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Federal Register

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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.

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 13, 32, 50, 51, 55, 60, 72, and 110

RIN 3150–AF86

Minor Correcting Amendments

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule; Technical amendment.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations to correct several miscellaneous errors in the Code of Federal Regulations (CFR). This document is necessary to inform the public of these corrective changes to NRC regulations.

EFFECTIVE DATE: November 3, 1997.

FOR FURTHER INFORMATION CONTACT: David L. Meyer, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Telephone (301) 415–7162.

SUPPLEMENTARY INFORMATION: The Nuclear Regulatory Commission is amending the regulations in 10 CFR Parts 13, 32, 50, 51, 55, 60, 72, and 110 to correct several miscellaneous errors in regulatory text. These changes in CFR text are necessary because of errors that occurred in the process of preparing and printing various rulemaking documents.

Because these are amendments dealing with agency practice and procedure, the notice and comment provisions of the Administrative Procedure Act do not apply pursuant to 5 U.S.C. 553(b)(A). These amendments are effective upon publication in the **Federal Register**. Good cause exists to dispense with the usual 30-day delay in the effective date because the amendments are of a minor and administrative nature dealing with corrections to certain CFR sections.

Environmental Impact: Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(2). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this final rule.

Paperwork Reduction Act Statement

This final rule does not contain a new or amended information collection requirement subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). Existing requirements were approved by the Office of Management and Budget, approval numbers 3150–0001, 3150–0011, 3150–0021, 3150–0018, 3150–00127, 3150–0132, and 3150–0036.

Public Protection Notification

If a document used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this final rule and that a backfit analysis is not required, because these amendments do not involve any provisions that would impose backfits as defined in 10 CFR Chapter I.

List of Subjects

10 CFR Part 13

Claims, Fraud, Organization and function (government agencies), Penalties.

10 CFR Part 32

Byproduct material, Criminal penalties, Labeling, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 50

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10 CFR Part 51

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10 CFR Part 60

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10 CFR Part 72

Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

10 CFR Part 110

Administrative practice and procedure, Classified information, Criminal penalties, Export, Import, Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Scientific equipment.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553; the NRC is adopting the following amendments to 10 CFR parts 13, 32, 50, 51, 55, 60, 72, and 110.

PART 13—PROGRAM FRAUD CIVIL REMEDIES

1. The authority citation for Part 13 continues to read as follows:

Authority: Public Law 99–509, sec. 6101–6104, 100 Stat. 1874 (31 U.S.C. 3801–3812). Sections 13.13 (a) and (b) also issued under section Pub. L. 101–410, 104 Stat. 890, as amended by section 31001(s), Pub. L. 104–134, 110 Stat. 1321–373 (28 U.S.C. 2461 note).

§ 13.3 [Amended]

2. In § 13.3(b)(1)(ii), add ''by'' between ''prescribed'' and ''law.''

PART 32—SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

3. The authority citation for Part 32 is revised to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

§ 32.74 [Amended]

4. In § 32.74(a)(3), in the first sentence ''§ 35.58'' is revised to read '' § 35.57.''

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

5. The authority citation for Part 50 is revised to read as follows:

Authority: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 50.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 50.10 also issued under secs. 101, 185, 68 Stat. 955 as amended (42 U.S.C. 2131, 2235), sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97–415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80–50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C 2237).

§ 50.2 [Amended]

6. In § 50.2, the definition of ''Electric Utility,'' in the second sentence, the word ''coperatives'' is revised to read ''cooperatives.''

§ 50.46 [Amended]

7. In § 50.46(a)(2), the word ''Regulations'' is revised to read ''Regulation.''

§ 50.55 [Amended]

8. In § 50.55a(g)(6)(ii)(A)(2), insert ''()'' around the ''A'' in the cite '' § 50.55a(g)(6)(ii)A(3)''.

§ 50.65 [Amended]

9. In § 50.65(a)(3), in the third sentence, the first time the word ''preventative'' appears, it is revised to read ''preventing'', in the third sentence, the second time the word ''preventative'' appears, it is revised to read ''preventive'', and in the fourth sentence, the word ''preventative'' is revised to read ''preventive.''

PART 51—ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

10. The Authority citation for Part 51 continues to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953, (42 U.S.C. 2201, 2297f); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842). Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853–854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95–604, Title II, 92 Stat. 3033–3041; and sec. 193, Pub. L. 101–575, 104 Stat. 2835 (42 U.S.C. 2243). Sections 51.20, 51.30, 51.60, 51.61, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97–425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100–203, 101 Stat. 1330–223 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036–3038 (42 U.S.C. 2021) and under Nuclear Waste Policy Act of 1982, sec 121, 96 Stat. 2228 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also under Nuclear Waste Policy Act of 1982, sec 114(f), 96 Stat. 2216, as amended (42 U.S.C. 10134(f)).

§ 51.55 [Amended]

11. In § 51.55(a), in the second sentence, insert the word ''of'' between the words ''Office'' and ''Nuclear.''

Appendix B to Subpart A [Amended]

12. In Subpart A, Appendix B, Table B–1 under ''Uranium Fuel Cycle and Waste Management,'' in the third column, second paragraph, fourth sentence, the word ''does'' is revised to read ''dose,'' and in the third column, fourth paragraph, last sentence, ''310^{-3}'' is revised to read ''3×10^{-3}.''

PART 55—OPERATORS' LICENSES

13. The authority citation for Part 55 continues to read as follows:

Authority: Secs. 107, 161, 182, 68 Stat. 939, 948, 953 , as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2137, 2201, 2232, 2282); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Sections 55.41, 55.43, 55.45, and 55.59 also issued under sec. 306, Pub. L. 97–425, 96 Stat. 2262 (42 U.S.C. 10226). Section 55.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237).

§ 55.45 [Amended]

14. In § 55.45(a)(7), the word ''head'' is revised to read ''heat.''

PART 60—DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN GEOLOGIC REPOSITORIES

15. The authority citation for Part 60 continues to read as follows:

Authority: Secs. 51, 53, 62, 63, 65, 81, 161, 182, 183, 68 Stat. 929, 930, 932, 933, 935, 948, 953, 954, as amended (42 U.S.C. 2071, 2073, 2092, 2093, 2095, 2111, 2201, 2232, 2233); secs. 202, 206, 88 Stat. 1244, 1246 (42 U.S.C. 5842, 5846); secs. 10 and 14, Pub. L. 95–601, 92 Stat. 2951 (42 U.S.C. 2021a and 5851); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332); secs. 114, 121, Pub. L. 97–425, 96 Stat. 2213g, 2228, as amended (42 U.S.C. 10134, 10141), and Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851).

§ 60.111 [Amended]

16. In § 60.111(a), insert the word ''the'' between the words ''by'' and ''Environmental.''

PART 72—LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

17. The Authority citation for Part 72 is revised to read as follows:

Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86–373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97–425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168).

Section 72.44(g) also issued under secs. 142 (b) and 148 (c), (d), Pub. L. 100–203, 101 Stat. 1330–232, 1330–236 (42 U.S.C. 10162 (b), 10168 (c), (d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97–425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10165(g)). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97–425, 96 Stat. 2202, 2203, 2204, 2222, 2224 (42 U.S.C. 10101, 10137(a), 10161(h)). Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

§ 72.54 [Amended]

18. In § 72.54(d), ''§ 72.42(d)'' is revised to read ''§ 72.42(b).''

PART 110—EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL

19. The authority citation for Part 110 continues to read as follows:

Authority: Secs. 51, 53, 54, 57, 63, 64, 65, 81, 82, 103, 104, 109, 111, 126, 127, 128, 129, 161, 181, 182, 183, 187, 189, 68 Stat. 929, 930, 931, 932, 933, 936, 937, 948, 953, 954, 955, 956, as amended (42 U.S.C. 2071, 2073, 2074, 2077, 2092–2095, 2111, 2112, 2133, 2134, 2139, 2139a, 2141, 2154–2158, 2201, 2231–2233, 2237, 2239); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec 5, Pub. L. 101–575, 104 Stat 2835 (42 U.S.C. 2243).

Sections 110.1(b)(2) and 110.1(b)(3) also issued under Pub. L. 96–92, 93 Stat. 710 (22 U.S.C. 2403). Section 110.11 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152) and secs. 54c and 57d, 88 Stat. 473, 475 (42 U.S.C. 2074). Section 110.27 also issued under sec. 309(a), Pub. L. 99–440. Section 110.50(b)(3) also issued under sec. 123, 92 Stat. 142 (42 U.S.C. 2153).Section 110.51 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 110.52 also issued under sec. 186, 68 Stat. 955 (42 U.S.C. 2236). Sections 110.80–110.113 also issued under 5 U.S.C. 552, 554. Sections 110.130–110.135 also issued under 5 U.S.C. 553. Sections 110.2 and 110.42(a)(9) also issued under sec. 903, Pub. L. 102–496 (42 U.S.C. 2151 *et seq.*).

§ 110.4 [Amended]

20. In § 110.4, the telephone number is revised to read ''(301) 415–2344.''

§ 110.26 [Amended]

21. In § 110.26(a)(2), the words ''South Korea'' are revised to read ''Republic of Korea.''

§ 110.52 [Amended]

22. In § 110.52(c), ''subpart J'' is revised to read ''subpart I.''

§ 110.111 [Amended]

23. In § 110.111(f), ''subpart L'' is revised to read ''subpart K.''

Dated at Rockville, Maryland, this 21st day of October 1997.

For the Nuclear Regulatory Commission.

L. Joseph Callan,

Executive Director for Operations.

[FR Doc. 97–28988 Filed 10–31–97; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97–CE–90–AD; Amendment 39–10188; AD 97–23–01]

RIN 2120–AA64

Airworthiness Directives; Fairchild Aircraft, Inc. SA226 and SA227 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment supersedes Airworthiness Directive (AD) 93–15–02 R2, which currently requires the following on Fairchild Aircraft, Inc. (Fairchild Aircraft) SA226 and SA227 series airplanes that are equipped with a certain Simmonds-Precision pitch trim actuator: repetitively measuring the freeplay of the pitch trim actuator and repetitively inspecting the actuator for rod slippage; immediately replacing any actuator if certain freeplay limitations are exceeded or rod slippage is evident; and, eventually replacing the actuator regardless of the inspection results. This action retains the repetitive inspections and replacement requirements, adds the repetitive inspections after the installation of certain Barber-Coleman pitch time actuators, and removes the terminating action. This action is the result of failure of the no-backs on a Barber-Colman pitch time actuator installed on a Fairchild Aircraft SA227 series airplane. The actions specified by this AD are intended to prevent failure of the pitch trim actuator, which could cause loss of control of the airplane.

DATES: Effective December 1, 1997.

The incorporation by reference of Fairchild Aircraft SA226 Series Service Letter 226–SL–014, Fairchild Aircraft SA227 Series Service Letter 227–SL–031, and Fairchild Aircraft SA227 Series Service Letter CC7–SL–021, all Issued: October 3, 1997, is approved by the Director of the Federal Register as of December 1, 1997.

The incorporation by reference of Fairchild Aircraft SA226 Series Service Letter 226–SL–005, and Fairchild Aircraft SA227 Series Service Letter 227–SL–011, both Issued: April 8, 1993, Revised: May 22, 1996, listed in the regulations was previously approved by the Director of the Federal Register as of July 25, 1996 (61 FR 36817, July 15, 1996).

Comments for inclusion in the Rules Docket must be receive on or before January 2, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket 97–CE–90–AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Service information that applies to this AD may be obtained from Field Support Engineering, Fairchild Aircraft, Inc., P.O. Box 790490, San Antonio, Texas 78279–0490; telephone (210) 824–9421; facsimile (210) 820–8609. This information may also be examined at the FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket 97–CE–90–AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Werner Koch, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193–0150; telephone (817) 222–5133; facsimile (817) 222–5960.

SUPPLEMENTARY INFORMATION:

Discussion

Airworthiness Directive (AD) 93–15–02 R2, Amendment 39–9689 (61 FR 36817, July 25, 1996), currently requires the following on Fairchild Aircraft SA226 and SA227 series airplanes that are equipped with a certain Simmonds-Precision pitch trim actuator: repetitively measuring the freeplay of the pitch trim actuator and repetitively inspecting the actuator for rod slippage; immediately replacing any actuator if certain freeplay limitations are exceeded or rod slippage is evident; and eventually replacing the actuator regardless of the inspection results.

Accomplishment of the inspections required by AD 93–15–02 R2 is in accordance with Fairchild Aircraft SA226 Series Service Letter (SL) 226–SL–005, or Fairchild Aircraft SA227 Series SL 227–SL–011, both Issued: April 8, 1993, Revised: May 22, 1996.

In addition, AD 93–15–02 R2, Amendment 39–9689 (61 FR 36817, July 15, 1996), eliminates the initial inspection and the repetitive inspection if a Barber-Colman actuator (part number (P/N) 27–19008–001 or –002 is installed.

Actions Since Issuance of the Previous Rule

Since issuance of AD 93–15–02 R2, the FAA received an incident report of a failure of a pitch trim actuator installed on a Fairchild SA227 series airplane during a landing approach. The failure was specifically of the no-backs

on a Barber-Colman pitch trim actuator (P/N 27–19008–002), which caused the horizontal stabilizer to go full leading edge down, resulting in a violent pitch-up of the airplane. According to the report, both pilots had to use extreme force on the control column to recover from the pitch-up and get the airplane safely on the ground.

Because of this incident, Fairchild re-examined the possible fail rate of these pitch trim actuators. This examination shows that the no-backs in the Barber-Coleman pitch trim actuators installed on the Fairchild SA226 and SA227 series airplanes are subject to failure after accumulating a certain amount of hours time-in-service (TIS). As a result, Fairchild now recommends repetitive inspections of the Barber-Colman pitch trim actuators (P/N 27–19008–001/–002).

Relevant Service Information

Fairchild has issued SA226 Series Service Letter (SL) 226–SL–014, Fairchild Aircraft SA227 Series SL 227–SL–031, and Fairchild Aircraft SA227 Series SL CC7–SL–021, all Issued: October 3, 1997, which specify procedures for inspecting and testing all Fairchild SA226 and SA227 series airplanes equipped with a Barber-Colman pitch trim actuator P/N 27–19008–001 or –002.

The FAA's Determination

After examining the circumstances and reviewing all available information related to the incidents described above, including the referenced service information, the FAA has determined that AD action should be taken in order to prevent failure of the pitch trim actuator, which could cause loss of control of the airplane.

Explanation of the Provisions of This AD

Since an unsafe condition has been identified that is likely to exist or develop in other Fairchild SA226 and SA227 series airplanes of the same type design, the FAA is issuing this AD to supersede AD 93–15–02 R2. This AD retains the inspection requirements for airplanes equipped with the Simmonds-Precision pitch trim actuators, and changes the inspection requirements for airplanes equipped with Barber-Colman pitch trim actuators to require repetitively inspecting the actuator. This action eliminates the terminating action in AD 93–15–02 R2. Inspecting the Barber-Colman actuator (P/N 27–19008–001 or –002) is required in accordance with the instructions in Fairchild SL 226–SL–014, SL 227–SL–031, or CC7–SL–021, all Issued: October 3, 1997, whichever is applicable. Inspecting the Simmonds-Precision actuators will continue to be accomplished in accordance with Fairchild Aircraft SA226 Series SL 226–SL–005, or Fairchild Aircraft SA227 Series SL 227–SL–011, both Issued: April 8, 1993, Revised: May 22, 1996.

Determination of the Effective Date of the AD

Since a situation exists (failure of the pitch-trim actuators) that requires the immediate adoption of this regulation, it is found that notice and opportunity for public prior comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting immediate flight safety and, thus, was not preceded by notice and opportunity to comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the 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 that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. 97–CE–90–AD.'' The postcard will be date stamped and returned to the commenter.

Regulatory Impact

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 that must be issued immediately to correct an unsafe condition in aircraft, and is not a ''significant regulatory action'' under Executive Order 12866. It has been determined further 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 Rules 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, Incorporation by reference, Safety.

Adoption of the Amendment

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

PART 39—AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing AD 93–15–02 R2, Amendment 39–9689 (61 FR 36817, July 15, 1996), and by adding a new airworthiness directive (AD) to read as follows:

97–23–01 Fairchild Aircraft, Inc.: Amendment 39–10188; Docket No. 97–CE–90–AD. Supersedes AD 93–15–01 R2, Amendment 39–9689.

Applicability: All SA226 and SA227 series airplanes (all models and serial numbers), certificated in any category, that are equipped with a Simmonds-Precision pitch trim actuator, (part number (P/N) DL5040M5 or P/N DL5040M6) or a Barber-Colman pitch trim actuator (P/N 27–19008–001 or P/N 27–19008–002).

Note 1: This AD applies to each airplane identified in the preceding applicability

provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD.

The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To prevent failure of the pitch trim actuator, which could cause loss of control of the airplane, accomplish the following:

Note 2: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.
Level 2: (1), (2), (3), etc.
Level 3: (i), (ii), (iii), etc.

Level 2 and Level 3 structures are designations of the Level 1 paragraph they immediately follow.

(a) Accomplish the following at the times specified in the chart in paragraph (b) of this AD:

(1) *Initial and repetitive inspections:*

(i) For airplanes equipped with a Simmonds-Precision actuator, P/N DL5040M5 and P/N DL5040M6, measure the freeplay (inspection) of the pitch trim actuator and inspect the actuator for rod slippage in accordance with the INSTRUCTIONS section of Fairchild Aircraft SA226 Series Service Letter (SL) 226–SL–005, or Fairchild Aircraft SA227 Series SL 227–SL–011, both Issued: April 8, 1993, Revised: May 22, 1996, as applicable.

(ii) For airplanes equipped with Barber-Colman actuators, P/N 27–19008–001 or P/N 27–19008–002, conduct a functional inspection of the actuator in accordance with the INSTRUCTIONS section of Fairchild Aircraft SL 226–SL–014, 227–SL–031, or CC7–SL–021, Issued: October 3, 1997, whichever is applicable.

Note 3: the actions in this AD are the same as the actions in AD 93–15–02 R2, except for the repetitive inspections added to the Barber-Colman actuator, P/N 27–19008–001 or P/N 27–19008–002.

(2) *Initial and repetitive replacements:* Replace the pitch trim actuator with one of the following, in accordance with the instructions in the applicable maintenance manual at the time specified in the Repetitive Replacement column of the chart in paragraph (b) of this AD. However, if certain freeplay limitations that are specified in the service letters are exceeded or if rod slippage is found, replace the pitch trim actuator prior to further flight.

(i) A new Simmonds-Precision actuator, P/N DL5040M5 or P/N DL5040M6.

(ii) A pitch trim actuator with an overhauled, zero-timed part of the same design and part number.

(iii) A Barber-Colman actuator, P/N 27–19008–001 or P/N 27–19008–002.

(b) The following chart presents the initial and repetitive inspection and replacement compliance times of this AD:

Condition	Initial inspection	Repetitive inspection	Repetitive replacement
With an original Simmonds-Precision actuator, P/N DL5040M5, installed.	Upon accumulating 3,000 hours TIS on a Simmonds-Precision P/N DL5040M5 actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93–15–02 R1), whichever occurs later.	Every 250 hours TIS after initial inspection until accumulating 5,000 hours TIS on the actuator or 500 hours TIS after the last inspection required by AD 93–15–02 R1, whichever occurs later.	Initially upon accumulating 5,000 hours TIS on the actuator or 500 hours TIS after the initial inspection, whichever occurs later, and thereafter as indicated below.
With a replacement Simmonds-Precision actuator, P/N DL5040M5, installed.	Initially upon accumulating 5,000 hours TIS on the new actuator, or within 50 hours TIS after April 17, 1995 (the effective date of AD 93–15–02 R1), whichever occurs later.	Every 300 hours TIS after the initial inspection until accumulating 6,500 hours TIS on the actuator.	Upon accumulating 6,500 hours TIS on the actuator.
With a replacement Simmonds-Precision actuator, P/N DL5040M6, installed. This part can be new, modified from a P/N DL5040M5 actuator, or overhauled and zero-timed.	Initially upon accumulating 7,500 hours TIS on the new or modified actuator, or within 50 hours TIS after April 17, 1995 (the effective date of AD 93–15–02 R1), whichever occurs later.	Every 300 hours TIS after the initial inspection until accumulating 9,900 hours TIS on the actuator.	Upon accumulating 9,900 hours TIS on the actuator.
With a replacement P/N DL5040M5 actuator installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were replaced with new assemblies during overhaul.	Initially upon accumulating 5,000 hours TIS on the over-hauled actuator, or within 50 hours TIS after April 17, 1995 (the effective date of AD 93–15–02 R1), whichever occurs later.	Every 300 hours TIS after the initial inspection until accumulating 6,500 hours TIS on the actuator.	Upon accumulating 6,500 hours TIS on the actuator.
With a replacement P/N DL5040M5 actuator installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were not replaced with new assemblies during overhaul.	Initially upon accumulating 3,000 hours TIS on the over-hauled actuator, or within 50 hours TIS after April 17, 1995 (the effective date of AD 93–15–02 R1), whichever occurs later.	Every 250 hours TIS after the initial inspection until accumulating 5,000 hours TIS on the actuator.	Upon accumulating 5,000 hours TIS on the actuator.
With a Barber-Colman pitch trim actuator installed, P/N 27–19008–001 or 27–19008–002, currently in-service with less than 1,000 hours TIS since new or overhauled, zero-timed.	Upon accumulating 500 hours total TIS on the new or overhauled zero-timed pitch trim actuator, or within 50 hours TIS after the effective date of this AD, whichever occurs later.	Every 300 hours TIS after the initial inspection.	None.
For newly fabricated and overhauled, zero-timed Barber-Colman actuator, P/N 27–19008–001 or P/N 27–19008–002 actuators.	Upon accumulating 500 hours total TIS on the actuator, or within 50 hours TIS after the effective date of this AD, whichever occurs later.	Every 300 hours TIS after the initial inspection.	None.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(d) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Airplane Certification Office (ACO), FAA, 2601 Meacham Boulevard, Fort Worth, Texas 76193–0150. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Fort Worth Airplane Certification Office. Alternative methods of compliance, approved in accordance with AD 93–15–02–R2, are not considered to be approved as alternative methods of compliance with this AD.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Forth Worth Airplane Certification Office.

(e) The inspections required by this AD for Fairchild SA226 and SA227 series airplanes equipped with Barber-Colman pitch trim actuators shall be done in accordance with Fairchild Aircraft SA226 Series Service Letter 226–SL–014, Fairchild Aircraft SA227 Series Service Letter 227–SL–031, or Fairchild Aircraft SA227 Series Service Letter CC7–SL–021, all Issued: October 3, 1997, whichever is applicable. This incorporation by reference is approved by the Director of the Federal Register is accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The inspections required by this AD on Fairchild Aircraft SA226 and SA227 series airplanes equipped with Simmonds-Precision pitch trim actuators shall be done in accordance with Fairchild Aircraft SA226 Series Service Letter (SL) 226–SL–005, and Fairchild Aircraft SA227 Series SL 227–SL–011, both Issued: April 8, 1993, Revised: May 22, 1996. This incorporation by reference was previously approved by the Director of the Federal Register as of July 25, 1996 (61 FR 36817, July 15, 1996). Copies of all of the documents may be obtained from Field Support Engineering, Fairchild Aircraft Inc., P.O. Box 790490, San Antonio Texas 78279–0490.

Copies may be inspected at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment (39–10188) supersedes AD 93–15–02 R2, Amendment 39–9689.

(g) This amendment (39–10188) becomes effective on December 1, 1997.

Issued in Kansas City, Missouri, on October 27, 1997.

Mary Ellen A. Schutt,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 97–28880 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 84–CE–27–AD; Amendment 39–10189; AD 85–02–05 R1]

RIN 2120–AA64

Airworthiness Directives; The New Piper Aircraft, Inc. PA–20, PA–22, PA–23, PA–24, PA–25, PA–30, PA–31P, PA-36, PA–39, and PA–44 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; correction.

SUMMARY: This document clarifies information in Airworthiness Directive (AD) 85–02–05, which applies to all The New Piper Aircraft, Inc. (Piper) PA–20, PA–22, PA–23, PA–24, PA–25, PA–30, PA–31P, PA–36, PA-39, and PA–44 series airplanes. AD 85–02–05 currently requires installing on the pilot's instrument panel a Piper part number (P/N) 81090–02 placard, which provides information for operation of the parking brake. Piper has superseded that placard with a P/N 683–107 placard, and operators in need of a new placard can only obtain the P/N 683–107 placard. In this scenario, the owners/operators of the affected airplanes could not comply with AD 85–02–05 as currently written. The P/N 683–107 placard contains the same wording as the P/N 81090–02 placard. The actions specified in that AD are intended to prevent airplane controllability problems while involved in ground operation because of improper brake operations. This document maintains the placard requirement of AD 85–02–05, and adds the installation of the P/N 683–107 placard as an option of compliance.

DATES: Effective November 21, 1997.

FOR FURTHER INFORMATION CONTACT: William Herderich, Aerospace Engineer, Atlanta Certification Office, FAA, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703–6084; facsimile (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Discussion

AD 85–02–05, Amendment 39–4984, currently requires the following on Piper PA–20, PA–22, PA–23, PA–24, PA-25, PA–30, PA–31P, PA–36, PA–39, and PA–44 series airplanes: installing on the pilot's instrument panel a Piper part number (P/N) 81090–02 placard, which provides information for operation of the parking brake. The actions required by AD 85–02–05 are intended to prevent airplane controllability problems while involved in ground operation because of improper brake operations.

Need for the Correction

Piper has superseded the P/N 81090–02 placard with a P/N 683–107 placard, and owners/operators in need of a new placard can only obtain the P/N 683–107 placard. In this scenario, the owners/operators of the affected airplanes could not comply with AD 85–02–05 as currently written. The P/N 683–107 placard contains the same wording as the P/N 81090–02 placard.

Correction of Publication

This document maintains the placard requirement of AD 85–02–05, adds the installation of the Piper P/N 683-107 placard as an option of compliance, adds a paragraph that allows the pilot to install the placard, adds the standard alternative method of compliance paragraph, and adds the AD as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13).

Since this action only adds the Piper P/N 683–107 placard as an option of compliance, it has no adverse economic impact and imposes no additional burden on any person than would have been necessary to comply with AD 85–02–05. Therefore, the FAA has determined that prior notice and opportunity for public comment are unnecessary.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Correction

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

PART 39—AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Airworthiness Directive (AD)

85–02–05, Amendment 39–4984, and by adding a new AD to read as follows:

85–02–05 R1 The New Piper Aircraft, Inc.: Amendment 39–10189; Docket No. 84–CE–27–AD. Revises AD 85–02–05, Amendment 39–4984.

Applicability: The following model and serial number airplanes, certificated in any category:

Models	Serial numbers
PA–20, PA–20S, PA–20–115, PA–20S–115, PA–20–135, and PA–20S–135.	20–1 through 20–1121.
PA–22, PA–22–108, PA–22–135, PA–22S–135, PA–22–150, PA–22S–150, PA–22–160, and PA–22S–160.	22–1 through 22–9848.
PA–23 and PA–23–160.	23–1 through 23–2046.
PA–23–235, PA–23–250, and PA–E23–250.	27–1 through 27-8154030.
PA–24, PA–24–250, and PA–24–260.	24–1 through 24–5034.
PA–24–400	26–1 through 26–148.
PA–25, PA–25–235, and PA–25–260.	25–1 through 25-8156024.
PA–30	30–1 through 30–2000.
PA–31P	31P–1 through 31P–7730012.
PA–36–285, PA–36–300, and PA–36–375.	36–7360001 through 36–8302025.
PA–39	39–1 through 39–162.
PA–44–180	44–7995001 through 44–8195026.
PA–44–180T	44–8107001 through 44–8207020.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, repaired, or reconfigured in the area subject to the requirements of this AD. For airplanes that have been modified, altered, repaired, or reconfigured so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required within 100 hours time-in-service after March 1, 1985 (the effective date of AD 85–02–05, Amendment 39–4984) or prior to the next flight after the effective date of this AD, whichever occurs later, unless already accomplished.

To prevent airplane controllability problems while involved in ground operation because of improper brake operations, accomplish the following:

(a) Install one of the following in a central location on the pilot's instrument panel in full view of the pilot.

(1) A Piper part number 81090–02 placard; or

(2) A Piper part number 683–107 placard.

Note 2: The above referenced placards both contain the following language:

''Warning No Braking Will Occur if Aircraft Brakes Are Applied While Parking Brake Handle is Pulled and Held''

(b) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(c) Installing the placard required by paragraph (a) of this AD may be performed by the owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), and must be entered into the aircraft records showing compliance with this AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

(d) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349.

(1) The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

(2) Alternative methods of compliance approved in accordance with AD 85–02–05 (revised by this action) are considered approved as alternative methods of compliance with this AD.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(e) All persons affected by this directive may examine information pertaining to this document at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

(f) This amendment (39–10189) becomes effective on November 21, 1997.

Issued in Kansas City, Missouri, on October 27, 1997.

Mary Ellen A. Schutt,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 97–28983 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 173

[Docket No. 93F–0461]

Secondary Direct Food Additives Permitted in Food for Human Consumption; Milk-Clotting Enzymes

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the food additive regulations to provide for the safe use of aspartic proteinase enzyme preparation produced by pure culture fermentation of *Aspergillus oryzae* modified by recombinant deoxyribonucleic (DNA) techniques to contain the gene for aspartic proteinase enzyme from *Rhizomucor miehei* for use as a milk-clotting enzyme in the production of cheese.

DATES: The regulation is effective November 3, 1997; written objections and requests for a hearing by December 3, 1997.

ADDRESSES: Submit written objections to the Dockets Management Branch (HFA–305), Food and Drug Administration, 12420 Parklawn Dr., rm. 1–23, Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Wendy J. Dixon, Center for Food Safety and Applied Nutrition (HFS–206), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202–418–3090.

SUPPLEMENTARY INFORMATION:

In a notice published in the **Federal Register** of January 21, 1994 (59 FR 3365), FDA announced that a food additive petition (FAP 4A4406) had been filed by Novo Nordisk Bioindustrials, Inc., proposing that the food additive regulations be amended to provide for the safe use of aspartic proteinase enzyme preparation produced by pure culture fermentation of *A. oryzae* modified by recombinant DNA techniques to contain the gene for aspartic proteinase enzyme from *R. miehei* for use in the production of cheese. Although Novo Nordisk Bioindustrials, Inc., submitted FAP 4A4406, while the petition was under review, Gist-Brocades International B. V. purchased the dairy enzyme business from Novo Nordisk, at which time, the responsibility for the petition transferred to Gist-Brocades International B. V.

I. Evaluation of Safety of the Petitioned Use of the Additive

A. Aspergillus Oryzae

The host organism for production of aspartic proteinase is the fungus *A. oryzae*. *A. oryzae* has had a long history of use, greater than 2,000 years, in the production of enzymes, e.g., koji and α-amylase, used in the fermentation and processing of food products, such as soy-sauce, miso, sake, baked goods, and brewery products (Refs. 1 and 2). The nonpathogenicity and nontoxigenicity of this microbe to humans and its inability to produce antibiotics is well-documented in the literature (Refs. 1, 3, and 4). This conclusion regarding the nonpathogenicity and nontoxigenicity of this microbe is consistent with a recent evaluation of the Joint Expert Committee on Food Additives (JECFA) of the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) (Ref. 5). JECFA evaluated the current uses of *A. oryzae* and enzyme preparations therefrom and concluded that the amylases and proteases from *A. oryzae* that were included in JECFA's review should be regarded as foods and thus, are safe for use in food processing.

The petitioner submitted a study to investigate the pathogenic potential of five strains of *A. oryzae*, including the parental strain and four recombinant strains; one of the strains tested is the subject of this petition. FDA evaluated this study and concluded that the recombinant strains of *A. oryzae*, as well as the unmodified parental strain, demonstrated no pathogenicity for mice when spores were inoculated in large numbers. Previously, *A. oryzae* has been the subject of evaluations performed by FDA, and based on those evaluations FDA concluded that the spores of two strains of *A. oryzae* are nonpathogenic to mice (Ref. 6). Therefore, FDA concludes that the recombinant strain of *A. oryzae* that is the subject of this petition is nonpathogenic and nontoxigenic (Ref. 3).

B. Rhizomucor Miehei

R. miehei, originally named *Mucor miehei* (Ref. 7), is the microorganism used as the source of the genetic material for the aspartic proteinase enzyme that is the subject of FAP 4A4406. Enzyme preparations derived from *R. miehei* (aspartic proteinase, or esterase-lipase activity produced by pure culture fermentation of *R. miehei* (as *M. miehei*)) are food additives that are approved for use in cheese production under §§ 173.150(a)(4) and 173.140 (21 CFR 173.150(a)(4) and 173.140), respectively.

C. Aspartic Proteinase Preparation

As discussed above, aspartic proteinase preparation produced by pure culture fermentation of *R. miehei* for use as a milk-clotting agent in the production of cheese is an approved food additive under § 173.150(a)(4). The petitioner has submitted the following evidence to demonstrate that it has cloned full length copies of the aspartic proteinase gene from *R. miehei* into *A. oryzae*: (1) DNA sequencing information, whereby the cloned putative aspartic proteinase gene was shown to have the same nucleotide sequence that encodes the amino acid sequence of the *R. miehei* aspartic proteinase; and (2) nucleic acid hybridization studies whereby the cloned DNA fragments were shown to hybridize (i.e., specifically bind) with complementary DNA from the aspartic proteinase gene.

To further confirm the identity of the aspartic proteinase cloned into *A. oryzae*, the petitioner provided information on the sodium dodecyl polyacrylamide gel electrophoresis (SDS–PAGE)[1] relative mobility of recombinant aspartic proteinase and aspartic proteinase from *R. miehei*, with and without treatment by endo-glucosidase H (an enzyme that removes most glycosyl moieties from proteins). The results from this study establish that untreated aspartic proteinase from recombinant *A. oryzae* has a lower relative mobility than untreated aspartic proteinase from *R. miehei*. However, after pretreatment with endo-glucosidase H, the aspartic proteinase preparations from both recombinant *A. oryzae* and *R. miehei* have an identical SDS–PAGE relative mobility. This is higher than the mobilities of either of the untreated forms of aspartic proteinase. These results show that aspartic proteinase from *A. oryzae* or *R. miehei* is glycosylated but when the *R. miehei* gene for aspartic proteinase is expressed in *A. oryzae*, the aspartic proteinase enzyme is more extensively glycosylated (Ref. 8).

FDA finds that glycosylation of the aspartic proteinase enzyme does not raise any safety concerns. Glycosylation is characteristic of many proteins produced in the cells of eukaryotic organisms, which include higher plants and animals, and fungi, such as *A. oryzae* and *R. miehei* (Ref. 9). However, the type and amount of glycosyl moieties attached to glycoproteins varies, even among closely related organisms (Ref. 10). Therefore, proteins with identical amino acid sequences may have different amounts and types of glycosylation when produced in different eukaryotic organisms, such as *A. oryzae* and *R. miehei*. Because *A. oryzae* is a common, nonpathogenic, nontoxigenic organism that has a safe history of use in the production of food processing enzymes (Refs. 1 and 3), the agency finds that the more extensively glycosylated aspartic proteinase enzyme from recombinant *A. oryzae* is as safe as the less extensively glycosylated aspartic proteinase enzyme from *R. miehei*.

The petitioner submitted several toxicological studies that address the safety of the petitioned aspartic proteinase preparation. These include: (1) Short term and subchronic toxicity studies in both rats and dogs; (2) a teratogenicity study in rats; and (3) genotoxicity studies, including tests for mutagenic activity in *Salmonella typhimurium* and mammalian cells, as well as tests for chromosome-damaging activity in human lymphocytes. FDA has reviewed these studies and concludes that the petitioned aspartic proteinase preparation does not raise any toxicity concerns at the expected level of consumption nor does it have any mutagenic potential (Refs. 6, 11, and 12).

D. Source of Impurities

Enzyme preparations used in food are usually not chemically pure, but contain cellular and processing material. The nature and amounts of these impurities in the finished enzyme preparation depend on the organism from which the enzyme preparation is produced (the production organism), the fermentation materials and methods used to grow the production organism, and the materials and methods used to generate the finished enzyme preparation. Thus, the question is whether the production organism or the manufacturing methods used to grow the production organism or to generate the finished enzyme preparation from recombinant *A. oryzae*, will introduce impurities that raise concerns about the safety of the enzyme preparation. In addition, § 173.150(c) states that the milk-clotting enzyme preparation shall be produced by a process that completely removes the generating organism from the milk-clotting enzyme product. The agency concludes that the petition contains information demonstrating that the manufacturing process includes procedures to ensure that the production organism is completely removed from the enzyme preparation

[1] SDS–PAGE is a technique that enables one to compare the relative molecular weight of proteins based on their rate of migration through the gel. The SDS-PAGE relative mobility of a protein is directly related to its molecular weight.

during the manufacturing (Refs. 3 and 13).

One issue raised by the use of recombinant DNA techniques is the potential transfer of DNA encoding for extraneous proteins along with the gene of interest (i.e., aspartic proteinase), thereby contaminating the enzyme preparation. As a matter of current good manufacturing practice, manufacturers using recombinant DNA technology should ensure that they have not inadvertently cloned extraneous protein-encoding DNA along with the aspartic proteinase gene that may lead to contamination of the aspartic proteinase enzyme preparation. Such assurance can come from reviewing the details of the cloning steps, which include the origin and sequence of the DNA fragments used in the cloning, and full characterization of the final genetic constructs via techniques such as DNA sequencing.

The petition contains information demonstrating that the petitioner evaluated the cloning process to ensure that the final cloning product, i. e., the DNA with the aspartic proteinase gene and other components to ensure accurate expression of the gene, used in the development of the recombinant *A. oryzae* was accurately constructed. As mentioned above, the petitioner submitted evidence to demonstrate that it cloned full length copies of the aspartic proteinase gene from *R. miehei* into *A. oryzae*. In addition to the aspartic proteinase gene, the recombinant *A. oryzae* strain contains a marker gene conferring resistance to ampicillin (*amp*^{r}), a clinically useful antibiotic, as well as a marker gene encoding the enzyme acetamidase (*amdS*), which permits the transformed strain to utilize acetamide as a nitrogen or carbon source. The petitioner states that the only transgenes expressed in the production organism, *A. oryzae*, are the aspartic proteinase transgene and the *amdS* transgene. Aspartic proteinase is secreted into the culture medium from which the enzyme preparation is produced while the enzyme acetamidase is not. Therefore, the agency concludes that the acetamidase is effectively removed when the production cells are discarded during processing (Ref. 13).

The expression of the *amp*^{r} gene is controlled by a promoter, a region of DNA that is a major component in the regulation of a gene. In general, bacterial promoters do not function in higher organisms, including the fungus *A. oryzae*. Because expression of the *amp*^{r} gene is controlled by a bacterial promoter, this gene is not expected to be expressed in the production organism, *A. oryzae*. The agency has considered the potential consequences if expression of the *amp*^{r} transgene were to occur in the production organism. The petitioner noted that the enzyme preparation is produced from the fermentation supernatant and that in the process, intact cells are removed. Therefore, even if expression of the *amp*^{r} gene takes place, the gene product would be sequestered within the intact cells and therefore, would not be present in the fermentation supernatant, which is the source of the aspartic proteinase enzyme preparation. Accordingly, the agency concludes that any *amp*^{r} gene product would effectively be removed from the enzyme preparation (Ref. 13).

Finally, FDA notes that § 173.150(b) stipulates that the microbial milk-clotting enzyme listed in the food additive regulations should be produced using a production strain that is nonpathogenic and nontoxic in man or other animals. For example, if the DNA inserted by recombinant methodology were to encode a toxic substance that would render the enzyme preparation unsafe, the resulting aspartic proteinase preparation would not conform with the prescribed conditions under § 173.150, and therefore, food processed with the improperly manufactured enzyme preparation would be deemed adulterated.

FDA concludes that, when the aspartic proteinase preparation is manufactured in conformity with § 173.150, there is no basis for concern regarding the possibility that the aspartic proteinase preparation will be contaminated by the products of extraneous protein-encoding DNA (e.g., products of *amdS* and *amp*^{r} genes) inserted along with the aspartic proteinase gene in *A. oryzae* (Ref. 13).

Furthermore, FDA concludes, having considered the evidence concerning the production organism and the processing steps to derive the aspartic proteinase preparation, that *A. oryzae* containing aspartic proteinase gene from *R. miehei* is safe for use as a source of food-grade aspartic proteinase preparations, and that impurities resulting from the use of *A. oryzae* containing aspartic proteinase gene from *R. miehei* in the production of aspartic proteinase preparation will not affect the safety of the aspartic proteinase preparation.

II. Conclusion

The agency finds that the principal active ingredient, i.e., aspartic proteinase, in the aspartic proteinase enzyme preparation, is the same as that in the milk-clotting enzyme preparation from *R. miehei*, and that when the preparation is manufactured in accordance with the conditions of use listed in § 173.150, the source organism and manufacturing process will not introduce impurities that may render the use of the enzyme preparation unsafe.

The agency has evaluated the data in the petition and other relevant material. Based on this information, the agency concludes that the proposed use of aspartic proteinase enzyme preparation from *A. oryzae* containing the aspartic proteinase gene from *R. miehei* is safe and that the additive will achieve its intended technical effect. Therefore, the regulation in § 173.150 should be amended.

III. Inspection of Documents

In accordance with § 171.1(h) (21 CFR 171.1(h)), the petition and the documents that FDA considered and relied upon in reaching its decision to approve the petition are available for inspection at the Center for Food Safety and Applied Nutrition by appointment with the information contact person listed above. As provided in § 171.1(h), the agency will delete from the documents any materials that are not available for public disclosure before making the documents available for inspection.

IV. Environmental Impact

The agency has carefully considered the potential environmental effects of this action. FDA has concluded that the action will not have a significant impact on the human environment, and that an environmental impact statement is not required. The agency's finding of no significant impact and the evidence supporting that finding, contained in an environmental assessment, may be seen in the Dockets Management Branch (address above) between 9 a.m. and 4 p.m., Monday through Friday.

V. Objections

Any person who will be adversely affected by this regulation may at any time on or before December 3, 1997, file with the Dockets Management Branch (address above) written objections thereto. Each objection shall be separately numbered, and each numbered objection shall specify with particularity the provisions of the regulation to which objection is made and the grounds for the objection. Each numbered objection on which a hearing is requested shall specifically so state. Failure to request a hearing for any particular objection shall constitute a waiver of the right to a hearing on that objection. Each numbered objection for which a hearing is requested shall include a detailed description and

analysis of the specific factual information intended to be presented in support of the objection in the event that a hearing is held. Failure to include such a description and analysis for any particular objection shall constitute a waiver of the right to a hearing on the objection. Three copies of all documents shall be submitted and shall be identified with the docket number found in brackets in the heading of this document. Any objections received in response to the regulation may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

VI. References

The following references have been placed on display in the Dockets Management Branch (address above) and may be seen by interested persons between 9 a.m. and 4 p.m., Monday through Friday.

1. Barbesgaard, P., H. P. Heldt-Hansen, and B. Diderichsen, ''On the Safety of *Aspergillus oryzae*: A Review,'' *Applied Microbiology and Biotechnology*, 36:569–572, 1992.

2. ''Biotechnologies and Food: Assuring the Safety of Foods Produced by Genetic Modification,'' *Regulatory Toxicology and Pharmacology*, 12 (3):S114–S128, 1990.

3. Memorandum from J. Madden, FDA, to D. Keefe, FDA, April 11, 1994.

4. Gray, W. D., *The Use of Fungi as Food and in Food Processing*, pp. 42–100, CRC Press, Cleveland, OH, 1970.

5. Joint FAO/WHO Expert Committee on Food Additives. ''Toxicological Evaluation of Certain Food Additives,'' 31st Meeting, Geneva, February 16–25, 1987.

6. Memorandum from H. C. A. Chang, FDA, to D. Keefe, FDA, March 14, 1994.

7. Shipper, M. A. A., ''On the Genera *Rhizomucor* and *Parasitella*,'' *Studies in Mycology*, 17:53–65, 1978.

8. Cristensen, T. et al., ''High Level Expression of Recombinant Genes in *Aspergillus oryzae*,'' *Bio/Technology*, 6:1419–1422, 1988.

9. Herrman, J. L. et al., ''Bacterial Glycoproteins: A Link Between Glycosylation and Proteolytic Cleavage of a 19 kDa Antigen from *Mycobacterium tuberculosis*,'' *EMBO Journal*, 15:3547–3554, 1996.

10. Grinna, L. S., and J. F. Tschopp, ''Size Distribution and General Structural Features of N-linked Oligosaccharides from the Methylotrophic Yeast, *Pichia pastoris*,'' *Yeast*, 5 (2):107–115, 1989.

11. Memorandum from S. E. Carberry, FDA, to D. Keefe, FDA, January 5, 1995.

12. Memorandum from H. C. A. Chang, FDA, to D. Keefe, FDA, February 6, 1995.

13. Memorandum from T. A. Cebula, FDA, to D. Keefe, FDA, April 4, 1995.

List of Subjects in 21 CFR Part 173

Food additives.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Director, Center for Food Safety and Applied Nutrition, 21 CFR part 173 is amended as follows:

PART 173—SECONDARY DIRECT FOOD ADDITIVES PERMITTED IN FOOD FOR HUMAN CONSUMPTION

1. The authority citation for 21 CFR part 173 continues to read as follows:

Authority: 21 U.S.C. 321, 342, 348.

2. Section 173.150 is amended by adding paragraph (a)(5) to read as follows:

§ 173.150 Milk-clotting enzymes, microbial.

* * * * *

(a) * * *

(5) *Aspergillus oryzae* modified by recombinant deoxyribonucleic (DNA) techniques to contain the gene coding for aspartic proteinase from *Rhizomucor miehei* var. *Cooney et Emerson* as defined in paragraph (a)(4) of this section, and classified as follows: Class, Blastodeuteromycetes (Hyphomycetes); order, Phialidales (Moniliales); genus, *Aspergillus*; species *oryzae*.

Dated: October 20, 1997.

L. Robert Lake,

Director, Office of Policy, Planning and Strategic Initiatives, Center for Food Safety and Applied Nutrition.

[FR Doc. 97–29048 Filed 10–31–97; 8:45 am]

BILLING CODE 4160–01–F

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA 083–0053a; FRL–5911–4]

Approval and Promulgation of Implementation Plans; California State Implementation Plan Revision, San Diego County Air Pollution Control District, Ventura County Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: EPA is taking direct final action on revisions to the California State Implementation Plan (SIP). These revisions concern rules from the San Diego County Air Pollution Control District (SDCAPCD) and the Ventura County Air Pollution Control District (VCAPCD). This approval action will incorporate these rules into the federally approved SIP. The intended effect of approving these rules is to regulate emissions of volatile organic compounds (VOCs) in accordance with the requirements of the Clean Air Act, as amended in 1990 (CAA or the Act). The revised rules control VOC emissions from metal container, metal closure, and metal coil coating operations and marine vessel coating operations. Thus, EPA is finalizing the approval of these revisions into the California SIP under provisions of the CAA regarding EPA action on SIP submittals, SIPs for national primary and secondary ambient air quality standards and plan requirements for nonattainment areas.

DATES: This action is effective on January 2, 1998 unless adverse or critical comments are received by December 3, 1997. If the effective date is delayed, timely notice will be published in the **Federal Register**.

ADDRESSES: Comments must be submitted to Andrew Steckel at the Region IX office listed below. Copies of the rule revisions and EPA's evaluation report for each rule are available for public inspection at EPA's Region IX office during normal business hours. Copies of the submitted rule revisions are available for inspection at the following locations:

Rulemaking Office (AIR–4), Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105

Environmental Protection Agency, Air Docket (6102), 401 ''M'' Street, S.W., Washington, D.C. 20460

California Air Resources Board, Stationary Source Division, Rule Evaluation Section, 2020 ''L'' Street, Sacramento, CA 92123–1095

San Diego County Air Pollution Control District, 9150 Chesapeake Drive, San Diego, CA 92123–1096

Ventura County Air Pollution Control District, 702 County Square Drive, Ventura, California 93003.

FOR FURTHER INFORMATION CONTACT: Jerald S. Wamsley, Rulemaking Office, AIR–4, Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105, Telephone: (415) 744–1226

SUPPLEMENTARY INFORMATION:

I. Applicability

The rules being approved into the California SIP include SDCAPCD's Rule 67.4, Metal Container, Metal Closure, and Metal Coil Coating Operations, and VCAPCD's Rule 74.24, Marine Vessel Coating Operations. These rules were submitted by the California Air Resources Board (CARB) to EPA on October 18, 1996 and May 24, 1994, respectively.

II. Background

On March 3, 1978, EPA promulgated a list of ozone nonattainment areas under the provisions of the Clean Air Act, as amended in 1977 (1977 Act or pre-amended Act), that included San Diego and Ventura counties, see 43 FR 8964, 40 CFR 81.305. On May 26, 1988, EPA notified the Governor of California, pursuant to section 110(a)(2)(H) of the 1977 Act, that the San Diego and Ventura county portions of the California SIP were inadequate to attain and maintain the ozone standard and requested that deficiencies in the existing SIP be corrected (EPA's SIP-Call). On November 15, 1990, the Clean Air Act Amendments of 1990 were enacted. Pub. L. 101–549, 104 Stat. 2399, codified at 42 U.S.C. 7401-7671q. In amended section 182(a)(2)(A) of the CAA, Congress statutorily adopted the requirement that nonattainment areas fix their deficient reasonably available control technology (RACT) rules for ozone and established a deadline of May 15, 1991 for states to submit corrections of those deficiencies.

Section 182(a)(2)(A) applies to areas designated as nonattainment prior to enactment of the amendments and classified as marginal or above as of the date of enactment. It requires such areas to adopt and correct RACT rules pursuant to pre-amended section 172(b) as interpreted in pre-amendment guidance.[1] EPA's SIP-Call used that guidance to indicate the necessary corrections for specific nonattainment areas. San Diego County is classified as ''serious'' and Ventura County as ''severe''.[2] As a result, these areas were subject to the RACT fix-up requirement and the May 15, 1991 deadline.

The State of California submitted many revised RACT rules for incorporation into its SIP on October 18, 1996 and May 24, 1994, including the rules being acted on in this document. This document addresses EPA's direct-final action on SDCAPCD's Rule 67.4, Metal Container, Metal Closure, and Metal Coil Coating Operations, and VCAPCD's Rule 74.24, Marine Vessel Coating Operations. SDCAPCD adopted revisions to Rule 67.4 on July 25, 1995 and May 15, 1996. This submitted rule was found to be complete on December 19, 1996 pursuant to EPA's completeness criteria that are set forth in 40 CFR part 51 Appendix V.[3] VCAPCD adopted Rule 74.24 on March 8, 1994. EPA found this submitted rule complete on July 14, 1994.

EPA's review of SDCAPCD Rule 67.4 addresses two adopted revisions of the rule, one from July 25, 1995 and May 15, 1996. These two adopted versions of SDCAPCD 67.4 were submitted by CARB to EPA on October 18, 1996. Because the July 25, 1995 revisions to Rule 67.4 are reflected in the later May 15, 1996 revision and adoption, this rulemaking concerns substantively the latest adopted submittal of Rule 67.4, the May 15, 1996 rule revision.

SDCAPCD Rule 67.4 and VCAPCD Rule 74.24 are prohibitory rules governing the use and application of coating compounds containing photochemically reactive volatile organic compounds (VOCs) in their respective industries, metal container, closure, and coil manufacturing and marine vessel building, painting, and repair. VOCs contribute to the production of ground level ozone and smog. These rules were originally adopted as part of both the SDCAPCD and VCAPCD's respective efforts to achieve the National Ambient Air Quality Standard (NAAQS) for ozone and in response to EPA's SIP-Call and the section 182(a)(2)(A) CAA requirement. EPA's evaluation and final action for these rules follow below.

III. EPA Evaluation and Action

In determining the approvability of a VOC rule, EPA must evaluate the rule for consistency with the requirements of the CAA and EPA regulations, as found in section 110 and part D of the CAA and 40 CFR part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans). The EPA interpretation of these requirements, which forms the basis for today's action, appears in the various EPA policy guidance documents listed in footnote 1. Among those provisions is the requirement that a VOC rule must, at a minimum, provide for the implementation of RACT for stationary sources of VOC emissions. This requirement was carried forth from the pre-amended Act.

For the purpose of assisting state and local agencies in developing RACT rules, EPA prepared a series of Control Technique Guideline (CTG) documents. The CTGs are based on the underlying requirements of the Act and specify the presumptive norms for what is RACT for specific source categories. Under the CAA, Congress ratified EPA's use of these documents, as well as other Agency policy, for requiring States to ''fix-up'' their RACT rules. See section 182(a)(2)(A). The CTGs applicable to these rules are as follows: ''Control of Volatile Organic Emissions from Existing Stationary Sources Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light Duty Trucks,'' USEPA, May 1977, EPA–450/2–77–008; and, ''Control Technique Guidelines (CTG) for Shipbuilding and Ship Repair Operations (Surface Coating), USEPA, 61 FR 44050–44057, August 27, 1996. Further interpretations of EPA policy are found in the Blue Book, referred to in footnote one. In general, these guidance documents have been set forth to ensure that VOC rules are fully enforceable and strengthen or maintain the SIP.

On May 2, 1995, EPA approved into the SIP a version of SDCAPCD's Rule 67.4, Metal Container, Metal Closure, and Metal Coil Coating Operations, that had been adopted by SDCAPCD on September 27, 1994. The revised version of SDCAPCD Rule 67.4 under consideration today includes the following significant changes from the current SIP rule:

—Lowered VOC limits for end sealing compound for food and beverage containers, from 440 grams/liter (gr/l) to 20 gr/l;
—Added VOC limits for exterior and interior spray coating of new (as opposed to reconditioned) drums, pails, and lids at 340 and 420 gr/l;
—Added requirements for equipment cleaning operations;
—Exempted the use of cleaning material in quantities of less than 10 gallons per month from the prohibition of VOC containing materials;
—Updated several definitions;
—Updated and added test methods; and,
—Revised the exempt compound definition to reference Rule 2, a rule defining exempt compounds for all rules regulating VOC emissions.

EPA has reviewed and approved Rule 2 and similar changes to other VOC related rules for incorporation into the California SIP (see 62 FR 14659, March 27, 1997.)

EPA has evaluated SDCAPCD Rule 67.4 and has determined that it is consistent with the CAA, EPA regulations, and EPA policy. Therefore,

[1] Among other things, the pre-amendment guidance consists of those portions of the proposed post-1987 ozone and carbon monoxide policy that concern RACT, 52 FR 45044 (November 24, 1987); ''Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations, Clarification to Appendix D of November 24, 1987 **Federal Register** Notice'' (Blue Book) (notice of availability was published in the **Federal Register** on May 25, 1988); and the existing control technique guidelines (CTGs).

[2] Both San Diego and Ventura counties retained their designation of nonattainment and were classified by operation of law pursuant to sections 107(d) and 181(a) upon the date of enactment of the CAA. See 56 FR 56694 (November 6, 1991).

[3] EPA adopted the completeness criteria on February 16, 1990 (55 FR 5830) and, pursuant to section 110(k)(1)(A) of the CAA, revised the criteria on August 26, 1991 (56 FR 42216).

SDCAPCD's Rule 67.4, Metal Container, Metal Closure, and Metal Coil Coating Operations, is approved under section 110(k)(3) of the CAA as meeting the requirements of section 110(a) and part D.

There is no version of VCAPCD's Rule 74.24, Marine Vessel Coating Operations, in the SIP. The submitted rule includes the following provisions: applicability, general and specialty coating emission limits, add-on emission control equipment requirements; allowable exemptions from the rule, recordkeeping requirements, appropriate test methods, violations under the rule, and a list of definitions operable within the rule.

EPA has evaluated VCAPCD Rule 74.24 as submitted and has determined that it is consistent with the CAA, EPA regulations, and EPA policy. Therefore, VCPCD's Rule 74.24, Marine Vessel Coating Operations, is approved under section 110(k)(3) of the CAA as meeting the requirements of section 110(a) and part D.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future implementation plan. Each request for revision to the state implementation plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

EPA is publishing this document without prior proposal because the Agency views this as a noncontroversial amendment and anticipates no adverse comments. However, in a separate document in this **Federal Register** publication, the EPA is proposing to approve the SIP revision should adverse or critical comments be filed. This action will be effective January 2, 1998, unless, by December 3, 1997, adverse or critical comments are received.

If the EPA receives such comments, this action will be withdrawn before the effective date by publishing a subsequent document that will withdraw the final action. All public comments received will then be addressed in a subsequent final rule based on this action serving as a proposed rule. The EPA will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time. If no such comments are received, the public is advised that this action will be effective January 2, 1998.

IV. Administrative Requirements

A. Executive Order 12866

The Office of Management and Budget (OMB) has exempted this regulatory action from E.O. 12866 review.

B. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, 5 U.S.C. 600 *et seq.*, EPA must prepare a regulatory flexibility analysis assessing the impact of any proposed or final rule on small entities. 5 U.S.C. 603 and 604. Alternatively, EPA may certify that the rule will not have a significant impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and government entities with jurisdiction over populations of less than 50,000.

SIP approvals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements, but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not impose any new requirements, the Administrator certifies that it does not have a significant impact on any small entities affected. Moreover, due to the nature of the Federal-State relationship under the CAA, preparation of a flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S. EPA*, 427 U.S. 246, 255-66 (1976); 42 U.S.C. 7410(a)(2).

C. Unfunded Mandates

Under Section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to private sector, of $100 million or more. Under Section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the approval action promulgated does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new Federal requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

D. Submission to Congress and the General Accounting Office

Under 5 U.S.C. 801(a)(1)(A) as added by the Small Business Regulatory Enforcement Fairness Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller General of the General Accounting Office prior to publication of the rule in today's **Federal Register**. This rule is not a ''major'' rule as defined by 5 U.S.C. 804(2).

E. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by January 2, 1998. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Hydrocarbons, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

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

Dated: September 26, 1997.

Felicia Marcus,

Regional Administrator.

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

PART 52—[AMENDED]

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

Authority: 42 U.S.C. 7401–7671q.

Subpart F—California

2. Section 52.220 is amended by adding paragraphs (c)(197)(i)(D) and (c)(241)(i)(A)(*2*) to read as follows:

§ 52.220 Identification of plan.

* * * * *

(c) * * *

(197) * * *

(i) * * *

(D) Ventura County Air Pollution Control District.

(*1*) Rule 74.24, adopted on March 8, 1994.

* * * * *

(241) * * *

(i) * * *

(A) * * *

(*2*) Rule 67.4, revised on May 15, 1996.

* * * * *

[FR Doc. 97–29050 Filed 10–31–97; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 260

[FRL–5916–3]

Project XL Site-Specific Rulemaking for Molex, Inc., 700 Kingbird Road Facility, Lincoln, NE

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The EPA is proposing to implement a project under the Project XL program for the Molex, Inc. (Molex) facility located at 700 Kingbird Road, Lincoln, NE. The terms of the project are defined in a draft Final Project Agreement (FPA) which is being made available for public review and comment by this document. Also, EPA is making available for informational purposes a draft variance by the Nebraska Department of Environmental Quality necessary for implementation of the project. In addition, EPA is today promulgating a direct final site-specific rule, applicable only to the Molex facility, to facilitate implementation of the project. Also in today's **Federal Register**, EPA is publishing a proposed rule identical to this direct final rule. By this document, EPA solicits comment on the direct final rule, the draft variance, the draft FPA, and the project generally. Public notice is also being provided locally.

This direct final site-specific rule is intended to provide regulatory changes under the Resource Conservation and Recovery Act (RCRA) to implement Molex's XL project, which will result in superior environmental performance and, at the same time, provide Molex with greater operational flexibility. The flexibility provided by Project XL will allow the facility to segregate waste streams which had previously been co-mingled into a single waste stream. By changing the process lines to generate separate waste streams (nickel, copper, tin/lead), the facility can optimize the precipitation of each metal more effectively before the effluent is sent to the POTW. The environmental benefit from the project will be a substantial reduction in the mass loading of metals entering the City of Lincoln's POTW. In addition, the resultant mono-metal sludges will be commodity-like materials suitable for recycling by smelters. A secondary environmental benefit will be increased recycling and reducing the amount of material that would otherwise be landfilled. The site-specific rule, applicable only to the Molex facility, would change certain RCRA requirements so the implementing agency, the Nebraska Department of Environmental Quality, may issue a temporary variance from classifying as solid waste nickel, copper, and tin/lead non-precious metals containing sludges generated by Molex.

DATES: This action will be effective January 2, 1998, unless adverse comments are received by December 3, 1997. If the effective date is delayed, timely notice will be published in the **Federal Register**.

Public Hearing. A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning this direct final rule to implement Molex's XL project. If anyone contacts the EPA requesting to speak at a public hearing by November 24, 1997, a public hearing will be held at 7:00 p.m. on December 15, 1997. EPA will determine no later than November 28, 1997 whether a public hearing will be held. Additional information is provided in the section entitled **ADDRESSES**.

Request to Speak at Hearing. Persons wishing to present oral testimony must contact Mr. David Doyle at the EPA by November 24, 1997. Additional information is provided in the section entitled **ADDRESSES**.

ADDRESSES: *Comments.* Written comments should be submitted in duplicate to: Mr. David Doyle, U.S. Environmental Protection Agency, Region VII, Air, RCRA & Toxics Division, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7667.

Docket. A docket containing supporting information used in developing this direct final rulemaking is available for public inspection and copying at U.S. EPA, Region VII, Air, RCRA & Toxics Division, 726 Minnesota Avenue, during normal business hours, and at EPA's Water docket (Docket name ''XL–Molex''); 401 M Street, SW, Washington, DC 20460. For access to the Water docket materials, call (202) 260–3027 between 9:00 a.m. and 3:30 p.m. (Eastern time) for an appointment. A reasonable fee may be charged for copying. A docket is also available for public inspection at the Nebraska Department of Environmental Quality, Lincoln, NE.

Public Hearing. If a public hearing is held, it will be held at 7:00 p.m. on December 15, 1997 at the following location: Nebraska Department of Environmental Quality, Lincoln, NE. Persons interested in whether a hearing will be held should contact Mr. David Doyle, (913) 551–7667, after November 28, 1997.

FOR FURTHER INFORMATION CONTACT: Mr. David Doyle, U.S. Environmental Protection Agency, Region VII, Air, RCRA & Toxics Division, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7667.

SUPPLEMENTARY INFORMATION:

Outline of This Document

I. Authority
II. Background
  A. Overview of Project XL
  B. Overview of the Molex XL Project
  1. Introduction
  2. Molex XL Project Description
  3. Environmental Benefits
  4. Stakeholder Involvement
III. Resource Conservation and Recovery Act Requirements
IV. Additional Information
  A. Public Hearing
  B. Executive Order 12866
  C. Regulatory Flexibility
  D. Paperwork Reduction Act
  E. Unfunded Mandates Reform Act

I. Authority

This regulation is being promulgated under the authority of sections 1004, 2002, 3001–3007, and 3010 of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act, as amended (42 U.S.C. 6903, 6912, 6921–6927, and 6930).

II. Background

A. Overview of Project XL

This site-specific rule is designed to implement a project developed under Project XL, an important EPA initiative to allow regulated entities to achieve better environmental results at less cost.

Project XL—for ''eXcellence and Leadership''—was announced on March 16, 1995, as a central part of the National Performance Review's and EPA's effort to reinvent environmental protection. See 60 FR 27282 (May 23, 1995). In addition, on April 22, 1997, EPA modified its guidance on Project XL, solicited new XL proposals, clarified EPA definitions, and described changes intended to bring greater efficiency to the process of developing XL projects. See 62 FR 19872 (April 22, 1997).

Project XL provides a limited number of private and public regulated entities an opportunity to develop their own pilot projects to provide regulatory flexibility that will result in environmental protection that is superior to what would be achieved through compliance with current and reasonably anticipated future regulations. These efforts are crucial to the Agency's ability to test new regulatory strategies that reduce regulatory burden and promote economic growth while achieving better environmental and public health protection. The Agency intends to evaluate the results of this and other Project XL projects to determine which specific elements of the project, if any, should be more broadly applied to other regulated entities to the benefit of both the economy and the environment.

In Project XL, participants in four categories—facilities, industry sectors, governmental agencies and communities—are offered the flexibility to develop common sense, cost-effective strategies that will replace or modify specific regulatory requirements, on the condition that they produce and demonstrate superior environmental performance. To participate in Project XL, applicants must develop alternative pollution reduction strategies pursuant to eight criteria—superior environmental performance; cost savings and paperwork reduction; local stakeholder involvement and support; test of an innovative strategy; transferability; feasibility; identification of monitoring, reporting and evaluation methods; and avoidance of shifting risk burden. They must have full support of affected Federal, state and tribal agencies to be selected. The XL program is intended to allow EPA to experiment with untried, potentially promising regulatory approaches, both to assess whether they provide benefits at the specific facility affected, and whether they should be considered for wider application. Such pilot projects allow EPA to proceed more quickly than would be required to undertake changes on a nationwide basis. As part of this experimentation, EPA may try out approaches or legal interpretations that depart from or are even inconsistent with longstanding Agency practice, so long as those interpretations are within the broad range of discretion enjoyed by the Agency in interpreting statutes that it implements. EPA may also modify rules that represent one of several possible policy approaches within a more general statutory directive, so long as the alternative being used is permissible under the statute. Adoption of such alternative approaches or interpretations in the context of a given XL project does not, however, signal EPA's willingness to adopt that interpretation as a general matter, or even in the context of other XL projects. It would be inconsistent with the forward-looking nature of these pilot projects to adopt such innovative approaches prematurely on a widespread basis without first finding out whether or not they are viable in practice and successful in the particular projects that embody them. Furthermore, as EPA indicated in announcing the XL program, the Agency expects to adopt only a limited number of carefully selected projects. These pilot projects are not intended to be a means for piecemeal revision of entire programs. Depending on the results in these projects, EPA may or may not be willing to consider adopting the alternative interpretation again, either generally or for other specific facilities.

EPA believes that adopting alternative policy approaches and interpretations, on a limited, site-specific basis and in connection with a carefully selected pilot project, is consistent with the expectations of Congress about EPA's role in implementing the environmental statutes (so long as the Agency acts within the discretion allowed by the statute). Congress' recognition that there is a need for experimentation and research, as well as ongoing re-evaluation of environmental programs, is reflected in a variety of statutory provisions, such as sections 101(b) and 103 of the Clean Air Act. In some cases, as in this XL project, such experimentation requires an alternative regulatory approach that, while permissible under the statute, was not the one adopted by EPA historically or for general purposes.

B. Overview of the Molex XL Project

1. Introduction

Today's direct final site-specific rule supports a Project XL draft Final Project Agreement (FPA) and the Nebraska Department of Environmental Quality draft variance that have been developed by the Molex XL stakeholder group, namely Molex, Inc. (Molex), EPA, Nebraska Department of Environmental Quality (NDEQ), Lincoln/Lancaster County Health Department and the City of Lincoln, NE. The draft FPA and NDEQ draft variance are available for review in the docket for today's action and also are available on the world wide web at http://www.epa.gov/ProjectXL. The proposed FPA outlines how the project addresses the eight Project XL criteria, in particular how the project will produce, measure, monitor, report, and demonstrate superior environmental benefits. The NDEQ draft variance is the implementation mechanism for the project.

In today's action, the Agency is soliciting comment on the site-specific regulatory changes to implement the project. EPA also seeks comment on the proposed FPA, which is available on the world wide web and in the docket file for today's action, in light of the criteria outlined in the Agency's May 23, 1995, **Federal Register** notice (60 FR 27282) regarding Regulatory Reinvention (XL) Pilot Projects and April 22, 1997 **Federal Register** notice (62 FR 19872) Those criteria are: (1) Environmental performance superior to what would be achieved through compliance with current and reasonably anticipated future regulations; (2) cost savings or economic opportunity, and/or decreased paperwork burden; (3) stakeholder support; (4) test of innovative strategies for achieving environmental results; (5) approaches that could be evaluated for future broader application; (6) technical and administrative feasibility; (7) mechanisms for monitoring, reporting, and evaluation; and (8) consistency with Executive Order 12898 on Environmental Justice (avoidance of shifting of risk burden).

2. Molex XL Project Description

Molex is a multinational company that operates several electroplating facilities worldwide. Molex as part of its proposal has upgraded its facility in Lincoln, NE by changing its waste water treatment system to allow it to optimize the recovery of metals used in the electroplating processes. Once operating this system under the project, the primary environmental benefit will be the reduction of metals loading in the effluent discharges into the publicly owned treatment works (POTW). A secondary environmental benefit will be increased recycling and reducing the amount of material that would otherwise be landfarmed.

This project is an alternative environmental compliance strategy that encompasses technical changes to the

facility's wastewater treatment system, environmental improvements in the effluent to the POTW, regulatory relief for the facility for storage and shipment of wastes, and documentation of the technical, environmental and economic impacts of the alternative strategy.

The facility generates several metals-bearing wastewater streams that formerly were brought together for combined treatment. Metals recovery in such a system is limited because each metal has its own optimal set of treatment conditions. At its new facility Molex is operating a segregated treatment system that separately treats each metal waste stream to optimize the precipitation of each metal contaminant to more effectively remove metals from the effluent to the POTW. Molex has made its investment in the system in anticipation of its participation in the XL program and the regulatory relief it will provide. At the new facility Molex changed the process lines to generate separate treatment sludges for nickel, copper, and tin/lead. The environmental benefit will be a substantial reduction in the mass loading of metals entering the City of Lincoln's POTW. In addition, the resultant mono-metal sludges will be commodity-like materials suitable for recycling by smelters. However, the segregated system will cost more to operate than a combined treatment system. Additionally, the segregated system will result in increased costs from compliance with the current regulations for handling the resultant sludges. Currently, Molex is handling the sludges as hazardous wastes. Without the regulatory relief provided in this project, Molex will not be able to financially justify continued operation of the segregated system.

3. Environmental Benefits

This project supports goals of both the Federal Water Pollution Control Act (FWPCA), Nebraska Surface Water Quality Standards, Resource Conservation and Recovery Act (RCRA) and the Nebraska Hazardous Waste Management Program.

This project supports the FWPCA and Nebraska Surface Water Quality Standards goals to restore and maintain the chemical, physical and biological integrity of the Nation's and State's waters. Specifically, this project reduces the metals loading effluent into the City of Lincoln, NE's POTW, thus reducing metals discharges from the POTW into the nation's and State's waters and metals constituents in the POTW sludge that ultimately is landfarmed. Additionally, the reduced loading maintains the reserve treatment capacity of the POTW, thus deferring the replacement or enlargement of the publicly financed construction.

This project also supports the RCRA and Nebraska Hazardous Waste Management Program goals of resource recovery and conservation. Specifically, this project results in direct recycling of mono-metals bearing sludges by smelters, which will decrease the need for mining of ores or other virgin materials, thus conserving mineral resources and reducing the amount of materials that would otherwise be landfarmed.

4. Stakeholder Involvement

The participating stakeholders are the signatories to this FPA. In addition, the Lincoln/Lancaster County Health Department and the City of Lincoln, Nebraska have supported the development of this project. Also, the public has been notified from the outset of this project and invited to participate, and will continue to be informed as the project is implemented through dissemination of the reports submitted by Molex to NDEQ and EPA.

III. Resource Conservation and Recovery Act Requirements

A. Summary of Regulatory Changes for the Molex XL Project

The NDEQ hazardous waste program has been authorized by EPA pursuant to the Resource Conservation and Recovery Act (RCRA) Section 3006(b) and 40 CFR Part 271, to carry out the Nebraska program in lieu of the Federal hazardous waste program. Sludges from Molex's former combined treatment system contain copper, nickel, tin, lead, and gold. The gold content of the materials has allowed Molex to handle the combined treatment sludge as ''recyclable materials'' from which precious metals are reclaimed under Title 128, Rules and Regulations Governing Hazardous Waste Management in Nebraska, Chapter 7, Section 010.

Except for a small quantity of sludge generated from the gold plating operation, the sludges at the new facility will not contain precious metals and therefore will not qualify as ''recyclable material'' from which precious metals are reclaimed. As such, in the absence of this regulatory relief, the materials will be subject to the NDEQ Title 128 generator requirements for storage and shipment of hazardous wastes, at considerably greater expense for storage, shipment and disposal/recycling as compared to the precious metals exemption. With the regulatory relief, Molex will be allowed to handle the non-precious mono-metals sludges as a commodity-like material with substantially reduced regulatory compliance costs.

To accomplish the regulatory relief, the U.S. EPA today is promulgating a direct final site-specific rule to amend 40 CFR 260.31(c), which provides that authorized state agencies may:

> ''* * * grant requests for a variance from classifying as a solid waste those materials that have been reclaimed but must be reclaimed further before recovery is completed if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further).''

The federal site-specific rule will provide that the nickel, copper, and tin/lead non-precious metals bearing sludges generated at the Molex facility may qualify for a regulatory variance from NDEQ. The site-specific rule will also provide that the variance may be issued on a temporary basis by NDEQ.

IV. Additional Information

A. Public Hearing

A public hearing will be held, if requested, to provide opportunity for interested persons to make oral presentations regarding the direct final rule. Persons wishing to make oral presentation on the rule to implement Molex's XL project should contact the EPA at the address given in the **ADDRESSES** section of this document. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be sent to EPA at the addresses given in the **ADDRESSES** section of this document. If a public hearing is held, a verbatim transcript of the hearing and written statements will be available for inspection and copying during normal business hours at the EPA addresses given in the **ADDRESSES** section of this document.

B. Executive Order 12866

Because this rule only affects one facility it is not a rule of general applicability subject to OMB review under E.O. 12866. In addition, OMB has agreed that they do not need to review site specific rules under Project XL.

C. Regulatory Flexibility

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and

small governmental jurisdictions. This rule would not have a significant impact on a substantial number of small entities because it only affects one entity, the Molex facility in Lincoln, NE. Therefore, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities.

D. Paperwork Reduction Act

This action applies only to one company, and therefore requires no information collection activities subject to the Paperwork Reduction Act, and therefore no information collection request (ICR) will be submitted to the Office of Management and Budget (OMB) for review in compliance with the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

E. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

As noted above, this rule is limited to Molex's facility in Lincoln, NE. EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. EPA has also determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

List of Subjects in 40 CFR Part 260

Environmental protection, Hazardous waste, Treatment storage and disposal facility, Waste determination.

Dated: October 27, 1997.

Carol M. Browner,

Administrator.

For the reasons set forth in the preamble of this rule, chapter I of title 40 of the Code of Federal Regulations is amended as follows:

1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921–6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

2. Section 260.31 is amended by adding paragraph (d) to read as follows:

§ 260.31 Standards and criteria for variances from classification as a solid waste.

* * * * *

(d) Pursuant to participation by Molex, Inc. in the Project XL program (May 23, 1995 and April 22, 1997), and for a period not to exceed two years, the Nebraska Department of Environmental Quality may grant to the Molex, Inc. facility located at 700 Kingbird Road in Lincoln, NE, a temporary variance from classifying as a solid waste the commodity-like nickel, copper, and tin/lead non-precious metals bearing sludges generated at the facility.

[FR Doc. 97–29052 Filed 10–31–97; 8:45 am]

BILLING CODE 6560–50–U

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 64

[Docket No. FEMA–7673]

List of Communities Eligible for the Sale of Flood Insurance

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Final rule.

SUMMARY: This rule identifies communities participating in the National Flood Insurance Program (NFIP). These communities have applied to the program and have agreed to enact certain floodplain management measures. The communities' participation in the program authorizes the sale of flood insurance to owners of property located in the communities listed.

EFFECTIVE DATES: The dates listed in the third column of the table.

ADDRESSES: Flood insurance policies for property located in the communities listed can be obtained from any licensed property insurance agent or broker serving the eligible community, or from the NFIP at: Post Office Box 6464, Rockville, MD 20849, (800) 638–6620.

FOR FURTHER INFORMATION CONTACT: Robert F. Shea, Jr., Division Director, Program Implementation Division, Mitigation Directorate, 500 C Street SW., room 417, Washington, DC 20472, (202) 646–3619.

SUPPLEMENTARY INFORMATION: The NFIP enables property owners to purchase flood insurance which is generally not otherwise available. In return, communities agree to adopt and administer local floodplain management measures aimed at protecting lives and new construction from future flooding. Since the communities on the attached list have recently entered the NFIP, subsidized flood insurance is now available for property in the community.

In addition, the Associate Director of the Federal Emergency Management Agency has identified the special flood hazard areas in some of these communities by publishing a Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM). The date of the flood map, if one has been published, is indicated in the fourth column of the table. In the communities listed where a flood map has been published, Section 102 of the Flood Disaster Protection Act of 1973, as amended, 42 U.S.C. 4012(a), requires the purchase of flood insurance as a condition of Federal or federally related financial assistance for acquisition or construction of buildings in the special flood hazard areas shown on the map.

The Associate Director finds that the delayed effective dates would be contrary to the public interest. The Associate Director also finds that notice and public procedure under 5 U.S.C. 553(b) are impracticable and unnecessary.

National Environmental Policy Act. This rule is categorically excluded from

the requirements of 44 CFR Part 10, Environmental Considerations. No environmental impact assessment has been prepared.

Regulatory Flexibility Act. The Associate Director certifies that this rule will not have a significant economic impact on a substantial number of small entities in accordance with the Regulatory Flexibility Act, 5 U. S. C. 601 *et seq.*, because the rule creates no additional burden, but lists those communities eligible for the sale of flood insurance.

Regulatory Classification. This final rule is not a significant regulatory action under the criteria of section 3(f) of Executive Order 12866 of September 30, 1993, Regulatory Planning and Review, 58 FR 51735.

Paperwork Reduction Act. This rule does not involve any collection of information for purposes of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

Executive Order 12612, Federalism. This rule involves no policies that have federalism implications under Executive Order 12612, Federalism, October 26, 1987, 3 CFR, 1987 Comp., p. 252.

Executive Order 12778, Civil Justice Reform. This rule meets the applicable standards of section 2(b)(2) of Executive Order 12778, October 25, 1991, 56 FR 55195, 3 CFR, 1991 Comp., p. 309.

List of Subjects in 44 CFR Part 64

Flood insurance, Floodplains.

Accordingly, 44 CFR part 64 is amended as follows:

PART 64—[AMENDED]

1. The authority citation for Part 64 continues to read as follows:

Authority: 42 U.S.C. 4001 *et seq.*, Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

§ 64.6 [Amended]

2. The tables published under the authority of § 64.6 are amended as follows:

State/location	Community No.	Effective date of eligibility	Current effective map date
New Eligibles—Emergency Program			
Iowa: Marshall County, unincorporated areas	190890	Sept. 19, 1997	June 3, 1997.
Texas:			
Eastland County, unincorporated areas	480793	Sept. 30, 1997	Nov. 15, 1997.
Frio County, unincorporated areas	481172	.....do.	
New Eligibles—Regular Program			
Pennsylvania: Lumber City, borough of, Clearfield County.	420309	Sept. 9, 1997	NSFHA.
Michigan: Meyer, township of, Menominee County	260458	Aug. 19, 1997	Aug. 19, 1997.
Maine: Long Island, town of, Cumberland County[1]	231035	Sept. 17, 1997	July 15, 1992.
North Carolina: Cornelius, town of, Mecklenburg County[2].	370498	Sept. 30, 1997	Feb. 3, 1993.
Texas: Montgomery, city of, Montgomery County	481483	.....do	Dec. 19, 1996.
Withdrawal			
South Dakota: Corsica, town of, Douglas County	460167	Feb. 24, 1997, Emerg.; Apr. 25, 1997, Reg.; Sept. 30, 1997, With.	NSFHA.
Reinstatements			
Ohio: Milford Center, village of, Union County	390662	May 14, 1975, Emerg.; June 2, 1995, Reg.; June 2, 1995, Susp.; Sept. 17, 1997, Rein.	June 2, 1995.
Illinois:			
Lake Forest, city of, Lake County	170374	Apr. 23, 1974, Emerg.; Feb. 18, 1981, Reg.; Sept. 3, 1997, Susp.; Sept. 18, 1997, Rein.	Sept. 3, 1997.
Lake Villa, village of, Lake County	170375	Oct. 16, 1974, Emerg.; July 2, 1981, Reg.; Sept. 3, 1997, Susp.; Sept. 18, 1997, Rein.	Do.
Hainesville, village of, Lake County	171005	May 11, 1995, Reg.; Sept. 3, 1997, Susp.; Sept. 19, 1997, Rein.	Do.
Riverwoods, village of, Lake County	170387	Aug. 21, 1975, Emerg.; Aug. 15, 1980, Reg.; Sept. 3, 1997, Susp.; Sept. 19, 1997, Rein.	Do.
Deer Park, village of, Lake County	171028	Feb. 17, 1993, Emerg.; Sept. 3, 1997, Susp.; Sept. 22, 1997, Rein.	Do.
Lake County, unincorporated areas	170357	Apr. 4, 1973, Emerg.; Nov. 3, 1982, Reg.; Sept. 3, 1997, Susp.; Sept. 23, 1997, Rein.	Do.
Fox Lake, village of, Lake County	170362	Mar. 9, 1973, Emerg.; Sept. 29, 1978, Reg.; Sept. 3, 1997, Susp.; Sept. 24, 1997, Rein.	Do.
Highland Park, city of, Lake County	170367	Apr. 5, 1973, Emerg.; Nov. 5, 1980, Reg.; Sept. 3, 1997, Susp.; Sept. 30, 1997; Rein.	Do.
Michigan: Nottawa, township of, Isabella County	260821	Apr. 24, 1989, Emerg.; May 2, 1991, Reg.; May 2, 1991, Susp.; Sept. 30, 1997, Rein.	May 2, 1991.
Ohio: Stockport, village of, Morgan County	390423	May 30, 1975, Emerg.; Aug. 1, 1987, Reg.; Aug. 1, 1987, Susp.; Sept. 30, 1997, Rein.	Aug. 1, 1987.
Texas: Smith County, unincorporated areas	481185	Jan. 5, 1979, Emerg.; July 2, 1981, Reg.; July 2, 1981, Susp.; Sept. 30, 1997, Rein.	July 2, 1981.
Regular Program Conversions			
Regional III			
Virginia: Culpeper County, unincorporated areas	510041	Sept. 3, 1997, Suspension Withdrawn	Sept. 3, 1997.
Region V			
Illinois:			
Antioch, village of, Lake County	170358	.....do	Do.

State/location	Community No.	Effective date of eligibility	Current effective map date
Bannockburn, village of, Lake County	170359	.....do	Do.
Beach Park, village of, Lake County	171022	.....do	Do.
Buffalo Grove, village of, Lake County	170068	.....do	Do.
Deerfield, village of, Lake County	170361	.....do	Do.
Grayslake, village of, Lake County	170363	.....do	Do.
Green Oaks, village of, Lake County	170364	.....do	Do.
Gurnee, village of, Lake County	170365	.....do	Do.
Hawthorn Woods, village of, Lake County	170366	.....do	Do.
Kildeer, village of, Lake County	170371	.....do	Do.
Lake Barrington, village of, Lake County	170372	.....do	Do.
Lake Bluff, village of, Lake County	170373	.....do	Do.
Lake County unincorporated areas	170357	.....do	Do.
Lake Zurich, village of, Lake County	170376	.....do	Do.
Libertyville, village of, Lake County	170377	.....do	Do.
Lincolnshire, village of, Lake County	170378	.....do	Do.
Lindenhurst, village of, Lake County	170379	.....do	Do.
Long Grove, village of, Lake County	170380	.....do	Do.
Mettawa, village of, Lake County	170381	.....do	Do.
Mundelein, village of, Lake County	170382	.....do	Do.
North Barrington, village of, Lake County	170383	.....do	Do.
North Chicago, village of, Lake County	170384	.....do	Do.
Old Mill Creek, village of, Lake County	170385	.....do	Do.
Park City, city of, Lake County	170386	.....do	Do.
Round Lake, village of, Lake County	170388	.....do	Do.
Round Lake Beach, village of, Lake County	170389	.....do	Do.
Round Lake Heights, village of, Lake County	170390	.....do	Do.
Round Lake Park, village of, Lake County	170391	.....do	Do.
Third Lake, village of, Lake County	170392	.....do	Do.
Tower Lakes, village of, Lake County	170393	.....do	Do.
Vernon Hills, village of, Lake County	170394	.....do	Do.
Wadsworth, village of, Lake County	170395	.....do	Do.
Wauconda, village of, Lake County	170396	.....do	Do.
Waukegan, city of, Lake County	170397	.....do	Do.
Winthrop Harbor, village of, Lake County	170398	.....do	Do.
Zion, city of, Lake County	170399	.....do	Do.
Region VII			
Kansas: Garden City, city of, Finney County	205186	.....do	Do.
Region IX			
California:			
Madera County, unincorporated areas	060170	.....do	Do.
Santa Paula, city of, Ventura County	060420	.....do	Do.
Simi Valley, city of, Ventura County	060421	.....do	Do.
Ventura County, unincorporated areas	060413	.....do	Do.
Region I			
Connecticut: Cromwell, town of, Middlesex County	090123	Sept. 17, 1997, Suspension Withdrawn	Sept. 17, 1997.
Massachusetts: Edgartown, town of, Dukes County.	250069	.....do	Do.
New Hampshire: Keene, city of, Cheshire County	330023	.....do	Do.
Region II			
New York:			
Brutus, town of, Cayuga County	360104	.....do	Do.
Gardiner, town of, Ulster County	360856	.....do	Do.
Region III			
Pennsylvania:			
Lock Haven, city of, Clinton County	420328	.....do	Do.
Woodward, township of, Clinton County	420337	.....do	Do.
Region V			
Ohio:			
Canal Winchester, village of, Franklin County	390169	.....do	Do.
Franklin County, unincorporated areas	390167	.....do	Do.
Wisconsin: West Bend, city of, Washington County	550475	.....do	Do.
Region IX			
Arizona: Apache County, unincorporated areas	040001	.....do	Do.
California:			
Dublin, city of, Alameda County	060705	.....do	Do.
Livermore, city of, Alameda County	060008	.....do	Do.
Modoc County, unincorporated areas	060192	.....do	Do.

State/location	Community No.	Effective date of eligibility	Current effective map date
Region VI			
Oklahoma: Marshall County, unincorporated areas	400511	Sept. 30, 1997, Suspension Withdrawn	Sept. 30, 1997.
Region VII			
Nebraska: Howard County, unincorporated areas	310446	.....do	Do.
Region VIII			
Colorado: Broomfield, city of, Adams, Boulder, and Jefferson Counties.	085073	.....do	Do.
Montana: Bull Creek, village of, Taney County	290916	.....do	Do.

[1] The Town of Long Island has adopted the City of Portland (CID #230051) Flood Insurance Rate Map dated July 15, 1992, panels 0003, 0004, 009 and 0010.
[2] The Town of Cornelius has adopted the Mecklenburg County (CID #370158) Flood Insurance Rate Map dated February 3, 1993, panels 005, 0015, and 0020.
Code for reading third column: Emerg.—Emergency; Reg.—Regular; Rein.—Reinstatement; Susp.—Suspension; With.—Withdrawn; NSFHA—Non Special Flood Hazard Area.

(Catalog of Federal Domestic Assistance No. 83.100, ''Flood Insurance'')
Issued: October 24, 1997.

Michael J. Armstrong,

Associate Director for Mitigation.

[FR Doc. 97–28997 Filed 10–31–97; 8:45 am]
BILLING CODE 6718–05–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 25

[IB Docket No. 96–220; FCC 97–370]

Non-Voice, Non-Geostationary Mobile Satellite Service

AGENCY: Federal Communications Commission.
ACTION: Final rule.

SUMMARY: The Commission has adopted rules and policies to govern the second processing round for the non-voice, non-geostationary mobile satellite service (''NVNG MSS'') also referred to as the ''Little LEO'' service. The Commission's rules adopted include a spectrum sharing plan that permits licensing five NVNG MSS applicants; financial qualification rules; rules requiring NVNG MSS licensees to time-share spectrum with existing commercial and government licensees; and a rule requiring second processing round applicants to file amendments to their applications to conform their applications to the rules adopted in the Report and Order.

EFFECTIVE DATE: January 2, 1998.
ADDRESSES: Office of the Secretary, Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.
FOR FURTHER INFORMATION CONTACT: Daniel Connors, International Bureau, Satellite Policy Branch, (202) 418–0755; or Kathleen Campbell, International Bureau, Satellite Policy Branch (202) 418–0753.
SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order in IB Docket No. 96–220; FCC 97–370, adopted October 8, 1997, and released October 15, 1997. The complete text of this Report and Order is available for inspection and copying during normal business hours in the FCC Reference Center (Room 239), 1919 M Street, N.W. Washington, D.C., and from the Commission's world-wide-web page on the Internet (http://www.fcc.gov), and also may be purchased from the Commission's copy contractor, International Transcription Service, (202) 857–3800, 2100 M Street, N.W., Suite 140, Washington, D.C. 20037. Because this Report and Order contains information collections that affect less than 10 persons and, therefore, is not subject to the Paperwork Reduction Act of 1995, Public Law No. 104–13. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared a Regulatory Flexibility Analysis (''RFA'') of the expected impact on small entities of the proposals suggested in this document.

Summary of the Report and Order

1. This Report and Order (''R&O'') reflects the Commission's commitment to licensing applicants in the second processing round to provide Little LEO service and the Commission's continued efforts to promote competition in the U.S. satellite services market. With this R&O, we adopt a spectrum sharing plan and service rules and polices for the licensing of five applicants in the second processing round.

2. Because the second processing round applicants filed a mutually agreed upon spectrum sharing plan with the Commission that accommodates all of their proposed systems, we decline to adopt our proposed new entrant rule. The spectrum sharing plan that we adopt achieves the same pro-competitive objectives as our proposed new entrant rule with the additional benefit of permitting the licensing of all five second processing round applicants. Therefore, our proposed new entrant rule is unnecessary.

3. As a result of the spectrum sharing plan agreed to by the second processing round applicants, all applicants can be accommodated in the available spectrum being licensed. Consequently, our proposed strict financial qualification standard is unnecessary to prevent an under-financed applicant from preventing a fully capitalized applicant from going forward. Therefore, we adopt a relaxed financial qualification standard that requires that second processing round applicants demonstrate finances sufficient to construct and launch two satellites in their proposed systems and to operate two satellites in their system for one year after their launch.

4. We adopt a spectrum sharing plan that permits licensing five second processing round applicants: three new Little LEO systems and two existing Little LEO licensees. One new Little LEO applicant (''System 1'') can operate a system in the 148–150.05 MHz uplink band and the 137–137.025 MHz, 400.15–401 MHz downlink bands. A second new Little LEO applicant (''System 2'') can operate a system in the 148–150.05 MHz uplink band and in parts of the 400.15–401 MHz and 137–138 MHz downlink bands. A third new Little LEO applicant (''System 3'') can operate a system in the 148–148.905 MHz uplink band and the 137.0725–137.9275 MHz downlink band. Orbital Communications Corporation, an existing Little LEO licensee (''Orbcomm''), can expand its Little LEO system by sharing approximately 355 kHz of spectrum in the 148–148.855 MHz uplink band with Systems 1, 2 and 3. Orbcomm will also operate in parts of the 137–138 MHz downlink band not being used by Systems 1 or 2. Finally, Volunteers in Technical Assistance, Inc. (''VITA''), also an existing Little LEO licensee, can expand its authorized Little LEO system to operate in the 400.5983–400.645 MHz downlink band on a time-shared basis with System 2. In the 137–138 MHz band, System 2 will

be required to time-share spectrum with meteorological satellites of the National Oceanic and Atmospheric Administration (''NOAA''). In the 400.15–400.505 MHz and 400.645–401 MHz bands, System 1 will be required to time-share the spectrum with meteorological satellites of the Department of Defense (''DoD'').

5. Because System 2 will be unable to implement its system fully in the spectrum available in the second processing round, the Commission has adopted a rule that makes the System 2 licensee eligible to apply for and use up to 210 kHz of downlink spectrum subsequently allocated to the Little LEO service on a worldwide and domestic basis, subject to operating conditions and other restrictions imposed by the Commission. This priority will enable the System 2 licensee to implement its proposed system.

6. The R&O requires System 1 and System 2 to time-share parts of their downlink spectrum with the meteorological satellite systems of DoD and NOAA, respectively. Consequently, we have adopted rules permitting System 1 and System 2 to time-share this spectrum with DoD and NOAA, respectively, subject to certain elevation angle, transmission termination, satellite shut-off and frequency demonstration and change requirements imposed by the Commission to protect the DoD and NOAA meteorological satellite systems from harmful interference from the operations of System 1 and System 2, respectively.

7. We also adopted a rule prohibiting a NVNG licensee from entering into exclusive agreements or arrangements with other countries concerning communications to and from the United States. An exclusive agreement or arrangement may foreclose other United States Little LEO licensees from serving a foreign market and preventing that licensee from providing global service.

8. Finally, we adopted a rule requiring second processing round applicants to amend their applications within 15 days after the release of the R&O in order to conform their applications with the rules and policies adopted in the R&O. Ordering Clauses

9. Accordingly, *It Is Ordered* pursuant to sections 1, 4, 303(r), and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154, 303(r), and 309(j), that Part 25 of the Commission's Rules, 47 CFR 25, and the Commission's policies are amended as specified in this R&O.

10. *It is further ordered* that second round applicants shall file amended applications on or before October 30, 1997. We find good cause to make this rule effective within 15 days after the release of this R&O. This rule will enable the five second round applicants to expedite the amendment of their second round applications which have been pending for approximately three years. This will enable the Commission to expedite the processing of second round applications in order to issue licenses to qualified applicants. Continued delay in the processing of second round applications will increase the headstarts already given to existing first round licensees and other providers of competitive services. Further delay in issuing second processing round licenses will undermine the public interest by delaying the entry of new competitors in the markets for Little LEO services. Moreover, we find that good cause exists to waive additional notice and comment upon this rule because it is unnecessary and contrary to the public interest. This rule has already been subject to notice and comment in this rulemaking proceeding and the second round applicants that are directly affected by this rule are urging the Commission to take prompt action in this R&O that will expedite the issuance of second round licenses. It would be contrary to the public interest for the Commission to delay further the processing of second round applications now that the second round applicants have mutually agreed upon a spectrum sharing plan and are urging the Commission to expedite the issuance of second round licenses.

11. The analysis required pursuant to the Regulatory Flexibility Act, 5 U.S.C. § 604, is set forth below.

12. The Paperwork Reduction Act does not apply to the rules adopted herein because such rules apply to less than 10 persons.

13. Except for the rule requiring the filing of amended applications by second round applicants within 15 days after the release of this R&O, *It is further ordered* that amendments to Part 25 of the Commission's Rules, 47 CFR part 25, and the Commission's policies, as specified in this R&O, Will Become Effective January 2, 1998.

Final Regulatory Flexibility Act Statement

14. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared a final Regulatory Flexibility Analysis (''FRFA'') of the expected impact on small entities of the proposals suggested in this document. The Secretary shall send a copy of this R&O, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act, Public Law No. 96–354, 94 Stat. 1164, 5 U.S.C. § 601 *et seq*. (1981).

Final Regulatory Flexibility Analysis

15. As required by RFA, an Initial Regulatory Flexibility Analysis (''IRFA'') was incorporated in the Notice of Proposed Rulemaking (the ''Notice''). The Commission sought written public comment on the proposals in the Notice, including comment on the IRFA. This FRFA, concerning the R&O, conforms to the RFA.

I. Need for and Objectives of the R&O

16. In this decision, the Commission, adopts a spectrum licensing plan and service rules and policies for second processing round applicants for NVNG MSS systems that will operate in frequency bands below 1 GHz. The purpose of this action is to develop rules and policies for licensing new NVNG MSS systems and existing NVNG licensees seeking to expand the service capability of their systems in order to (a) promote competition in the emerging NVNG MSS service markets and (b) spur the rapid delivery of new services to the public at reasonable prices. NVNG MSS systems provide near real-time data services worldwide and are global systems. In order to ensure the rapid and successful implementation of new NVNG MSS systems, the Commission has worked closely with the National Telecommunications and Information Administration (''NTIA'') to develop innovative technical service rules that permit new NVNG MSS systems to time-share the licensed spectrum with existing United States government systems that will be operating in the same downlink spectrum. The R&O adopts rules and policies that promote efficiency in licensing and use of the electromagnetic spectrum. In addition, we expect that the licensing framework we have set out for NVNG MSS systems will aid in the development of competitive and innovative satellite systems.

II. Summary of Significant Issues Raised by Public Comments in Response to the Initial Regulatory Flexibility Analysis

17. No comments were received specifically in response to the IRFA. However, in order to minimize the entry barriers for new Little LEO systems seeking to provide NVNG MSS systems, the Commission staff spent months working with NTIA and the applicants to fashion a spectrum licensing plan that was proposed in the Notice. Before release of the R&O, we, again, worked

closely with second round applicants and encouraged them to develop a mutually acceptable spectrum licensing plan. All of the second processing round applicants were able to reach agreement regarding a spectrum sharing plan and that plan has been adopted in the R&O. The spectrum sharing plan accommodates the system designs of all second round applicants, including existing NVNG MSS licensees. Therefore, we will not adopt our new entrant eligibility requirements and will apply our relaxed financial standard, rather than the strict financial standard proposed in the Notice. In addition, because all second round applicants can be accommodated in the available spectrum, the spectrum sharing plan we adopt avoids mutual exclusivity. Consequently, it will be unnecessary for the Commission to employ an auction to choose among mutually exclusive applicants. Finally, the R&O adopts eligibility rules for the use of future MSS spectrum and for receiving a second processing round authorization. By licensing all second round NVNG MSS applicants, we enable small entities and start-up companies the opportunity to compete in the capital intensive satellite industry.

III. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

18. The Commission has not developed a definition of small entities applicable to satellite service licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration rules applicable to Communications Services ''Not Elsewhere Classified.'' This definition provides that a small entity is one with $11 million or less in annual receipts.[1]

19. Of the five applicants in the second processing round, two are small entities: Volunteers in Technical Assistance, Inc. and LEO One USA Corporation. The remaining three second round applicants, Orbital Communications Corporation, Final Analysis Communications, Inc. and E-Sat, are not small entities because they each have revenues in excess of $11 million annually or have parent companies or investors that have revenues in excess of $11 million annually.

20. The service rules adopted in the R&O will not apply to other small entities currently providing NVNG MSS types of services. The services rules apply only to second round NVNG MSS licensees that time-share spectrum in the 400.15–401 MHz and 137–138 MHz frequency bands with existing United States government satellite systems.

[1] 13 CFR 121.201, Standard Industrial Classification (SIC) Code 4899.

IV. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

21. The rules adopted in the R&O require that all second processing round applicants file amendments to their pending applications to conform to the rules and policies adopted in the R&O. Such amendments are required in order to provide the Commission with updated technical and financial information about each applicant so that the Commission can determine whether or not an applicant is technically and financially qualified to receive a license to operate in the applied for spectrum.

22. In this R&O, we also adopt certain compliance requirements for second round NVNG MSS licensees that time-share spectrum in the 400.15–401 MHz and 137–138 MHz frequency bands with United States government satellite systems. The Commission may terminate the operations of NVNG MSS licensees determined to be interfering with the operations of United States government satellite systems. NVNG MSS licensees will also be required to comply with technical operational parameters relating to elevation angle, system demonstration requirements and satellite fail-safe procedures.

V. Steps Taken to Minimize Significant Economic Burden on Small Entities, and Significant Alternatives Considered

23. The Commission proposed in the Notice applying a strict financial standard to second round NVNG MSS applicants. In order to minimize any barriers for entry into this new satellite market for small entities, Commission staff spent months encouraging and working with all of the NVNG MSS second round applicants to develop a spectrum sharing plan that could accommodate all second round applicants. As discussed in the R&O, all second round applicants can be accommodated under the spectrum licensing plan that we adopt. Therefore, we will apply the same relaxed financial standard to second processing round applicants that we applied to first processing round licenses. By developing a spectrum sharing plan that accommodates all second round applicants, we enable small entities and start-up companies the opportunity to compete in the capital intensive satellite industry.

VI. Report to Congress

24. The Commission shall send a copy of this FRFA, along with the R&O, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 801(a)(1)(A). A copy of this FRFA will also be published in the **Federal Register**.

List of Subjects in 47 CFR Part 25

Satellites.

Federal Communications Commission.

William F. Caton,

Acting Secretary.

Rule Changes

Part 25 of title 47 of the Code of Federal Regulations is amended as follows:

PART 25—SATELLITE COMMUNICATIONS

1. The authority citation for part 25 continues to read as follows:

Authority: Secs. 25.101 to 25.601 issued under Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interpret or apply secs. 101–104, 76 Stat. 419–427; 47 U.S.C. 701–744; 47 U.S.C. 554.

2. Paragraphs (d) and (e) are added to § 25.142 to read as follows:

§ 25.142 Licensing provisions for the non-voice, non-geostationary mobile-satellite service.

* * * * *

(d) *Prohibition of certain agreements.* No license shall be granted to any applicant for a non-voice, non-geostationary mobile-satellite service system if that applicant, or any companies controlling or controlled by the applicant, shall acquire or enjoy any right, for the purpose of handling traffic to or from the United States, its territories or possessions, to construct or operate space segment or earth stations in the non-voice, non-geosynchronous mobile-satellite service, or to interchange traffic, which is denied to any other United States company by reason of any concession, contract, understanding, or working arrangement to which the licensee or any persons or companies controlling or controlled by the licensee are parties.

(e) *Spectrum priority.* (1) The non-voice, non-geosynchronous mobile-satellite service system that is authorized in the second application processing round to operate in the 148–148.25 MHz, 148.75–148.855 MHz, 148.905–149.81 MHz and 150–150.05 MHz uplink frequency bands and the 400.505–400.5517 MHz, 400.5983–400.645 MHz, 137.025–137.175 MHz, 137.333–137.4125 MHz, 137.475–

137.525 MHz, 137.595–137.645 MHz, 137.753–137.787 MHz and 137.825–138 MHz downlink frequency bands (the ''System 2 licensee'') will have a first priority to apply for and use a limited amount of downlink spectrum duly allocated worldwide and domestically to the non-voice, non-geosynchronous mobile-satellite service by the ITU, at WRC–97 or a subsequent World Radiocommunication Conference, and by the Commission, respectively (the ''Future Spectrum''). The System 2 licensee will be eligible to apply for and use the first 210 kHz of Future Spectrum plus spectrum sufficient to account for Doppler frequency shift in the Future Spectrum (the ''Supplemental Spectrum'') to implement its non-voice, non-geosynchronous mobile-satellite service system. The System 2 licensee's application for and use of the Supplemental Spectrum is subject to the Commission's Rules and policies, such reasonable operating conditions as may be imposed by the Commission, and international spectrum coordination requirements. For so long as the System 2 licensee is permitted by the Government of France to operate in the 400.5517–400.5983 MHz band coordinated with the French system S80–1, the Supplemental Spectrum shall be reduced to an amount equivalent to 150 kHz of Future Spectrum plus spectrum sufficient to account for Doppler frequency shift in the Future Spectrum.

(2) The System 2 licensee's priority to apply for and use the Supplemental Spectrum is conditioned on the System 2 licensee's compliance with the terms and conditions of its second processing round authorization, including, but not limited to, its system construction, launch and operation milestones, and any modifications thereto, and the Commission's Rules. The System 2 licensee's priority to apply for and use the Supplemental Spectrum shall automatically terminate upon the occurrence of any of the following events:

(i) The System 2 licensee being permitted to operate in the Supplemental Spectrum;

(ii) The expiration or revocation of the System 2 licensee's second processing round authorization;

(iii) The discontinuance of use of the spectrum assigned to the System 2 licensee under its second processing round authorization; or

(iv) The surrender of the System 2 licensee's second processing round authorization to the Commission.

3. Section 25.201 is amended by adding the following definition, in alphabetical order, to read as follows:

§ 25.201 Definitions.

* * * * *

Protection areas. The geographic regions on the surface of the Earth where United States Department of Defense (''DoD'') meteorological satellite systems or National Oceanic and Atmospheric Administration (''NOAA'') meteorological satellite systems, or both such systems, are receiving signals from low earth orbiting satellites.

* * * * *

4. Add §§ 25.259 and 25.260 to subpart C to read as follows:

§ 25.259 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137–138 MHz band.

(a) A non-voice, non-geostationary mobile-satellite service system licensee (''NVNG licensee'') time-sharing spectrum in the 137–138 MHz frequency band shall not transmit signals into the ''protection areas'' of National Oceanic and Atmospheric Administration (''NOAA'') satellite systems. When calculating the protection areas for a NOAA satellite in the 137.333–137.367 MHz, 137.485–137.515 MHz, 137.605–137.635 MHz and 137.753–137.787 MHz bands, a NVNG licensee shall use an earth station elevation angle of five degrees towards the NOAA satellite and will cease its transmissions prior to the NVNG licensee's service area, based on an elevation angle of zero degrees towards the NVNG licensee's satellite, overlapping the NOAA protection area. When calculating the protection areas for a NOAA satellite in the 137.025–137.175 MHz and 137.825–138 MHz bands, a NVNG licensee shall use an earth station elevation angle of zero degrees, or less if reasonably necessary, towards the NOAA satellite and will cease its transmissions prior to the NVNG licensee's service area, based on an elevation angle of zero degrees towards the NVNG licensee's satellite, overlapping the NOAA protection area. A NVNG licensee is responsible for obtaining the necessary ephemeris data. This information shall be updated system-wide on at least a weekly basis. A NVNG licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by NOAA.

(b) A NVNG licensee time sharing spectrum in the 137–138 MHz band shall establish a 24-hour per day contact person and telephone number so that claims of harmful interference into NOAA earth station users and other operational issues can be reported and resolved expeditiously. This contact information shall be made available to NOAA or its designee. If the National Telecommunications and Information Administration (''NTIA'') notifies the Commission that NOAA is receiving unacceptable interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide NOAA system. A NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its non-voice, non-geostationary mobile-satellite service, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph (b). The Commission will not hesitate to impose sanctions on a NVNG licensee time-sharing spectrum in the 137–138 MHz band with NOAA, including monetary forfeitures and license revocations, when appropriate.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with NOAA in the 137–138 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

§ 25.260 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15–401 MHz band.

(a) A non-voice, non-geostationary mobile-satellite service system licensee (''NVNG licensee'') time-sharing spectrum in the 400.15–401.0 MHz band shall not transmit signals into the ''protection areas'' of Department of Defense (''DoD''). When calculating the protection areas for a DoD satellite in the 400.15–401 MHz band, a NVNG licensee shall use an earth station elevation angle of five degrees towards the DoD satellite and will shut off its transmissions prior to the NVNG licensee's service area, based on an elevation angle of zero degrees towards the NVNG licensee's satellite, overlapping the DoD protection area. A NVNG licensee is responsible for obtaining the necessary ephemeris data. This information shall be updated system-wide at least once per week. A NVNG licensee shall use an orbital

propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by DoD.

(b) A NVNG licensee time sharing spectrum in the 400.15–401 MHz band shall establish a 24-hour per day contact person and telephone number so that claims of harmful interference into DoD earth station users and other operational issues can be reported and resolved expeditiously. This contact information shall be made available to DoD or its designee. If the National Telecommunications and Information Administration (''NTIA'') notifies the Commission that DoD is receiving unacceptable interference from a NVNG licensee, the Commission will require such NVNG licensee to terminate its interfering operations immediately unless it demonstrates to the Commission's reasonable satisfaction, and that of NTIA, that it is not responsible for causing harmful interference into the worldwide DoD system. A NVNG licensee assumes the risk of any liability or damage that it and its directors, officers, employees, affiliates, agents and subcontractors may incur or suffer in connection with an interruption of its non-voice, non-geostationary mobile-satellite service, in whole or in part, arising from or relating to its compliance or noncompliance with the requirements of this paragraph (b). The Commission will not hesitate to impose sanctions on a NVNG licensee time-sharing spectrum in the 400.15–401 MHz band with DoD, including monetary forfeitures and license revocations, when appropriate.

(c) Each satellite in a NVNG licensee's system time-sharing spectrum with DoD in the 400.15–401 MHz band shall automatically turn off and cease satellite transmissions if, after 72 consecutive hours, no reset signal is received from the NVNG licensee's gateway earth station and verified by the satellite. All satellites in such NVNG licensee's system shall be capable of instantaneous shutdown on any sub-band upon command from such NVNG licensee's gateway earth station.

(d) Initially, a NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band shall be able to change the frequency on which its system satellites are operating within 125 minutes of receiving notification from a DoD required frequency change in the 400.15–401 MHz band. Thereafter, when a NVNG licensee constructs additional gateway earth stations located outside of North and South America, it shall use its best efforts to decrease to 90 minutes the time required to implement a DoD required frequency change. A NVNG licensee promptly shall notify the Commission and NTIA of any decrease in the time it requires to implement a DoD required frequency change.

(e) Once a NVNG licensee time-sharing spectrum with DoD in the 400.15–401 MHz band demonstrates to DoD that it is capable of implementing a DoD required frequency change within the time required under paragraph (d) of this section, thereafter, such NVNG licensee shall demonstrate its capability to implement a DoD required frequency change only once per year at the instruction of DoD. Such demonstrations shall occur during off-peak hours, as determined by the NVNG licensee, unless otherwise agreed by the NVNG licensee and DoD. Such NVNG licensee will coordinate with DoD in establishing a plan for such a demonstration. In the event that a NVNG licensee fails to demonstrate to DoD that it is capable of implementing a DoD required frequency change in accordance with a demonstration plan established by DoD and the NVNG licensee, upon the Commission's receipt of a written notification from NTIA describing such failure, the Commission shall impose additional conditions or requirements on the NVNG licensee's authorization as may be necessary to protect DoD operations in the 400.15–401 MHz downlink band until the Commission is notified by NTIA that the NVNG licensee has successfully demonstrated its ability to implement a DoD required frequency change. Such additional conditions or requirements may include, but are not limited to, requiring such NVNG licensee immediately to terminate its operations interfering with the DoD system.

[FR Doc. 97–28995 Filed 10–31–97; 8:45 am]
BILLING CODE 6712–01–P

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Part 199

[Docket RSPA–97–2995, Notice No. 5]

Control of Drug Use and Alcohol Misuse in Natural Gas, Liquefied Natural Gas, and Hazardous Liquid Pipeline Operations Alcohol Misuse Prevention Program

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of random drug testing rate.

SUMMARY: RSPA has received and evaluated the 1996 Management Information System (MIS) Data Collection forms for the drug testing of pipeline industry personnel. The RSPA determined that the random positive drug testing rate for pipeline industry for the period of January 1, 1996, through December 31, 1996, is 0.7 percent.

DATES: Effective January 1, 1998, through December 31, 1998.

FOR FURTHER INFORMATION CONTACT: Catrina Pavlik, Drug/Alcohol Program Analyst, Research and Special Programs Administration, Office of Pipeline Safety, Room 2335, 400 Seventh Street, SW, Washington, DC 20590. Telephone: (202) 366–6199, Fax: (202) 366-4566, e-mail: catrina.pavlik@RSPA.dot.gov. Information is also available on the Office of Pipeline Safety's internet home page at ''OPS.dot.gov.''

SUPPLEMENTARY INFORMATION: In a final rule published on December 23, 1993 (58 FR 68257), RSPA announced that it would require operators of gas, hazardous liquid and carbon dioxide pipelines, and liquefied natural gas facilities, who are subject to 49 CFR parts 192, 193 and 195, to implement, maintain, and submit an annual report of their drug testing program data. Operators with 51 or more covered employees are required to submit this information on an annual basis. Operators with 50 or fewer covered employees are required to maintain this information, and RSPA randomly selected 100 operators in this category to submit their data. The drug testing statistical data is essential for RSPA to analyze its current approach to deterring and detecting illegal drug abuse in the pipeline industry, and, as appropriate, plan a more efficient and effective approach. In 1997, RSPA lowered the random drug testing rate to 25 percent. Since the positive random testing rate continues to be less than 1 percent industry-wide, the RSPA announces in accordance with Section 199.11(c)(3), that the minimum random drug testing rate will be maintained at 25 percent of covered pipeline employees for the period of January 1, 1998, through December 31, 1998.

Submission of MIS reports are due to the Office of Pipeline Safety, Research and Special Programs Administration, DPS–23, Room 2335, 400 7th Street SW., Washington, DC 20590, not later than March 15 of each calendar year. Notice of statistical data will be published in the future to report results of each calendar year's MIS Data Collection results. At that time, the RSPA will also publish whether or not the random rate will be reduced or

increased for the pipeline industry pursuant to Section 199.11.

Issued in Washington, DC on October 28, 1997.

Richard B. Felder,

Associate Administrator for Pipeline Safety.

[FR Doc. 97–28985 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–60–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 960531152–7241–05; I.D. 082897A]

RIN 0648–AI18

Fisheries in the Exclusive Economic Zone Off Alaska; Technical Amendment

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule; technical amendment.

SUMMARY: NMFS issues a technical amendment correcting minor errors in the regulations implementing the Individual Fishing Quota (IFQ) Program for fixed gear Pacific halibut and sablefish fisheries in and off of Alaska. This action is necessary to correct a number of inadvertent errors in the regulations implementing the IFQ Program. The intent of this action is to improve the clarity and coherence of the IFQ regulations.

DATES: November 3, 1997.

ADDRESSES: Comments must be sent to Chief, Fisheries Management Division, Alaska Region, NMFS, 709 West 9th Street, Room 453, Juneau, AK 99801 or P.O. Box 21668, Juneau, AK, Attn: Lori J. Gravel. Send comments regarding burden estimates or any other aspect of the data requirements, including suggestions for reducing the burdens, to NMFS and to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Washington, DC 20530, Attn: NOAA Desk Officer.

FOR FURTHER INFORMATION CONTACT: James Hale, 907–586–7228.

SUPPLEMENTARY INFORMATION:

Background

The fixed gear halibut and sablefish fisheries are managed by the IFQ Program, a limited access system for fixed gear Pacific halibut (*Hippoglossus stenolepis*) and sablefish (*Anoplopoma fimbria*) fisheries in and off of Alaska. Under authority of the Magnuson-Stevens Fishery Conservation and Management Act and the Northern Pacific Halibut Act of 1982 (Halibut Act), NMFS implemented the IFQ Program in 1995, on the recommendation of the North Pacific Fishery Management Council (Council).

At 50 CFR 679.1(d)(2), the regulations state that the term ''fixed gear'' is described in 16 U.S.C. 773(d). The term ''fixed gear'' is not defined in 16 U.S.C. 773(d). However, it is defined, as an ''authorized fishing gear'' in 50 CFR 679.2, *Definitions*. The reference is corrected.

On August 9, 1996, at 61 FR 41523, NMFS published a final rule implementing a number of regulatory changes in the IFQ Program. Among these changes, the requirements for submitting IFQ Shipment Reports at 50 CFR 679.5(l)(2)(iii)(A) were revised to require that Shipment Reports be submitted to NMFS within 7 days of the date of shipment, not prior to the shipment as was formerly required. In the revised regulations, the reference to submission of Shipment Reports in 50 CFR 679.5(l)(2)(ii)(A) should also have been revised to be consistent with the new requirement. Moreover, this section is redundant and awkward. To correct the inconsistency and clarify the requirements for shipping reports, NMFS revises in its entirety § 679.5(l)(2).

Finally, a final rule published at 61 FR 43312, on August 22, 1996, revised the definitions of vessel categories to which quota share and IFQ can be assigned (§ 679.40(a)(5)(ii)(B)), and included an exception to the revised definitions elsewhere in the regulations (§ 679.42(a)). The exception is not referenced in the definitions themselves. For the sake of clarity, this action revises the regulations defining QS categories to reference the exception.

Classification

Because this technical amendment makes only minor, non-substantive corrections to an existing rule, prior notice and opportunity for public comment would serve no purpose. Accordingly, the Assistant Administrator for Fisheries, under 5 U.S.C. 553(b)(3)(B), finds for good cause that prior notice and opportunity for public comment are unnecessary. Because this is a non-substantive rule, 5 USC(d) does not require a delay in the effective date.

Because this rule is being issued without prior notice, it is not subject to the Regulatory Flexibility Act requirement for a regulatory flexibility analysis, and none has been prepared.

This rule makes minor technical changes to a rule that has been determined to be not significant under E.O. 12866. No change in the regulatory impact previously reviewed and analyzed will result from implementation of this technical amendment.

This rule repeats a collection-of-information requirement subject to the Paperwork Reduction Act (PRA). The requirement for an IFQ shipment report has been approved by the Office of Management Budget, Control Number 0648–0272. Public reporting burden for this collection of information is estimated to average 12 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding these burden estimates or any other aspect of the data requirements, including suggestions for reducing the burden, to NMFS and OMB (see **ADDRESSES**).

Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection-of-information subject to the requirements of the PRA, unless that collection -of-information displays a currently valid OMB control number.

List of Subjects in 50 CFR Part 679

Alaska, Fisheries, Reporting and recordkeeping requirements.

Dated: October 27, 1997.

David L. Evans,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set forth in the preamble, 50 CFR part 679 is amended as follows:

PART 679—FISHERIES OF THE EXCLUSIVE ECONOMIC ZONE OFF ALASKA

1. The authority citation for 50 CFR part 679 continues to read as follows:

Authority: 16 U.S.C. 773 *et seq.*, 1801 *et seq.*, and 3631 *et seq.*

2. In § 679.1, paragraph (d)(2) is revised to read as follows:

§ 679.1 Purpose and scope.

* * * * *

(d) * * *

(2) *Halibut.* Regulations in this part govern commercial fishing for halibut by vessels of the United States using fixed gear, as that term is defined in 50 CFR 679.2, in and off of Alaska.

* * * * *

3. In § 679.5, paragraph (l)(2) is revised to read as follows:

§ 679.5 Recordkeeping and reporting.

* * * * *

(l) * * *

(2) *IFQ shipment report*—(i) *Registered buyer.* Each registered buyer, other than those conducting dockside sales, must:

(A) Report on a shipment report any shipments or transfers of IFQ halibut and IFQ sablefish to the first destination beyond the location of the IFQ landing.

(B) Complete a shipment report for each shipment or transfer from that register buyer prior to shipment and assure that the shipment report is submitted to, and received by, the NMFS Alaska Enforcement Division, within 7 days of the date shipment or transfer commenced;

(C) Assure that a copy of the shipment report or a bill of lading containing the same information accompanies the shipment to its first destination beyond the location of the IFQ landing; and

(D) Submit a revised shipment report if any information on the original shipment report changes prior to the first destination of the shipment. A revised shipment report must be clearly labeled ''Revised Shipment Report,'' and must be received by NMFS Alaska Enforcement Division, within 7 days of the change.

(ii) *Shipment report.* (A) A shipment report must be submitted to NMFS Alaska Enforcement Division in a manner prescribed on the registered buyer permit.

(B) A shipment report must specify: Species and product type being shipped, number of shipping units, fish product weight, names of the shipper and receiver, names and addresses of the consignee and consignor, mode of transportation, and intended route.

* * * * *

4. In § 679.40, paragraph (a)(5)(ii)(B) is revised to read as follows:

§ 679.40 Sablefish and halibut QS.

* * * * *

(a) * * *

(5) * * *

(ii) * * *

(B) Category B QS and associated IFQ, which authorizes an IFQ cardholder to harvest IFQ species on a vessel of any length, except as provided in § 679.42(a);

* * * * *

[FR Doc. 97–29025 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–22–F

Proposed Rules

Federal Register
Vol. 62, No. 212
Monday, November 3, 1997

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.

OFFICE OF PERSONNEL MANAGEMENT

5 CFR Part 532

RIN 3206–AI06

Prevailing Rate Systems; Removal of Putnam, Richmond, and Rockland Counties, NY, and Monmouth County, NJ, from the New York, NY, Appropriated Fund Survey Area

AGENCY: Office of Personnel Management.

ACTION: Proposed rule with request for comments.

SUMMARY: The Office of Personnel Management is issuing a proposed rule that would remove Putnam, Richmond, and Rockland Counties, NY, and Monmouth County, NJ, from the survey area of the New York, NY, appropriated fund Federal Wage System wage area. The four counties would remain in the area of application of the New York, NY, wage area.

DATES: Comments must be received by December 3, 1997.

ADDRESSES: Send or deliver comments to Donald J. Winstead, Assistant Director for Compensation Policy, Human Resources Systems Service, Office of Personnel Management, Room 7H31, 1900 E Street NW., Washington, DC 20415, or FAX: (202) 606–0824.

FOR FURTHER INFORMATION CONTACT: Frank Derby at (202) 606–2848, or e-mail: fjderby@opm.gov.

SUPPLEMENTARY INFORMATION: The Office of Personnel Management (OPM) is engaged in an ongoing project to review the geographic definitions of selected Federal Wage System (FWS) appropriated fund wage areas. OPM recently reviewed the definition of the New York, New York, FWS wage area and is proposing the change described below.

When the Federal Wage System was established in 1972, the New York, NY, survey area was composed of Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, and Westchester Counties, NY; and Essex, Hudson, Morris, and Union Counties, NJ. In 1975, the Federal Prevailing Rate Advisory Committee agreed by consensus with a proposal to recommend that the New York, NY, survey area be expanded to include Putnam County, NY; and Bergen, Middlesex, Monmouth, Passaic, and Somerset Counties, NJ. This change was made so as to include 100 percent of the New York wage area's FWS employment in the New York, NY, survey area and to provide for a larger number of surveyable private industrial establishments.

As the largest FWS survey—with a sample of more than 900 industrial establishments—the New York, NY, FWS wage survey has become increasingly difficult to conduct because its logistical demands create unusual burdens on local agency activities already strained by downsizing and budget constraints. To reduce the logistical burdens of the New York, NY, FWS wage survey, OPM would remove Putnam, Richmond, and Rockland Counties, NY; and Monmouth County, NJ, from the New York, NY, survey area. Of the 19 counties in the New York, NY, survey area, OPM proposes that these four counties be removed from the survey area because their removal appears to offer the best means of reducing the logistical burdens of surveys in the New York, NY, wage area while least affecting the determination of prevailing rates for FWS employees in that wage area.

Putnam County is located north of Westchester County, New York. There are currently no FWS employees stationed in Putnam County and, in addition, there are only 11 surveyable private industrial establishments in the county (less than 1 percent of the wage area total).

Richmond County, Staten Island, is accessible from the rest of the New York, NY, survey area only via four toll bridges. There are currently about 91 FWS employees stationed in Richmond County (2 percent of the wage are total). There are only 33 surveyable private industrial establishments in Richmond County (less than 1 percent of the wage area total).

Rockland County is located to the north of Bergen County, New Jersey, and to the west of Westchester County, New York. There are currently no FWS employees stationed in Rockland County and, in addition, there are only 72 surveyable private industrial establishments in the county (1 percent of the wage area total).

Monmouth County is located to the south of Middlesex County, New Jersey, and is the southeastern-most county in the New York, NY, wage area. There are currently about 335 FWS employees stationed in Monmouth County (8 percent of the wage area total). When Monmouth County was added to the New York, NY, survey area in 1975, there were more than 1,500 FWS employees stationed in the county. While there were about 1,000 FWS employees stationed at Fort Monmouth in 1975, there are now only about 60 FWS employees stationed at that installation. In addition, there are only 133 surveyable private industrial establishments in the county (2 percent of the wage area total).

The removal of these four counties from the New York, NY, FWS survey area would leave 90 percent of the wage area's FWS employment in the New York, NY, survey area, and would include the number of surveyable private industrial establishments in the New York, NY, survey universe by only 4 percent. OPM also considered the possible removal of other counties from the New York survey area but none appeared to offer as convincing a rationale for removal as do Putnam, Richmond, Rockland, or Monmouth Counties.

The Federal Prevailing Rate Advisory Committee, the statutory national-level labor-management committee responsible for advising OPM on matters concerning the pay of FWS employees, has reviewed and concurred by consensus with this proposed change.

Because of a typographical error in appendix C to subpart B of 5 CFR part 532, the wage area listing for the New York, NY wage area follows immediately after the wage area listing for the Newburgh, NY, wage area without showing the title of the New York, NY, wage area. This rule would correct that inadvertent omission.

Regulatory Flexibility Act

I certify that these regulations will not have a significant economic impact on a substantial number of small entities because they affect only Federal agencies and employees.

List of Subjects in 5 CFR Part 532

Administrative practice and procedure, Freedom of information, Government employees, Reporting and recordkeeping requirements, Wages.

Office of Personnel Management.

Janice R. Lachance,

Acting Director.

Accordingly, OPM proposes to amend 5 CFR part 532 as follows:

PART 532—PREVAILING RATE SYSTEMS

1. The authority citation for part 532 continues to read as follows:

Authority: 5 U.S.C. 5343, 5346; § 532.707 also issued under 5 U.S.C. 552.

Appendix C to Subpart B of Part 532 [Amended]

2. Appendix C to subpart B is amended by revising the wage area listings for the Newburgh, New York, and New York, New York, wage area to read as follows: Appendix C to Subpart B of Part 532—Appropriated Fund Wage and Survey Areas.

* * * * *

New York

* * * * *

Newburgh

Survey Area

New York:
Dutchess
Orange
Ulster

Area of Application. Survey area plus:

New York:
Delaware
Sullivan

New York

Survey Area

New York:
Bronx
Kings
Nassau
New York
Queens
Suffolk
Westchester
New Jersey:
Bergen
Essex
Hudson
Middlesex
Morris
Passaic
Somerset
Union

Area of Application. Survey area plus:

New York:
Putnam
Richmond
Rockland
New Jersey:
Monmouth
Sussex

* * * * *

[FR Doc. 97–28971 Filed 10–31–97; 8:45 am]

BILLING CODE 6325–01–M

OFFICE OF PERSONNEL MANAGEMENT

5 CFR Part 630

RIN: 3206–AI03

Emergency Leave Transfer Program

AGENCY: Office of Personnel Management.

ACTION: Proposed rule with request for comments.

SUMMARY: The Office of Personnel Management is issuing proposed regulations governing the establishment of an emergency leave transfer program to permit the transfer of unused annual leave to Federal employees adversely affected by a major disaster or emergency, as declared by the President.

DATES: Comments must be received on or before January 2, 1998.

ADDRESSES: Comments may be sent or delivered to Donald J. Winstead, Assistant Director for Compensation Administration, Office of Personnel Management, Room 7H31, 1900 E Street NW., Washington, DC 20415; FAX (202) 606–0824; or email to payleave@opm.gov.

FOR FURTHER INFORMATION CONTACT: Jo Ann Perrini, (202) 606–2858, FAX (202) 606–0824, or email to payleave@opm.gov.

SUPPLEMENTARY INFORMATION: Section 9004 of Pub. L. 105–18, June 12, 1997, added section 6391 to title 5, United States Code, to provide that in the event of a major disaster or emergency, as declared by the President, that results in severe adverse effects for a substantial number of employees, the President may direct the Office of Personnel Management (OPM) to establish an emergency leave transfer program under which an employee in any Executive agency may donate annual leave for transfer to employees of his or her agency or to employees in other agencies who are adversely affected by such disaster or emergency. The Act also permits agency leave banks established under 5 U.S.C. 6362 to donate leave under an emergency leave transfer program established by OPM.

The Federal leave sharing program has proven to be an effective and cost-efficient means of allowing Federal employees to help their fellow workers in times of need. Under the current voluntary leave transfer program established under 5 U.S.C. 6332, an employee may donate unused annual leave for transfer to other Federal employees who have medical emergencies and who have exhausted their own leave. The emergency leave transfer program will be in addition to the voluntary leave transfer and leave bank programs and will provide leave benefits specific to the needs of employees affected by major disasters or emergencies. The emergency leave transfer program will permit employees to donate annual leave to employees who do not necessarily face a medical emergency but who need to take leave because of other effects of disasters or emergencies, such as a flood or an earthquake that has destroyed an employee's property or an emergency situation such as that created by the Oklahoma City bombing on April 19, 1995. In addition, employees approved as emergency leave recipients under the emergency leave transfer program will be able to use donated leave without having to exhaust their own accrued and accumulated annual and sick leave.

Establishment of Emergency Leave Bank

When directed by the President, OPM will establish an emergency leave transfer program for a major disaster or emergency that is declared by the President under which employees may transfer their unused annual leave to employees in their own agencies or other agencies who are adversely affected by the disaster or emergency. We anticipate that the authority to establish an emergency leave transfer program for an emergency or disaster declared by the President will be exercised only after appropriate consultation with the agencies affected by the emergency or disaster. OPM will establish and maintain an emergency leave bank for each such disaster or emergency that will contain the aggregate amount of annual leave donated by emergency leave donors in the agencies for a specific disaster or emergency. OPM will coordinate the transfer of donated annual leave from each agency to the emergency leave bank. An emergency leave donor may not contribute annual leave for transfer to a specific emergency leave recipient under this program. However, an employee may continue to donate his or her unused annual leave to a specific leave recipient under the separate authority for voluntary leave transfer in

5 U.S.C. 6332 and must follow the rules governing that program.

Each agency will be responsible for approving an emergency leave recipient and determining the amount of donated annual leave to be transferred to each of its approved emergency leave recipients. The agency must notify OPM of the aggregate amount of donated annual leave needed for transfer from the emergency leave bank to its approved emergency leave recipients. The minimum amount of annual leave an emergency leave donor may contribute in a leave year is 1 hour, and the maximum is 104 hours. In unusual situations, OPM may waive the limitations on donating annual leave.

To ensure that a sufficient amount of donated annual leave is available for all affected employees, emergency leave recipients may receive a maximum of 240 hours of donated leave at any one time from the emergency leave bank for each disaster or emergency. Emergency leave recipients may substitute donated leave retroactively for any period of leave without pay or advanced annual or sick leave used as result of the disaster or emergency. In addition, while an emergency leave recipient is in a shared leave status (i.e., using donated leave to recover from the disaster or emergency), annual and sick leave will continue to accrue to the credit of the employee without limitation. Any accrued annual leave is subject to the maximum annual leave ceilings established by 5 U.S.C. 6304(a), (b), (c), or (f).

Termination of Disaster or Emergency

Annual leave donated to an emergency leave bank for a specific disaster or emergency cannot be transferred to another emergency leave bank. When a disaster or emergency terminates, OPM will return to the donating agencies any donated annual leave that was not used by the emergency leave recipients. The amount of donated leave returned will be proportional to the amount of annual leave donated by the agency to the emergency leave bank for the disaster or emergency. Each agency will be responsible for determining the amount of returned annual leave to be restored to each of its emergency leave donors based on agency records of the amount of annual leave donated by the leave donor.

Redesignating Subpart K—Reservist Leave Bank Program

Subpart K of 5 CFR part 630, Reservist Leave Bank Program, is redesignated in its entirety as subpart M of 5 CFR part 630. The proposed rules for the new Emergency Leave Transfer Program are added as subpart K of 5 CFR part 630.

E.O. 12866, Regulatory Review

This rule has been reviewed by the Office of Management and Budget in accordance with E.O. 12866.

Regulatory Flexibility Act

I certify that these regulations will not have a significant economic impact on a substantial number of small entities because they will affect only Federal employees and agencies.

List of Subjects in 5 CFR Part 630

Government employees.

Office of Personnel Management.

Janice R. Lachance,

Acting Director.

Accordingly, OPM is amending part 630 of title 5 of the Code of Federal Regulations as follows:

PART 630—ABSENCE AND LEAVE

1. The authority citation for part 630 is revised to read as follows:

Authority: 5 U.S.C. 6311; § 630.301 also issued under Pub. L. 103–356, 108 Stat. 3410; § 630.303 also issued under 5 U.S.C. 6133(a); §§ 630.306 and 630.308 also issued under 5 U.S.C. 6304(d)(3), Pub. L. 102–484, 106 Stat. 2722, and Pub. L. 103–337, 108 Stat. 2663; subpart D also issued under Pub. L. 103–329, 108 Stat. 2423; § 630.501 and subpart F also issued under E.O. 11228, 30 FR 7739, 3 CFR, 1974 Comp., p. 163; subpart G also issued under 5 U.S.C. 6305; subpart H also issued under 5 U.S.C. 6326; subpart I also issued under 5 U.S.C. 6332, Pub. L. 100–566, 102 Stat. 2834, and Pub. L. 103–103, 107 Stat. 1022; subpart J also issued under 5 U.S.C. 6362, Pub. L 100–566, and Pub. L. 103–103; subpart K also issued under Pub. L. 102–25, 105 Stat. 92; subpart L also issued under 5 U.S.C. 6387 and Pub. L. 103–3, 107 Stat. 23; and subpart M also issued under 5 U.S.C. 6391 and Pub. L. 105–18, 111 Stat. 158.

2. In part 630, subpart K (consisting of §§ 630.1101 through 630.1109) is redesignated as subpart M (consisting of §§ 630.1301 through 630.1309); a new subpart K (consisting of §§ 630.1101 through 630.1106) is added; and in the newly redesignated subpart M, for each section indicated in the left column, the citations in the middle column are removed wherever they appear in the section, and the citations in the right column are added to read as follows:

Subpart K—Emergency Leave Transfer Program

Sec.

630.1101 Purpose, applicability, and administration.
630.1102 Definitions.
630.1103 Establishment of emergency leave transfer program.
630.1104 Transfer of annual leave.
630.1105 Limitations on donation and use of annual leave.
630.1106 Termination of disaster or emergency.

Subpart K—Emergency Leave Transfer Program

§ 630.1101 Purpose, applicability, and administration.

(a) *Purpose.* This subpart provides regulations to implement section 6391 of title 5, United States Code, and must be read together with section 6391. Section 6391 of title 5, United States Code, provides that in the event of a major disaster or emergency, as declared by the President, that results in severe adverse effects for a substantial number of employees, the President may direct the Office of Personnel Management (OPM) to establish an emergency leave transfer program under which an employee may donate unused annual leave for transfer to employees of his or her agency or to employees in other Executive agencies who are adversely affected by such disaster or emergency.

(b) *Applicability.* This subpart applies to any individual who is defined as an ''employee'' in 5 U.S.C. 6331(1) and who is employed in an Executive agency.

(c) *Administration.* The head of each agency having employees subject to this subpart is responsible for the proper administration of this subpart. Each Federal agency shall establish and administer procedures to permit the voluntary transfer of annual leave consistent with this subpart.

§ 630.1102 Definitions.

In this subpart—

Agency means an ''Executive agency,'' as defined in 5 U.S.C. 105.

Disaster or emergency means a major disaster or emergency, as declared by the President, that results in severe adverse effects for a substantial number of employees (e.g., loss of life or property, serious injury, or mental illness as a result of direct threat to life or health).

Emergency leave bank means a pooled fund of annual leave established by OPM under § 630.1103(b) for employees who are adversely affected by a disaster or emergency.

Emergency leave donor means a current employee whose voluntary written request for transfer of annual leave to an emergency leave bank is approved by his or her employing agency.

Emergency leave recipient means a current employee for whom the employing agency has approved an

application to receive annual leave from an emergency leave bank.

Emergency shared leave status means the administrative status of an employee while the employee is using leave transferred from an emergency leave bank.

Employee has the meaning given that term in 5 U.S.C. 6331(1).

Leave year has the meaning given that term in § 630.201.

Paid leave status under subchapter I has the meaning given that term in § 630.902.

§ 630.1103 Establishment of emergency leave transfer program.

(a) When directed by the President, OPM will establish an emergency leave transfer program for a major disaster or emergency that is declared by the President. The emergency leave transfer program will permit an employee to donate his or her accrued annual leave for transfer to employees of the same or other Executive agencies who are adversely affected by such disaster or emergency.

(b) OPM will establish an emergency leave bank for each disaster or emergency for which the President directs OPM to establish an emergency leave transfer program. Each emergency leave bank established under this paragraph will contain the aggregate amount of annual leave donated by emergency leave donors to employees affected by the disaster or emergency for which the emergency leave bank was established. OPM will determine the period of time for which donations of accrued annual leave may be accepted for each emergency leave bank.

(c) Each Federal agency shall—

(1) Accept annual leave donated by emergency leave donors for each declared disaster or emergency;

(2) Debit the amount of annual leave donated to an emergency leave bank from each emergency leave donor's annual leave account;

(3) Maintain records on the amount of leave donated by each emergency leave donor for a specific emergency leave bank (for the purpose of restoring unused transferred annual leave under § 630.1105(i)); and

(4) Report the aggregate amount of annual leave donated to an emergency leave bank to OPM.

(d) A leave bank established under subchapter IV of chapter 63 of title 5, United States Code, and subpart J of this part 630 may, with the concurrence of the leave bank board established under § 630.1003, donate annual leave to an emergency leave bank.

§ 630.1104 Transfer of annual leave.

(a) An employee may submit a voluntary written request to his or her employing agency that a specified number of hours of his or her accrued annual leave, consistent with the limitations in § 630.1105(a), be transferred from his or her annual leave account to an emergency leave bank established under § 630.1103(b). An emergency leave donor may not donate annual leave for transfer to a specific emergency leave recipient under this subpart.

(b) OPM will notify each affected agency of the aggregate amount of donated annual leave that will be credited to the agency for transfer by the agency to its approved emergency leave recipient(s).

(c) An employee who has been affected by a disaster or emergency (or his or her personal representative) may make written application to his or her employing agency to become an emergency leave recipient. The employee's application shall include a statement describing his or her need for leave from an emergency leave bank.

(d) Each affected agency shall—

(1) Take action to approve or disapprove a request to become an emergency leave recipient based on evidence administratively acceptable to the agency;

(2) Determine the amount of donated annual leave to be transferred to each emergency leave recipient (an amount that may vary according to individual needs);

(3) Notify OPM of the total number of approved emergency leave recipients and the aggregate amount of donated annual leave needed for transfer from the emergency leave bank; and

(4) Credit the annual leave account of each approved emergency leave recipient as soon as possible after the date OPM notifies the agency of the amount of donated annual leave that will be credited to the agency under paragraph (b) of this section.

§ 630.1105 Limitations on donation and use of annual leave.

(a) An emergency leave donor may not contribute less than 1 hour nor more than 104 hours of annual leave in a leave year. In unusual situations, OPM may waive the maximum limitation on donating annual leave under this section.

(b) Annual leave donated under this subpart may not be applied against the limitations on annual leave that may be donated under the voluntary leave transfer or leave bank programs established under 5 U.S.C. 6332 and 6362, respectively.

(c) An emergency leave recipient may receive a maximum of 240 hours of donated annual leave at any one time from an emergency leave bank for each disaster or emergency.

(d) Each emergency leave recipient shall use the donated annual leave for purposes related to the disaster or emergency for which the emergency leave recipient was approved.

(e) Annual leave transferred under this subpart may be—

(1) Substituted retroactively for any period of annual leave, sick leave, or leave without pay used as a result of the disaster or emergency, or

(2) Used to liquidate an indebtedness incurred by the emergency leave recipient for advanced annual or sick leave used as a result of the disaster or emergency.

(f) While an emergency leave recipient is in an emergency shared leave status under this subpart, annual and sick leave shall accrue to the credit of the employee at the same rate as if the employee were in a paid leave status under subchapter I of chapter 63 of title 5, United States Code, and shall be subject to the limitations imposed by 5 U.S.C. 6304(a), (b), (c), and (f) at the end of the leave year in which the transferred annual leave is received.

(g) Annual leave transferred under this subpart may not be—

(1) Included in a lump-sum payment under 5 U.S.C. 5551 or 5552;

(2) Made available for recredit under 5 U.S.C. 6306 upon reemployment by a Federal agency; or

(3) Used to establish initial eligibility for immediate retirement or acquire eligibility to continue health benefits into retirement under 5 U.S.C. 6302(g).

(h) When OPM determines that a disaster or emergency has terminated under § 630.1106(a)(1), OPM will return to the donating agencies any annual leave donated to an emergency leave bank that is not used by an approved emergency leave recipient. The amount of remaining annual leave to be returned to each agency will be proportional to the amount of annual leave donated by the agency to the emergency leave bank for such disaster or emergency. Annual leave donated to an emergency leave bank for a specific disaster or emergency may not be transferred to another emergency leave bank.

(i) Under procedures established by the donating agency, the agency shall determine the amount of annual leave returned under paragraph (h) of this section to be restored to each of the emergency leave donors who, on the date leave restoration is made, is employed by a Federal agency. At the election of the emergency leave donor,

unused transferred annual leave restored to the emergency leave donor under paragraph (h) of this section may be restored by—

(1) Crediting the restored annual leave to the emergency leave donor's annual leave account in the current leave year; or

(2) Crediting the restored annual leave to the emergency leave donor's annual leave account effective as of the first day of the first leave year beginning after the date of election.

§ 630.1106 Termination of disaster or emergency.

The disaster or emergency affecting an emergency leave recipient shall terminate—

(a) When OPM determines that the disaster or emergency has terminated;

(b) When the emergency leave recipient's Federal service terminates;

(c) At the end of the biweekly pay period in which the emergency leave recipient, or his or her personal representative, notifies the employing agency that he or she is no longer affected by such disaster or emergency;

(d) At the end of the biweekly pay period in which the employing agency determines, after written notice from the agency and an opportunity for the emergency leave recipient, or his or her personal representative, to answer orally or in writing, that the emergency leave recipient is no longer affected by such disaster or emergency; or

(e) At the end of the biweekly pay period in which the emergency leave recipient's employing agency receives notice that OPM has approved an application for disability retirement for the emergency leave recipient under the Civil Service Retirement System or the Federal Employees' Retirement System.

§§ 630.1304, 630.1308, and 630.1309 [Amended]

Section	Remove	Add
630.1304(c)	§ 630.1109(b)(1)	§ 630.1309(b)(1).
630.1308(b)	§ 630.1107	§ 630.1307.
630.1309(b)(1) and (d)	§ 630.1104(c)	§ 630.1304(c).
630.1309(d)	§ 630.1103(b)	§ 630.1303(b).

[FR Doc. 97–28970 Filed 10–31–97; 8:45 am]
BILLING CODE 6325–01–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

9 CFR Parts 304, 308, 310, 320, 327, 381, 416, and 417

[Docket No. 97–051N]

Reopening of Comment Period on the Generic HACCP Models and Guidance Materials

AGENCY: Food Safety and Inspection Service.

ACTION: Proposed rule; reopening of comment period.

SUMMARY: The Food Safety and Inspection Service (FSIS) is announcing the reopening of the comment period to solicit additional public comment on the 13 generic Hazard Analysis and Critical Control Point (HACCP) models, the Guidebook for the Preparation of HACCP Plans, and Hazards and Controls Guide for Meat and Poultry Products. The comment period is being reopened so that ongoing public meetings on plant communication can include further discussion on the usefulness of the generic models and guidance materials in preparing for HACCP implementation.

DATES: Written comments on the generic models and guidance materials must be submitted on or before February 2, 1998.

ADDRESSES: The models, Guidebook, and Guide may be viewed in the FSIS Docket Reading Room, Room 102 Cotton Annex Building, 300 12th Street, SW, Washington, DC 20250–3700 and at Government Depository Libraries throughout the country. Comments on the models and other documents should be directed to Ms. Diane Moore, FSIS Docket Clerk, at the above address.

FOR FURTHER INFORMATION CONTACT: Ms. Patricia F. Stolfa, Assistant Deputy Administrator, Regulations & Inspection, Office of Policy, Program Development, and Evaluation, Food Safety and Inspection Service, at (202) 205–0699, FAX (202) 401–1760.

SUPPLEMENTARY INFORMATION: On July 25, 1996, FSIS published a final rule, ''Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems'' (61 FR 38806). This rule introduces sweeping changes to the meat and poultry inspection system and directly targets pathogenic organisms on those products that can cause foodborne illness. In the preamble to the proposed rule, FSIS announced it would develop generic models to facilitate preparation of mandated HACCP plans, especially by ''small'' and ''very small'' establishments.

FSIS announced the availability of the models and guidance materials on June 12, 1997, and solicited public comment on those documents. (62 FR 32053) The models included Generic HACCP Model for Raw, Ground Meat and Poultry Products; Generic HACCP Model for Raw, Not Ground Meat and Poultry Products; Generic HACCP Model for Poultry Slaughter; Generic HACCP Model for Mechanically Separated (Species)/Mechanically Deboned Poultry; Generic HACCP Model for Thermally Processed Commercially Sterile Meat and Poultry Products; Generic HACCP Model for Irradiation; Generic HACCP Model for Meat and Poultry Products with Secondary Inhibitors, Not Shelf-Stable; Generic HACCP Model for Heat Treated, Shelf-Stable Meat and Poultry Products; Generic HACCP Model for Not Shelf-Stable Heat Treated, Not Fully Cooked Meat and Poultry Products; Generic HACCP Model for Fully Cooked, Not Shelf-Stable Meat and Poultry Products; Generic HACCP Model for Beef Slaughter; Generic HACCP Model for Pork Slaughter; and Generic HACCP Model for Not Heat Treated, Shelf-Stable Meat and Poultry Products. The initial comment period expired on August 11, 1997.

FSIS is reopening the comment period to allow plant owners and operators to further discuss the generic models and other documents during the second round of meetings held as part of the Agency's Plant Communications Initiative. Seven meetings, including a teleconference, are scheduled to be held across the country from August 18 through December 6, 1997. FSIS is interested in learning about the types of technical assistance that would be helpful to small plant managers in development of their HACCP systems.

Done in Washington, DC, on: October 24, 1997.

Thomas J. Billy,

Administrator.

[FR Doc. 97–29034 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–DM–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

9 CFR Parts 310 and 381

[Docket No. 97–004P]

RIN 0583–AC32

Generic E. coli Testing for Sheep, Goats, Equine, Ducks, Geese and Guineas

AGENCY: Food Safety and Inspection Service.

ACTION: Proposed rule.

SUMMARY: The Food Safety and Inspection Service (FSIS) is proposing to require establishments slaughtering sheep, goats, horses, mules, and other equines, and establishments slaughtering ducks, geese, and guineas to sample and test carcasses for generic *E. coli*. This proposal extends the sampling and testing requirements already applied to establishments that slaughter cattle, swine, chickens, and turkeys. Regular microbial testing by slaughter establishments is necessary to verify the adequacy of the establishment's process controls for the prevention and removal of fecal contamination and associated bacteria.

DATES: Comments on the proposed regulations must be received on or before January 2, 1998.

ADDRESSES: Please send an original and two copies of comments to: FSIS Docket Clerk, DOCKET No. 97–004P, Room 3806, 1400 Independence Ave., SW, Washington, DC 20250–3700.

FOR FURTHER INFORMATION CONTACT: Ms. Patricia Stolfa, Assistant Deputy Administrator, Office of Policy, Program Development, and Evaluation, FSIS, Room 402 Annex Building, Washington, DC 20250-3700; (202) 205–0699.

SUPPLEMENTARY INFORMATION:

Background

On July 25, 1996, FSIS published a final rule, ''Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems,'' (61 FR 38806). The new regulations (1) require that each establishment develop, implement, and maintain written sanitation standard operating procedures (Sanitation SOP's); (2) require regular microbial testing for generic *E. coli* by cattle, swine, chicken, and turkey establishments to verify the adequacy of the each establishment's process control for the prevention and removal of fecal contamination and associated bacteria; (3) establish pathogen reduction performance standards for *Salmonella* that slaughter establishments and establishments producing raw ground products must meet; and (4) require that all meat and poultry establishments develop and implement a system of preventive controls designed to improve the safety of their products, known as HACCP (Hazard Analysis and Critical Control Points).

At present, all inspected establishments that slaughter cattle, swine, chickens or turkeys must sample and test carcasses for generic *E. coli*. These establishments must develop sampling plans and sample at specified frequencies, locations, and sites. They must maintain records of results and evaluate the results using either the m/M criteria developed in FSIS' baseline studies or, if m/M criteria are not available, statistical process control techniques. Establishments defined as ''very low volume'' may sample at an alternative frequency. Also, establishments operating under HACCP may develop alternative sampling frequencies if certain requirements are met. The Pathogen Reduction/HACCP final rule and the ''Pathogen Reduction/ HACCP; Technical Amendments and Corrections'' rule (62 FR 26211) provide detailed information about the need for these requirements.

FSIS now is proposing to extend these sampling and testing requirements to sheep, goats, horses, mules and other equines, defined as livestock in 9 CFR 301.2(qq), and to ducks, geese and guineas, defined as poultry in 9 CFR 381.1(b)(40). All establishments slaughtering sheep, goats, horses, mules or other equines would be required to meet the sampling and testing requirements in 9 CFR 310.25. Similarly, establishments slaughtering ducks, geese and guineas would be required to meet the sampling and testing requirements in 9 CFR 381.94. These establishments would only be required to test sheep, goats, equines, ducks, geese, or guineas if they primarily slaughter these types of livestock or poultry. FSIS considers the livestock or poultry an establishment slaughters in the largest number to be that establishment's primary type of livestock or poultry slaughtered.

Sampling Frequencies and Definitions For Very Low Volume Establishments

For the Pathogen Reduction/HACCP final rule, FSIS used a methodology to select sampling frequencies so that in the subgroup of establishments accounting for 99 percent of total production for each type of livestock or poultry, the 5 percent of establishments with the highest production volume would each conduct a minimum of 13 *E. coli* tests, one complete test ''window'', each day. Under these frequencies, 90 percent of all cattle, 94 percent of all swine, 99 percent of all chickens, and 99 percent of all turkeys would be slaughtered in establishments conducting a minimum of one *E. coli* test per day. Additionally, FSIS concluded that all establishments, except those defined as very low volume establishments, must conduct sampling at a frequency of at least once per week to provide a minimum, adequate basis for process control verification.

FSIS developed alternative sample frequencies for establishments defined as ''very low volume.'' If there are published m/M criteria for the type of livestock or poultry primarily slaughtered, the establishment must sample that type of livestock or poultry at a minimum frequency of once per week starting the first full week of operation after June 1 until a series of 13 tests has met those m/M criteria. If there are no m/M criteria for the type of livestock or poultry primarily slaughtered, a very low volume establishment must collect at least one sample per week, starting the first full week of operation after June 1 of each year, and continue sampling at a minimum of once each week the establishment operates until June 1 of the following year or until 13 samples have been collected, whichever comes first. This provision will be eliminated once m/M criteria are developed for the primary type of livestock or poultry slaughtered.

FSIS permits very low volume establishments to test at this frequency, in part, because of their relatively simple and stable production environments. Also, FSIS assumed that the total risk of exposure to enteric pathogens from products produced at such establishments would be small and roughly proportional to the amount of products produced. FSIS requires these establishments to begin testing in June because it is most important for these establishments to conduct testing during the summer months, when there is a seasonal peak in the occurrence of foodborne diseases attributable to the major bacterial pathogens.

The final rule noted that very low volume cattle and swine establishments account for only 1.5 percent and 1.3 percent of overall production,

respectively. Very low volume chicken and turkey establishments account for .05 percent and .1 percent of overall production, respectively.

FSIS proposes to require sheep, goat, and equine establishments to sample at the same frequency now required for cattle, one test per 300 carcasses. Similarly, FSIS proposes to require duck, geese, and guinea establishments to sample at the same frequency now required for turkeys, one test per 3,000 carcasses. FSIS also proposes to require sheep, goat, equine, duck, geese, and guinea establishments, except those defined as very low volume establishments, to conduct sampling at a frequency of at least once per week to provide a minimum, adequate basis for process control verification.

FSIS is proposing to require sheep, goat, equine, duck, geese, and guinea establishments defined as ''very low volume'' to collect at least one sample per week, starting the first full week of operation after June 1 of each year, and continue sampling at a minimum of once each week the establishment operates until June 1 of the following year or until 13 samples have been collected, whichever comes first. At this time, baseline studies have not been conducted to develop m/M criteria for sheep, goats, equine, ducks, geese, and guinea. When m/M criteria is developed for any of these types of livestock or poultry, FSIS would require sampling at a minimum frequency of once per week starting the first full week of operation after June 1 until a series of 13 tests has met those m/M criteria.

Sheep and Goats

In fiscal year 1993, 93 establishments primarily slaughtered sheep and goats. FSIS is proposing that sheep and goat establishments sample at a frequency of one test per 300 carcasses or at least once a week, whichever is greater, unless they are very low volume establishments. At this sampling frequency, 85 percent of all sheep and goats would be slaughtered in establishments conducting a minimum of one *E. coli* test per day. A very low volume sheep or goat slaughter establishment would annually slaughter no more than 6,000 head. Based on fiscal year 1993 data, 61 of the 93 establishments would be classified as very low volume and account for 1.9 percent of total sheep and goat production.

Equine

In fiscal year 1995, eight establishments slaughtered equine under Federal inspection for human food. These eight establishments slaughtered only equine. The Agency is proposing that horse, mule, or other equine establishments sample at a rate of one per 300 carcasses or at least once a week, whichever is greater, unless they are very low volume establishments. Very low volume equine establishments would annually slaughter no more than 6,000 equines. Two of the equine establishments, slaughtering 5.6 percent of overall production, would be classified as very low volume.

Ducks, Geese, and Guineas

In fiscal year 1995, there were 12 establishments slaughtering primarily ducks and two establishments slaughtering primarily geese. FSIS is not aware of any federally inspected establishment currently processing guineas. FSIS is proposing that establishments slaughtering ducks, geese, and guineas sample at a frequency of one test per 3,000 carcasses or at least once a week, whichever is greater, unless they are very low volume establishments. At this frequency, 96 percent of all ducks would be slaughtered in establishments conducting a minimum of one *E. coli* test per day. Very low volume duck, geese or guinea establishments would slaughter no more than 60,000 ducks, geese, or guineas, respectively, a year.

In FY 1995, 25 establishments slaughtered 19.2 million ducks. Only 12 establishments primarily slaughtered ducks. These establishments produced 98.7 percent of all ducks slaughtered under Federal inspection. One of the 12 establishments produces less than .2 percent of ducks slaughtered and would be defined as a very low volume duck establishment.

Eight establishments under Federal inspection slaughtered 159,000 geese in FY 1995. Only two establishments primarily slaughtered geese and only one of these establishments slaughters more than 60,000 geese.

Alternative Sampling Frequencies

Establishments operating under a validated HACCP plan in accordance with 9 CFR 417.2(b) would be permitted to substitute an alternative frequency if the alternative is an integral part of the establishment's verification procedures for its HACCP plan. Establishments would not be allowed to use an alternative frequency if FSIS determines and notifies the establishment in writing that the alternative frequency is inadequate to verify the effectiveness of the establishment's process controls.

Sampling Plans

Sheep, goat, equine, duck, geese, and guinea establishments would prepare written specimen collection procedures. The procedures would include the identification of employees designated to collect samples, the location(s) of sampling, how sampling randomness is achieved, and how samples are handled to ensure sample integrity. The written procedures would be made available to FSIS upon request.

Sampling Locations

Sheep, goat, and equine establishments would collect samples from chilled carcasses. Carcasses boned before chilling (hot boned) would be sampled after the final wash. For ducks, geese and guineas, samples would be taken from the end of the chilling process, after the drip line. If the bird is boned before chilling, the sample would be taken from the end of the slaughter line instead of the end of the drip line.

Sampling Sites

Samples from sheep, goats, and equine carcasses would be taken by sponging tissue from three sites, the flank, brisket, and rump. Hide-on carcasses would be sampled by sponging from inside the flank, inside the brisket, and inside the rump. Ducks, geese, and guineas would be rinsed in an amount of buffer appropriate to the type of bird being tested.

Recordkeeping

Establishments would enter test results onto a process control chart or table and recorded in terms of colony forming units per milliliter (cfu/ml) for poultry carcasses or per square centimeter (cfu/cm^2) for livestock carcasses. Establishments would use the records to evaluate test results. These records would be maintained at the establishment for 12 months and must be made available to Inspection Program employees on request. Inspectors would review results over time to verify effective and consistent process control.

Evaluation Criteria

Establishments would evaluate results using statistical process control techniques until such time as m/M criteria are established for these types of livestock and poultry. FSIS intends to give high priority in its baseline plan to collect data that will support establishing m/M criteria for ducks and geese, and sheep.

Executive Order 12866 and Regulatory Flexibility Act

This proposed rule has been determined to be significant, and

therefore, has been reviewed by the Office of Management and Budget.

The Administrator has made an initial determination that this proposed rule would not have a significant economic impact on a substantial number of small entities, as defined by the Regulatory Flexibility Act (5 U.S.C. 601).

This proposed rule is an extension of the Pathogen Reduction/HACCP rule which was economically significant. Many aspects of that economically significant rule, such as the public health risks associated with pathogens present in fecal contamination and the potential health benefits of pathogen reduction, are applicable to this rule. In the Final Regulatory Impact Assessment (FRIA) (61 FR 38945, July 25, 1996) for the Pathogen Reduction/HACCP rule, FSIS addressed these areas in detail.

By extending coverage of generic *E. coli* testing to additional types of livestock and poultry, this proposed rule would increase the effectiveness of pathogen reduction efforts and thereby generate proportional increases in predicted public health benefits. The benefits assessment in the FRIA was based on a proportional reduction assumption, that is, an assumption that a reduction in pathogens at the manufacturing level leads to a proportional reduction in foodborne illness. Public health benefits are quantified in terms of reduced cost of foodborne illness.

This proposed rule would affect an estimated 101 federally inspected livestock slaughter establishments and a smaller number of State inspected livestock slaughter establishments. The total of 101 federally inspected establishments includes 11 establishments that slaughter only sheep and goats, 82 establishments that slaughter cattle and/or swine but slaughter sheep or goats as their primary type of livestock, and eight establishments that slaughter equine. Additionally, there are 574 establishments that slaughter sheep or goats but are not affected because they primarily slaughter cattle or swine.

This proposed rule would also affect an estimated 14 federally inspected poultry slaughter establishments and possibly a few State inspected poultry slaughter establishments. These include 12 federally inspected establishments that primarily slaughter ducks and two establishments that primarily slaughter geese. There are 14 establishments that also slaughter ducks and/or geese but are not affected because they primarily slaughter chickens or turkeys. There are currently no establishments that slaughter guineas under federal inspection.

Cost Analysis

This analysis is based on the same estimates and assumptions that were used to develop the FRIA for the Pathogen Reduction/HACCP rule and include:

(1) An average cost of $24 for collecting and analyzing a sample for generic *E. coli.*

(2) A cost of $640 for the preparation of a sampling plan. This estimate is based on 25 hours at $25.60 per hour, the average wage of a quality control manager.

(3) A cost of $403 per establishment for an estimated three out of four establishments that would require extra training for aseptic sampling.

(4) An estimate of 26 sample collections annually by very low volume slaughter establishments. (The proposed requirement is a minimum of 13.)

(5) An estimate of five minutes to record and review laboratory results for each sample by an employee earning $13.42 per hour.

Sheep, Goats and Equine

Unless otherwise specified, this cost analysis is based on data from the Agency's Enhanced Economic Database. This database includes ADRS data from FY 1993. Sheep and goat production were combined in the Enhanced Economic Database. Although the proposed rule treats sheep and goats as two separate types of livestock, the cost analysis is based on combined sheep and goat production. This has a minimal impact on the accuracy of the cost estimates.

There are 11 establishments that slaughter only sheep and goats. This proposed rule would extend mandatory generic *E. coli* testing to these establishments. Each of these 11 establishments would be required to develop a sampling plan at a cost of $640 per establishment or $7,040 in total. This cost would include items such as preparing a written plan, establishing sampling procedures, locating a laboratory and arranging for necessary supplies, and developing the statistical process control techniques to be used for analyzing results.

This analysis assumes that eight establishments (75 percent) would require training in aseptic sampling at a cost of $3,224 (8 times $403). Three of the eleven establishments would be very low volume establishments and would analyze 26 samples per year for a recurring cost of $1,872. Based on production data and a sampling rate of one in 300, the other eight establishments would analyze a total of 8,015 samples annually at a cost of $192,360. Recording and reviewing costs for 8,015 samples would require 668 hours annually and cost $8,970. The annual recording and reviewing costs for the three very low volume establishments would be $87 (6.5 hours at $13.43 per hour).

As discussed above, there are 82 establishments that slaughter cattle and/or swine but slaughter sheep or goats as their primary type of livestock. There would be no additional cost for 58 of these establishments because these 58 are now required to conduct sampling as very low volume cattle or swine slaughter establishments and would be very low volume sheep or goat establishments under the proposed rule. The impact on these 58 establishments would be a shift in the type of livestock sampled. It is assumed they can make this shift without additional costs for sampling plan development.

The other 24 establishments within the 82 that slaughter both cattle and/or swine and sheep or goats are now required to test for cattle or swine. However, under this proposed rule they would have to conduct additional analyses based on their sheep or goat production. Their sheep/goat production is greater than the larger of their cattle or swine production. As they shift from cattle or swine to sheep or goats, annual sampling would increase by 2,928 samples or $70,272 per year. Annual recording and reviewing costs would be $3,277 (244 hours at $13.43 per hour).

This proposed rule would also extend mandatory generic *E. coli* testing to 8 establishments that slaughter equines for human food. Based on FY 1995 ADRS data, the 8 equine establishments would be required to conduct 469 analyses per year. It was assumed they would all have to develop sampling plans ($640 each) and that six would have to obtain training in aseptic sampling ($403 per establishment). Two of the 8 equine establishments would meet the definition for a very low volume establishment. The total recurring cost for 469 analyses would be $11,256. Recording and reviewing costs would be $525 per year (39 hours at $13.43 per hour).

In conclusion, there are 43 federally inspected livestock slaughter establishments that would experience increased costs under this proposal. The one time up-front costs would total $17,802, $5,642 for training in aseptic sampling and $12,160 for sampling plan development. The total recurring cost for the 43 establishments would be $288,619, $275,760 for sample

collection and analysis and $12,859 for recording and reviewing test results.

All the costs discussed above for sheep, goat and equine establishments are summarized in Table 1.

TABLE 1.—COSTS FOR IMPLEMENTING GENERIC E. COLI SAMPLING PROGRAMS IN SHEEP, GOAT AND EQUINE ESTABLISHMENTS

Production category	Number of establishments	Training for aseptic sampling	Sampling plan development	Sample collection and analysis (recurring)	Recording and review (recurring)
Exclusively Sheep or Goats with Annual Production over 6,000	8	$2,418	$5,120	$192,360	$8,970
Exclusively Sheep or Goats with Annual Production under 6,000	3	806	1,920	1,872	87
Primarily Sheep or Goats with Annual Production over 6,000	24	.....	.....	70,272	3,277
Equine	8	2,418	5,120	11,256	525
Total	43	5,642	12,160	275,760	12,859

Ducks, Geese and Guineas

The ADRS data show that 28 federally inspected establishments slaughtered ducks and/or geese in FY 1995. FSIS is not aware of any establishment slaughtering guineas. Six establishments slaughtered only the types of poultry covered by this proposal. This proposal extends mandatory generic *E. coli* testing to six federally inspected poultry establishments that are not currently required to test. There are eight poultry slaughter establishments that currently test chickens or turkeys but slaughter more ducks or geese and, therefore, would shift their testing program to ducks or geese. Seven of these establishments would have to conduct more testing because they would not be very low volume establishments based on their duck or goose production. The eighth establishment would shift from a very low volume chicken establishment to a very low volume duck establishment and would not incur any additional costs.

In summary, under this proposal, 14 establishments would test ducks or geese. Two of these establishments would be very low volume establishments. All 14 poultry slaughter establishments affected by this proposal were included in the Pathogen Reduction/HACCP FRIA as very low volume poultry slaughter establishments, that is, annual chicken slaughter under 440,000 and annual turkey slaughter under 60,000. The methodology applied in the FRIA started with all 306 poultry slaughter establishments (FY 1993 ADRS data) in the Agency's Enhanced Economic Database. FSIS calculated the costs for 208 establishments processing more than 440,000 chickens annually and the costs for 48 establishments processing more than 60,000 turkeys annually. FSIS treated the remaining 50 poultry slaughter establishments as very low volume establishments.

This methodology most likely overestimated costs for the FRIA because more recent FY 1995 ADRS data include six poultry slaughter establishments processing ducks and/or geese exclusively. This cost analysis separates the costs already addressed and the incremental costs of basing sampling frequency upon duck and geese production. The costs already addressed that are actually costs of this proposal include the cost of six sampling plans at $640 per plan or $3,840; training in aseptic sampling for five establishments at $403 per establishment or $2,015; sample collection and analysis costs for 156 (6 multiplied by 26) samples per year at a cost of $24 per sample or $3,744; and recording and record review costs of $175. Using ducks and geese production levels from FY 1995, five of the six establishments slaughtering only ducks and geese would have to collect and analyze an additional 2,281 samples per year at an annual cost of $54,744. The recording and reviewing costs for 2,281 samples would be $2,553 annually. The other establishment is a very low volume establishment.

As discussed above, there are seven establishments that are currently required to test for chickens or turkeys as very low volume establishments but would have to conduct more analyses under this proposal because they would not be very low volume establishments based on their duck or goose production. These seven establishments would have to collect and analyze an additional 3,769 samples annually at a cost of $90,456. Recording and review costs at five minutes per sample would total $4,218 per year.

The total cost for extending testing to ducks, geese, and guineas includes a one time cost of $5,855 for training and sampling plan development and an annual recurring sampling and recording cost of $155,890. The costs for implementing generic *E. coli* sampling for duck, geese and guineas are summarized in Table 2.

TABLE 2.—COSTS FOR IMPLEMENTING GENERIC E. COLI SAMPLING PROGRAMS FOR DUCK, GOOSE, AND GUINEA ESTABLISHMENTS

Production category	Number of establishments	Training for aseptic sampling	Sampling plan development	Sample collection and analysis (recurring)	Recording and review (recurring)
Ducks and Geese only-Costs Included in FRIA	6	$2,015	$3,840	$3,744	$175
Ducks and Geese only-Costs not Previously accounted for	5 (included in the 6 above)	.....	.....	54,744	2,553

TABLE 2.—COSTS FOR IMPLEMENTING GENERIC E. COLI SAMPLING PROGRAMS FOR DUCK, GOOSE, AND GUINEA ESTABLISHMENTS—Continued

Production category	Number of establishments	Training for aseptic sampling	Sampling plan development	Sample collection and analysis (recurring)	Recording and review (recurring)
Establishments Currently Required to test Chickens or Turkeys	7	.....	.....	90,456	4,218
Total	13	2,015	3,840	148,944	6,946

Overall Summary of Cost Analysis

This proposed rule would extend mandatory generic *E. coli* sampling requirements to 25 federally inspected establishments, 11 that slaughter sheep and goats exclusively, eight that slaughter equine and six that currently slaughter only ducks and/or geese. The nonrecurring up-front costs for these establishments would total $23,657. The annual recurring costs for collecting and analyzing 10,999 samples and recording and reviewing results for these 25 establishments would be $276,286. There are 31 establishments that currently test cattle, swine, chickens or turkeys that would have to increase their testing programs by 6,697 samples. The increase in annual recurring costs for these 31 establishments would be $168,223.

The costs summarized in Tables 1 and 2 are maximum costs because the proposal would allow for establishments operating under a validated HACCP system to use sampling frequencies other than those specified in this proposal if the alternative sampling frequency is an integral part of the establishments HACCP plan. The cost estimates in Tables 1 and 2 do not account for possible reductions in sampling frequencies.

Executive Order 12988

This proposed rule has been reviewed under Executive Order 12988, Civil Justice Reform. If the proposed rule becomes final: (1) all state and local laws and regulations that are inconsistent with this rule would be preempted; (2) no retroactive effect would be given to this rule; and (3) administrative proceedings would not be required before parties may file suit in court challenging this rule.

Paperwork Requirements

Abstract: As part of microbiological testing, each slaughter establishment would be required to develop written procedures outlining specimen collection and handling. The slaughter establishments would be responsible for entering the results into a statistical process control chart or table. The data and chart would be available for review by FSIS upon request.

Estimate of Burden: Agency subject matter experts estimate that it would take 25 hours for establishments to develop a microbial sampling and analysis plan. It would take an estimated 17.5 minutes to collect samples and 5 minutes per sample to enter data into charts, and then review and file the information.

This proposal would require 25 federally inspected establishments to develop sampling plans. FSIS estimates that each plan would require 25 hours to develop. Plan development for 25 establishments would require 625 burden hours. Fifty-six establishments would be required to collect samples and to record new or additional test results. These 56 establishments would be required to collect and record and review the results of 17,696 analyses, annually. To collect samples at 17.5 minutes per sample, 5,161 burden hours would be required. To record and review results at 5 minutes per result, it would take 1,475 burden hours.

Respondents: Livestock and poultry product establishments.

Estimated Number of Respondents: 56.

Estimated Number of Responses per Respondent: 18,402.

Estimated Total Annual Burden on Respondents: 7,261 hours.

Copies of this information collection assessment can be obtained from Lee Puricelli, Paperwork Specialist, Food Safety and Inspection Service, USDA, 1400 Independence Ave, SW, Room 3812, Washington, DC 20250–3700.

Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Agency, including whether the information would have practical utility; (b) the accuracy of the Agency's estimate of the burden of the collection of information including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology. Comments may be sent to Lee Puricelli, Paperwork Specialist, see the address above, and Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20253.

Comments are requested by January 2, 1998. To be most effective, comments should be sent to OMB within 30 days of the publication date of this proposed rule.

Proposed Rule

List of Subjects

9 CFR Part 310

Meat inspection, Microbial testing.

9 CFR Part 381

Poultry and poultry products, Microbial testing.

For the reasons set forth in this preamble, 9 CFR chapter III would be amended as follows:

PART 310—POST MORTEM INSPECTION

1. The authority citation for part 310 would continue to read as follows:

Authority: 21 U.S.C. 601–695; 7 CFR 2.18, 2.53.

2. Section 310.25 would be amended by revising the first sentence of paragraph (a)(1) introductory text, paragraphs (a)(2)(ii),(a)(2)(iii), and the first sentence of (a)(2)(v)(A) to read as follows:

§ 310.25 Contamination with microorganisms; pathogen reduction performance standards for Salmonella.

(a) * * *

(1) Each official establishment that slaughters livestock must test for *Escherichia coli* Biotype 1 (*E. coli*). * * *.

* * * * *

(2) * * *

(i) * * *

(ii) *Sample collection.* The establishment must collect samples from all chilled livestock carcasses, except those boned before chilling (hot-boned), which must be sampled after the final wash. Samples must be collected in the following manner:[1]

(A) For cattle, establishments must sponge or excise tissue from the flank, brisket and rump, except for hide-on calves, in which case establishments must take samples by sponging from inside the flank, inside the brisket, and inside the rump.

(B) For sheep, goat, horse, mule, or other equine carcasses, establishments must sponge from the flank, brisket and rump, except for hide-on carcasses, in which case establishments must take samples by sponging from inside the flank, inside the brisket, and inside the rump.

(C) For swine carcasses, establishments must sponge or excise tissue from the ham, belly and jowl areas.

(iii) *Sampling frequency.* Slaughter establishments, except very low volume establishments as defined in paragraph (a)(2)(v) of this section, must take samples at a frequency proportional to the volume of production at the following rates:

(A) Cattle, Sheep, Goats, Horses, Mules, and Other Equine: 1 test per 300 carcasses, but at a minimum one sample each week of operation.

(B) Swine: 1 test per 1000 carcasses, but at a minimum one sample each week of operation.

* * * * *

(v) * * *

(A) Very low volume establishments annually slaughter no more than 6,000 cattle, 6,000 sheep, 6,000 goats, 6,000 horses, mules, or other equine, 20,000 swine, or a combination of livestock not exceeding 6,000 cattle and 20,000 total of all livestock. * * *

* * * * *

PART 381—POULTRY PRODUCTS INSPECTION REGULATIONS

3. The authority citation for part 381 would continue to read as follows:

Authority: 7 U.S.C. 138f, 450; 21 U.S.C. 451–470, 7 CFR 2.18, 2.53.

Subpart K—Post Mortem Inspection; Disposition of Carcasses and Parts

6. Section 381.94 would be amended by revising paragraph (a)(2)(iii), and the first and second sentences of paragraph (a)(2)(v)(A) as follows:

§ 381.94 Contamination with microorganisms; process control verification criteria and testing; pathogen reduction standards.

(a) * * *

(2) * * *

(iii) *Sampling frequency.* Slaughter establishments, except very low volume establishments as defined in paragraph (a)(2)(v) of this section, must take samples at a frequency proportional to the establishment's volume of production at the following rates:

(A) Chickens: 1 sample per 22,000 carcasses, but at a minimum one sample per each week of operation.

(B) Turkeys, Ducks, Geese, and Guineas: 1 sample per 3,000 carcasses, but at a minimum one sample each week of operation.

* * * * *

(v) * * *

(A) Very low volume establishments annually slaughter no more than 440,000 chickens or 60,000 turkeys, 60,000 duck, 60,000 geese, 60,000 guineas or a combination all types of poultry not exceeding 60,000 turkeys and 440,000 birds total. Very low volume establishments slaughtering turkeys, ducks, geese, or guineas in the largest number must collect at least one sample per week, starting the first full week of operation after June 1 of each year, and continue sampling at a minimum of once each week the establishment operates until June 1 of the following year or until 13 samples have been collected, whichever comes first. * * *

* * * * *

Done at Washington, DC, on October 24, 1997.

Thomas J. Billy,

Administrator.

[FR Doc. 97–29027 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–DM–P

[1] A copy of FSIS's ''Guidelines for *E. coli* Testing for Process Control verification in Cattle and Swine Slaughter Establishments'' is available for inspection in the FSIS Docket Room.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97–CE–79–AD]

RIN 2120–AA64

Airworthiness Directives; American Champion Aircraft Corporation 7, 8, and 11 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes to adopt a new airworthiness directive (AD) that would apply to American Champion Aircraft Corporation (ACAC) 7, 8, and 11 series airplanes, excluding Model 8GCBC airplanes. The Federal Aviation Administration (FAA) previously proposed similar AD action for the ACAC Model 8GCBC airplanes. The proposed AD would require installing inspection holes on the top and bottom wing surfaces, repetitively inspecting the front and rear wood spars for damage, repairing or replacing any damaged wood spar, and installing inspection covers. Damage is defined as cracks; compression cracks; longitudinal cracks through the bolt holes or nail holes; or loose or missing rib nails. The proposed AD results from a review of the service history of the affected airplanes that incorporate wood wing spars. The review was prompted by in-flight wing structural failures on ACAC Model 8GCBC airplanes, and revealed several incidents where damage was found on the front and rear wood spars on the affected airplanes. The actions specified by the proposed AD are intended to prevent possible compression cracks and other damage in the wood spar wing, which, if not detected and corrected, could eventually result in in-flight structural failure of the wing with consequent loss of the airplane.

DATES: Comments must be received on or before January 8, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 97–CE–79–AD, Room 1558, 601 E. 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.

Service information that applies to the proposed AD may be obtained from American Champion Aircraft Corporation, P.O. Box 37, 32032 Washington Avenue, Highway D, Rochester, Wisconsin 53167. This information also may be examined at the Rules Docket at the address above.

FOR FURTHER INFORMATION CONTACT: Mr. William Rohder, Aerospace Engineer, FAA, Chicago Aircraft Certification Office, 2300 E. Devon Avenue, Des Plaines, Illinois 60018; telephone (847) 294–7697; facsimile (847) 294–7834.

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 Rules Docket 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 that summarizes 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 postcard on which the following statement is made: ''Comments to Docket No. 97–CE–79–AD.'' The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 97–CE–79–AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Discussion

AD 87–18–09, Amendment 39–5725, currently requires inspecting (one-time) the sides of the front and rear wood spars for compression cracks on ACAC Model 8GCBC airplanes, repairing or replacing any wood spar with compression cracks, and re-inspecting immediately after any incident involving wing damage. AD 87–18–09 was the result of three accidents involving ACAC Model 8GCBC airplanes where structural damage to the wing caused by compression cracks in a wood spar was considered to be a primary factor of the accidents.

Wood compression cracks are failures of wood fibers on a plane perpendicular to the wood fiber longitudinal axis. Repetitive high stress can initiate these compression cracks on the top surface of the wing spar that is adjacent to doubler plate glue lines and rib nail holes. These high stress conditions can occur during crop dusting, banner and glider tow operations, turbulence, and rough field or float operations. Compression cracks can also initiate if the wing contacts the ground. Compression cracks can initiate at either the top or bottom surface of the spar depending on the loads (either upward or downward) at impact.

In-flight structural failure of the wing recently occurred on an ACAC Model 8GCBC airplane that was initially inspected as required by AD 87–18–09. A possible contributing factor of this incident was an undetected compression crack on the right wing front spar.

Investigation of this accident and data acquired from inspections of several ACAC Model 8GCBC airplanes indicate that wood spar compression cracks can occur without previous wing damage. The data indicates that detection of compression crack initiation is unlikely on the sides of the spar, unless the crack is in an advanced state of propagation. Based on this data, the FAA believes that repetitive inspections are necessary. The FAA recently issued an NPRM on the Model 8GCBC airplanes that was published in the **Federal Register** on September 26, 1997 (62 FR 50527). This NPRM proposes to supersede AD 87–18–09, and, if issued as a final rule, would require similar action to that proposed in this document.

Reasons for the Proposed AD

The above-referenced incidents on the ACAC Model 8GCBC airplanes prompted the FAA to review the service history of the other ACAC 8 series airplanes, as well as the 7 and 11 series airplanes. The FAA has record of eight reports of accidents (five fatal) on ACAC 7 and 8 series airplanes, other than the Model 8GCBC airplanes. Four of these accidents are attributed to overstress, two to wing failure due to previous damage going undetected, one to an overload condition with evidence of wing panel failure prior to impact, and one spar with an out-of-specification wood spar grain slope. This review revealed 16 reports of spar crack damage (spar butt end and/or longitudinal cracks), 6 reports of compression cracked spars, and 13 reports of loose/missing rib nails. These reports break down as follows:

—Model 7AC (2,626 U.S. registered airplanes): 12 reports of spar crack damage, plus 2 reports of loose/missing rib nails;

—Model 7BCM (253 U.S. registered airplanes): 1 report of spar crack damage;

—Model 7ECA (871 U.S. registered airplanes): 1 report of a compression cracked spar, plus 6 reports of loose/missing rib nails;

—Model 7GCBC (829 U.S. registered airplanes): 1 report of a compression cracked spar;

—Model 7KCAB (482 U.S. registered airplanes): 2 reports of spar crack damage, 2 reports of compression cracked spars, and 3 reports of loose/missing rib nails; and

—Model 8KCAB (480 U.S. registered airplanes): 1 report of spar crack damage, 2 reports of compression cracked spars, and 2 reports of loose/missing rib nails.

The FAA believes that many cracked/damaged spars are not reported because general aviation operators (operating in accordance with part 91 of the Federal Aviation Regulations (14 CFR part 91)) are not required to submit service difficulty reports.

Relevant Service Information

The FAA has reviewed and approved the technical contents of ACAC Service Letter 406, dated March 28, 1994, and ACAC Service Letter 417, Revision A, dated October 2, 1997. ACAC Service Letter 406, dated March 28, 1994, includes procedures for conducting a detailed visual inspection of both the front and rear wood wing spars for cracks; compression cracks; longitudinal cracks through the bolt holes or nail holes; and loose or missing rib nails (referred to as damage hereafter). ACAC Service Letter 417, Revision A, dated October 2, 1997, includes procedures for installing inspection holes and surface covers and assuring that all applicable lower surface drain holes are installed.

The FAA's Determination

After examining the circumstances and reviewing all available information related to the incidents and accidents described above, including the referenced service information, the FAA has determined that (1) the wing design of all 7, 8, and 11 series airplanes equipped with wood spars is similar and is conducive to spar cracks/damage; and (2) AD action should be taken to prevent possible compression cracks and other damage in the wood spar wing, which, if not detected and corrected, could eventually result in in-flight structural failure of the wing with consequent loss of the airplane.

Explanation of the Provisions of the Proposed AD

Since an unsafe condition has been identified that is likely to exist or develop in other ACAC 7, 8, and 11 series airplanes (excluding the Model 8GCBC airplanes) of the same type design, the FAA is proposing AD action. The proposed AD would require installing inspection holes on the top

and bottom wing surfaces, repetitively inspecting the front and rear wood spars for damage, repairing or replacing any damaged wood spar, and installing surface covers. Accomplishment of the proposed actions would be as follows:

—Installations: in accordance with ACAC Service Letter 417, Revision A, dated October 2, 1997;

—Inspections: in accordance with ACAC Service Letter 406, dated March 28, 1994; and

—Spar Repair and Replacement, as applicable: in accordance with Advisory Circular (AC) 43–13–1A, Acceptable Methods, Techniques and Practices; or other data that the FAA has approved for spar repair and replacement.

Differences Between This Proposed AD and ACAC Service Letter 406

ACAC Service Letter 406, dated March 28, 1994, specifies the same inspections as are proposed in this notice of proposed rulemaking (NPRM). The differences between the service letter and NPRM are:

—the service letter specifies the proposed action within the next 30 days or 10 flight hours and at each 100 hour/annual inspection thereafter. The FAA has determined that a more realistic and enforceable compliance time would be to require:

1. The proposed initial inspection at the first annual inspection that occurs 3 calendar months or more after the effective date of the AD or within 15 calendar months after the effective date of the AD, whichever occurs first; and

2. The proposed repetitive inspections thereafter at intervals not to exceed 12 calendar months or 500 hours time-in-service (TIS), whichever occurs first;

and

—the service letter applies to all ACAC 7 and 8 series airplanes, whereas the NPRM applies to ACAC 7, 8, and 11 series airplanes with similar design, except for the Model 8GCBC airplanes. The FAA previously proposed similar AD action for the ACAC Model 8GCBC airplanes, Docket No. 97–CE–33–AD (62 FR 50527, September 26, 1997).

Compliance Time of the Proposed AD

The compliance time of the proposed AD is presented in calendar time and hours TIS. Although the unsafe condition specified in the proposed AD is a result of airplane operation, operators of the affected airplanes utilize their airplanes in different ways.

For example, an operator may utilize his/her airplane 50 hours TIS in a year while utilizing the aircraft in no or very little crop dusting operations, banner and glider tow operations, or rough field or float operations. This airplane would obviously have a lower crack propagation rate than an airplane operated 300 hours TIS a year in frequent crop dusting operations, banner and glider tow operations, or rough field or float operations. However, this airplane could have pre-existing and undetected wood spar damage that occurred during previous operations. In this situation, the damage to the wood spar would propagate at a level that depends on the operational exposure of the airplane and severity of the initial wood spar damage.

To assure that compression cracks do not go undetected in the wood spars of the affected airplanes, the FAA has determined that the following compliance times should be used:

1. The proposed initial inspection at the first annual inspection that occurs 3 calendar months or more after the effective date of the AD or within 15 calendar months after the effective date of the AD, whichever occurs first; and

2. The proposed repetitive inspections thereafter at intervals not to exceed 12 calendar months or 500 hours TIS, whichever occurs first.

Cost Impact

The FAA estimates that 6,440 airplanes in the U.S. registry would be affected by the proposed AD, that it would take approximately 6 workhours (Installations: 5 workhours; Initial Inspection: 1 workhour) per airplane to accomplish the proposed action, and that the average labor rate is approximately $60 an hour. Parts cost approximately $292 per airplane, provided that each airplane would only need 11 additional standard inspection hole covers per wing bottom surface (total of 22 new covers per airplane). If the airplane would require the installation of more inspection covers (i.e., a result of previous non-factory wing recover work), the cost could be slightly higher. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be $4,198,880 or $652 per airplane.

This cost figure is based on the presumption that no affected airplane owner/operator has accomplished the installations or the initial inspection. The FAA has no knowledge of any owner/operator of the affected airplanes that has already accomplished the installations and initial inspection.

This cost figure also does not account for repetitive inspections. The FAA has no way of determining the number of repetitive inspections each owner/operator of the affected airplanes will incur over the life of his/her airplane. However, each proposed repetitive inspection would cost substantially less than the initial inspection because of the cost of the initial proposed inspection hole and cover installations would not be repetitive. The inspection covers allow easy access for the inspection of the wood spars, and the proposed compliance time would enable the owners/operators of the affected airplanes to accomplish the repetitive inspections at regularly scheduled annual inspections.

Regulatory Impact

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 action (1) is not a ''significant regulatory action'' under Executive Order 12866; (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 Rules 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 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

American Champion Aircraft Company:
Docket No. 97–CE–79–AD.

Applicability: The following airplane models, all serial numbers, certificated in any category, that are equipped with wood wing spars:

7AC
7BCM (L–16A)
7DC
S7EC
7GC
7GCB
7HC
7KCAB
S11AC
7ACA
7CCM (L–16B)
S7DC
7ECA
7GCA
7GCBA
7JC
8KCAB
11BC
S7AC
S7CCM
7EC
7FC
7GCAA
7GCBC
7KC
11AC
S11BC

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, repaired, or reconfigured in the area subject to the requirements of this AD. For airplanes that have been modified, altered, repaired, or reconfigured so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To prevent possible compression cracks and other damage in the wood spar wing, which, if not detected and corrected, could eventually result in in-flight structural failure of the wing with consequent loss of the airplane, accomplish the following:

(a) At the first annual inspection that occurs 3 calendar months or more after the effective date of this AD or within the next 15 calendar months after the effective date of this AD, whichever occurs first, accomplish the following:

(1) Install inspection holes in the top and bottom surface of each wing in accordance with American Champion Aircraft Corporation (ACAC) Service Letter 417, Revision A, dated October 2, 1997. Assure that all drainage holes are installed as depicted in this service letter, and install drainage holes as necessary.

(2) Inspect (detailed visual) both the front and rear wood wing spars for cracks; compression cracks; longitudinal cracks through the bolt holes or nail holes; and loose or missing rib nails (referred to as damage hereafter). Accomplish these inspections in accordance with ACAC Service Letter 406, dated March 28, 1994.

(3) If any spar damage is found, prior to further flight, accomplish the following:

(i) Repair or replace the wood wing spar in accordance with Advisory Circular (AC) 43–13–1A, Acceptable Methods, Techniques and Practices; or other data that is approved by the FAA for wing spar repair or replacement.

(ii) If the wing is recovered, accomplish the installations required by paragraph (a)(1) of this AD, as applicable.

(4) Install inspection hole covers on the top and bottom surface of the wing in accordance with ACAC Service Letter 417, Revision A, dated October 2, 1997.

(b) Within 12 calendar months or 500 hours TIS (whichever occurs first) after accomplishing all actions required by paragraph (a) of this AD, and thereafter at intervals not to exceed 12 calendar months or 500 hours TIS, whichever occurs first, accomplish the inspection, repair, replacement, and installation required by paragraphs (a)(2), (a)(3), as applicable; including its subparagraphs; and (a)(4) of this AD.

(c) If, after the effective date of this AD, any of the affected airplanes are involved in an incident/accident that involves wing contact damage (e.g., surface deformations such as abrasions, gouges, scratches, or dents, etc.), prior to further flight after that incident/accident, accomplish the inspection, repair, replacement, and installation required by paragraphs (a)(2), (a)(3), as applicable; including its subparagraphs; and (a)(4) of this AD.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance time that provides an equivalent level of safety may be approved by the Manager, Chicago Aircraft Certification Office (ACO), 2300 E. Devon Avenue, Des Plaines, Illinois 60018. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Chicago ACO.

(f) All persons affected by this directive may obtain copies of the documents referred to herein upon request to American Champion Aircraft Corporation, P.O. Box 37, 32032 Washington Avenue, Highway D, Rochester, Wisconsin 53167; or may examine these documents at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Issued in Kansas City, Missouri, on October 27, 1997.

Mary Ellen A. Schutt,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 97–28984 Filed 10–31–97; 8:45 am]
BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Office of the Secretary

14 CFR Part 255

[Docket No. OST–97–3057; Notice No. 97–11]

RIN 2105–AC67

Computer Reservations System (CRS) Regulations (Part 255)

AGENCY: Office of the Secretary, (DOT).

ACTION: Notice of proposed rulemaking.

SUMMARY: The Department is proposing to revise its rules governing airline computer reservations systems (CRSs) by changing the rules' expiration date from December 31, 1997, to March 31, 1999. If the Department does not change the expiration date in the rules (14 CFR Part 255), they will terminate on December 31, 1997. The proposed extension of the current rules will cause those rules to remain in effect while the Department carries out an extensive reexamination of the need for CRS regulations. The Department tentatively believes that the current rules should be maintained because they appear to be necessary for promoting airline competition and helping to ensure that consumers and their travel agents can obtain complete and accurate information on airline services.

DATES: Comments must be submitted on or before November 18, 1997.

ADDRESSES: Comments must be filed in Room PL–401, Docket OST–97–3057, U.S. Department of Transportation, 400 7th St. SW., Washington, DC 20590. Late filed comments will be considered to the extent possible. To facilitate consideration of comments, each commenter should file six copies of its comments.

FOR FURTHER INFORMATION CONTACT: Thomas Ray, Office of the General Counsel, 400 Seventh St. SW., Washington, DC 20590, (202) 366–4731.

SUPPLEMENTARY INFORMATION: The Department in 1992 adopted its rules governing CRS operations—14 CFR Part 255—because CRSs had become essential for the marketing of airline services for almost all airlines operating in this country. 57 FR 43780, September 22, 1992. We concluded that the rules were necessary to ensure that the owners of the systems—all of which were airlines or airline affiliates—did not use them to unreasonably prejudice the competitive position of other airlines or to provide misleading or inaccurate information to travel agents and their customers. CRS practices can injure airline competition because travel agents rely on CRSs to provide airline information and bookings for their customers and because almost all airlines rely heavily on travel agencies to distribute their services. Our rules will expire on their sunset date, December 31, 1997, unless we readopt them or extend the expiration date. We have begun a proceeding to determine whether the rules are necessary and should be readopted and, if so, with what modifications. 62 FR 47606, September 10, 1997. We are proposing here to extend the expiration date for the current rules to March 31, 1999, so that they will remain in force while we conduct our overall reexamination of the rules.

We have set a short comment period of fifteen days so that we can publish a final decision on this proposal before the rules' current expiration date. We note that our advance notice of proposed rulemaking has already given interested persons notice of our intent to propose an extension of the rules' expiration date. 62 FR at 47610–47611.

The CRS Business

Four CRSs—each affiliated with one or more U.S. airlines—operate in the United States. A CRS consists of a periodically-updated central database that contains information on airline services and other travel services sold through the system. The major users of the information and transaction capabilities provided by CRSs are travel agents, who access CRSs through computer terminals, which are normally leased from the system. Consumers can also access a CRS through an on-line computer service or an Internet website. A CRS enables travel agents and other users to find out what airline seats and fares are available, book a seat, and issue a ticket on each airline that ''participates'' in the system, that is, that makes its services saleable through the CRS.

Each CRS obtains most of its revenues from airlines and other travel suppliers participating in the system. An airline participant pays a fee whenever the system is used to make a booking on that airline (most of the systems also charge fees for related transactions, such as booking changes and cancellations). Other travel suppliers pay similar fees. While travel agencies subscribing to the system may also pay fees, subscriber fees, unlike airline fees, are disciplined by competition. Many travel agencies obtain CRS services at little or no charge.

Regulatory Background

CRSs became essential for airline distribution in the early 1980s. At that time each of the systems operating in the United States, with one exception, was owned by a single airline (one system was owned by a non-airline firm, but it had a small market share and was later sold to an airline CRS). Each owner airline used its system to prejudice airline competition and give consumers biased or incomplete information in order to obtain more bookings. These factors caused the agency formerly responsible for the economic regulation of airlines, the Civil Aeronautics Board (''the Board''), to adopt rules governing the operations of airline-affiliated CRSs. 49 FR 32540, August 15, 1984. The Board found that regulations were essential to keep the systems from causing substantial harm to airline competition. The Board adopted its regulations primarily under its authority under section 411 of the Federal Aviation Act, later recodified as 49 U.S.C. 41712, to prevent unfair methods of competition and unfair and deceptive practices in air transportation and the marketing of airline transportation. On review the Seventh Circuit upheld the Board's rules. *United Air Lines* v. *CAB,* 766 F.2d 1107 (7th Cir. 1985).

The Board's major rules required each system to make participation available to all airlines on non-discriminatory terms, to offer at least one unbiased display, and to make available to each airline participant any marketing and booking data from bookings for domestic travel that it chose to generate from its system. The Board's rules also prohibited certain contract terms that limited the travel agencies' ability to choose which system to use.

We assumed the Board's responsibilities for airline regulation, including its regulation of CRSs, after the Board's sunset on December 31, 1984. *See United Air Lines, supra,* 766 F.2d at 1109.

To ensure that we would reexamine the need for the rules and their effects, the Board included a sunset date of December 31, 1990, in its rules. To carry out that reexamination we held a rulemaking proceeding to determine whether the rules should be readopted or modified. 54 FR 38870, September 21, 1989, (advance notice of proposed rulemaking); 56 FR 12586, March 26, 1991, (notice of proposed rulemaking); and 57 FR 43780, September 22, 1992, (the final rule). Since we did not complete that rulemaking by December 31, 1990, the rules' original expiration date, we extended that date to keep the rules in effect until the rulemaking's completion. 55 FR 53149, December 27, 1990; 56 FR 60915, November 29, 1991; 57 FR 22643, May 29, 1992. In the rulemaking we relied in part on the findings made in the staff's study of the rules and the CRS business. Secretary's Task Force on Competition in the U.S. Domestic Airline Industry, *Airline Marketing Practices: Travel Agencies, Frequent-Flyer Programs, and Computer Reservation Systems* (February 1990).

In our rulemaking we concluded that CRS rules remained necessary: market forces still did not discipline the price or level of service offered participating airlines by the systems, CRS owners would still use their control of the systems to prejudice airline competition if there were no rules, and systems could still bias their displays of airline services if there were no rules requiring unbiased displays. 57 FR at 43783–43787. We therefore readopted the Board's rules with several changes intended to further promote competition in the airline and CRS industries.

To ensure that we would reexamine the need for our rules and their effectiveness, our rules, like the Board's rules, included a sunset date, December 31, 1997. 14 CFR 255.12; 57 FR, 43829–43830, September 22, 1992. If we do not readapt the rules or extend their expiration date, the rules will end on that date.

We recently published an advance notice of proposed rulemaking asking interested persons to comment on whether we should readapt the rules and, if so, with what changes. 62 FR 47606, September 10, 1997. We did not issue the advance notice earlier due to

the on-going study of the CRS business and the impact of the rules being conducted by the staff, which was begun by Order 94–9–35 (September 26, 1994) and is examining such recent developments as the growth in Internet booking services.

Since we adopted the rules, we have proposed two amendments to them. One proposed rule would prohibit each system from imposing contract terms on participating airlines that require an airline to participate in a system at least as high a level as the airline participates in any other system, at least when the airline participant did not own or market a competing system. 61 FR 42197, August 14, 1996. The second proposal would revise our rules on CARS displays to promote airline competition and ensure that systems provide reasonable displays of airline services. 61 FR 42208, August 14, 1996.

Our Proposed Extension of the CARS Rules

We are proposing to change the expiration date for our CARS rules to March 31, 1999, so that the rules will remain in effect while we conduct our reexamination of the need for the rules and the rules' effectiveness. Given the time required for completing the overall reexamination of our rules, including the need to give parties an adequate opportunity to file comments and reply comments in response to the advance notice of proposed rulemaking and to our future notice of proposed rulemaking, we will not be able to complete that proceeding by the current expiration date of our rules.

A temporary extension of the current rules will preserve the status quo until we determine which rules, if any, should be adopted. Allowing the current rules to expire could be disruptive, since the systems, airlines, and travel agencies have been conducting their operations in the expectation that each system will comply with the rules. Systems, airlines, and travel agencies, moreover, would be unreasonably burdened if the rules were allowed to expire and if we later determined that those rules (or similar rules) should be adopted, since they could have changed their business methods in the meantime.

We tentatively find that a short-term continuation of the current rules is necessary, primarily because of the need to protect airline competition and consumers against unreasonable practices. Before adopting our current rules we carefully considered the CARS business and airline marketing, both as part of the Secretary's study of domestic airline competition and through the rulemaking. We concluded in that CARS rulemaking, completed in 1992, that CRSs were still essential for the marketing of the services of virtually all airlines. 57 FR 43780, 43783–43784, September 22, 1992. Each airline's need to participate in each system meant that market forces did not discipline the terms offered by the systems for airline participation.

Although the staff has not completed its current study of the CARS business and although we have only begun a rulemaking to reexamine the need for the rules, we tentatively believe that the findings made in our last CARS rulemaking on the need for CARS rules are still valid, at least for the purpose of a short-term extension of the rules' expiration date. If we continue the current rules, those regulations will protect airline competition and consumers against the injuries that might otherwise occur, given our earlier findings on the market power of the systems and each airline owner's potential interest in using its affiliated CARS to prejudice the competitive position of other airlines. Continuing the rules in effect should not impose significant costs on the systems and their owners, since they have already adjusted their operations to comply with the rules and since the rules do not impose costly burdens of a continuing nature on the systems.

The need for the rules results from the airlines' dependence on travel agencies, the agencies' dependence on CRSs, the use by most travel agency offices of only a single CARS, the difficulty of creating alternatives for CRSs and getting travel agencies to use them, and the airlines' inability to cause agencies to use one CARS instead of another. Because of these factors, almost all airlines must participate in each CARS, and the CRSs have no need to compete for airline subscribers.

In recent years seventy percent of all airline bookings in the United States have been made by travel agencies, and travel agencies have relied almost entirely on CRSs to determine what airline services are available and to make reservations for their customers. 57 FR at 43782. Few travel agency offices make extensive use of more than one CARS. 57 FR at 43783.

If an airline does not participate in one system, the travel agents using that system must call the airline to obtain information and make bookings, which is substantially less efficient than using a CARS. Travel agents are less likely to book an airline when doing so is significantly more difficult than booking a competing airline participating in the agents' CARS. As a result, the non-participating airline will receive fewer bookings than it would obtain if it participated in the agents' system. The importance of marginal revenues in the airline industry means that an airline's loss of a few bookings on each flight is likely to substantially reduce its profitability. 57 FR at 43783–43784.

Most airlines do not have practicable alternatives to CARS participation. An airline could try to mitigate the loss of bookings caused by non-participation in a system by establishing a direct electronic link between the travel agencies using that system and its own internal reservations system, but doing so is expensive and potentially less convenient for travel agents.

We doubt that any airline could successfully create a new CARS, since doing so would be extremely costly. In addition, any new system could not easily obtain a significant number of subscribers. Moreover, due to the economies of scale in the CARS business, a system without a large subscriber base is unlikely to be profitable. 57 FR at 43783–43784. We recognize that U.S. Travel Agency Registry has announced a plan to create a new CARS, but its system would apparently not be available until late 1998, and a few industry sources have questioned USTAR's plans. *See Travel Distribution Report,* vol. 5, no. 11, August 28, 1997, at 1, 4. We will welcome new competition in the CARS business, but USTAR's plans do not undermine the apparent need for a short-term extension of the rules.

Airlines could exert some competitive pressure on the systems if they could encourage travel agencies to use one system instead of another, but that has not been practicable. 57 FR at 43831.

In our recent notices of proposed rulemaking on airline parity clauses and CARS displays, we tentatively concluded that market forces did not discipline the terms offered by a system for airline participation. *See, e.g.,* 61 FR at 42198. The Department of Justice filed comments in the parity clause rulemaking which supported our tentative findings. The Justice Department thus stated, Justice Dept. Comments at 2–3, Docket OST–96–1145 (footnote omitted):

> Each CARS provides access to a large, discrete group of travel agents, and unless a carrier is willing to forego access to those travel agents, it must participate in every CARS. Thus, from an airline's perspective, each CARS constitutes a separate market and each system possesses market power over any carrier that wants travel agents subscribing to that CARS to sell its airline tickets.

We are aware of the changes in the CARS business and airline marketing

practices since our last major CARS rulemaking, but we are reluctant to change our existing regulations until we have completed our study of the impact of those changes.

Many airlines and travel agencies and some CRSs now offer booking sites on the Internet that consumers may use, but few consumers currently book airline services through the Internet. Despite the rapid growth in the number of consumers using the Internet for airline bookings, airlines will probably remain dependent on travel agencies for most of their revenues for at least the next few years. Furthermore, many of the websites use a CARS for a booking engine, so CRSs have captured a significant share of the Internet business.

In addition, several new low-cost airlines began operations without making their services saleable through any CARS. Initially those airlines' adoption of that strategy suggested that airlines could compete successfully without CARS participation. However, some of these low-cost airlines—Western Pacific and ValuJet, for example—have recently announced plans to make their services available through CRSs, and other low-cost airlines—Reno and Frontier, for example—have always relied on CARS participation in their marketing. As a result, while Southwest has managed to prosper without participating in any CARS except Sabre, it appears that virtually no other airline has been able to duplicate Southwest's method of operations enough to avoid CARS participation.

Our tentative conclusion that CARS rules remain necessary, at least on a short-term basis, is supported by current airline complaints about CARS practices. For example, a number of airlines (including Delta, one of the three largest airlines in the United States and a part-owner of a CARS) have complained about the continuing increases in booking fees and the airlines' inability to exert any check on those increases. Justice Dept. Comments at 5, Docket OST–96–1145. There are also disputes between some participating airlines and some systems over the systems' imposition of booking fees on transactions that participating airlines believe are of no benefit to them. *See, e.g., Travel Distribution Report*, vol. 5, no. 2, April 24, 1997, at 1.

Finally, there is an additional basis for our tentative determination that we should keep the current rules in place pending our reexamination of the rules. Our goals of promoting airline competition and preventing consumer deception were not the only bases for our adoption of the rules. We also relied on our obligation under section 1102(b) of the Federal Aviation Act, recodified as 49 U.S.C. 40105(b), to act consistently with the United States' obligations under treaties and bilateral air services agreements. Many of those bilateral agreements assure the airlines of each party a fair and equal opportunity to compete. We have held that the fair and equal opportunity to compete includes, among other things, a right to have an airline's services fairly displayed in CRSs. Our rules against display bias and discriminatory treatment help to provide foreign airlines with a fair and equal opportunity to compete in the United States. 57 FR at 43791–43792. We note in that regard that the European Union, Canada, and Australia, among other countries, have adopted rules regulating CARS operations that help give U.S. airlines a fair opportunity to sell their services in the countries covered by the rules.

Regulatory Process Matters

Regulatory Assessment

This rule is a nonsignificant regulatory action under section 3(f) of Executive Order 12866 and has not been reviewed by the Office of Management and Budget under that order. Executive Order 12866 requires each executive agency to prepare an assessment of costs and benefits for each significant rule under section 6(a)(3) of that order. The proposal is also not significant under the regulatory policies and procedures of the Department of Transportation, 44 FR 11034.

Maintaining the current rules should impose no significant costs on the CRSs. The systems have already taken all the steps necessary to comply with the rules' requirements on displays and functionality, and operating in compliance with the rules does not impose a substantial burden on the systems. Maintaining the rules will benefit participating airlines, since otherwise they would be subjected to unreasonable terms for participation, and will benefit consumers, who otherwise might obtain incomplete or inaccurate information on airline services. Several provisions of the rules, moreover, are designed to prevent abuses in the systems' competition with each other for travel agency subscribers.

When we conducted our last major CARS rulemaking, we included a tentative regulatory impact statement in our notice of proposed rulemaking and made that analysis final when we issued our final rule. We believe that analysis remains applicable to our proposal to extend the rules' expiration date. As a result, no new regulatory impact statement appears to be necessary. However, we will consider comments from any party on that analysis before we make our proposal final.

This rule does not impose unfunded mandates or requirements that will have any impact on the quality of the human environment.

Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980, 5 U.S.C. 601 *et seq.*, was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by government regulations. The act requires agencies to review proposed regulations that may have a significant economic impact on a substantial number of small entities. For purposes of this rule, small entities include smaller U.S. and foreign airlines and smaller travel agencies. Our notice of proposed rulemaking sets forth the reasons for our proposed extension of the rules' expiration date and the objectives and legal basis for that proposed rule.

In addition, we note that keeping the current rules in force will not modify the existing regulation of small businesses. Our notice of proposed rulemaking in our last major CARS rulemaking contained an initial regulatory flexibility analysis on the impact of the rules, and we discussed the comments on that analysis in our final rule. Our analysis appears to be valid for our proposed extension of the rules' termination date. Accordingly, we adopt that analysis as our tentative regulatory flexibility statement and will consider any comments filed on that analysis in connection with this proposal.

The continuation of our existing CARS rules will primarily affect two types of small entities, smaller airlines and travel agencies. To the extent that airlines can operate more efficiently and reduce their costs, the rule will also affect all small entities that purchase airline tickets, since airline fares may be somewhat lower than they would otherwise be, although the amount may not be large.

Continuing the rules will protect smaller non-owner airlines from certain potential system practices that could injure their ability to operate profitably and compete successfully. No smaller airline has a CARS ownership interest. Market forces do not significantly influence the systems' treatment of airline participants. As a result, if there were no rules, the systems' airline owners could use them to prejudice the

competitive position of other airlines. The rules provide important protection to smaller airlines. For example, by prohibiting systems from ranking and editing displays of airline services on the basis of carrier identity, they limit the ability of each system to bias its displays in favor of its owner airlines and against other airlines. The rules also prohibit charging participating airlines discriminatory fees. The rules, on the other hand, impose no significant costs on smaller airlines.

The CARS rules affect the operations of smaller travel agencies, primarily by prohibiting certain CARS practices that could unreasonably restrict the travel agencies' ability to use more than one system or to switch systems. The rules prohibit CARS contracts that have a term longer than five years, give travel agencies the right to use third-party hardware and software, and prohibit certain types of contract clauses, such as minimum use and parity clauses, that restrict an agency's ability to use multiple systems. By prohibiting display bias based on carrier identity, the rules also enable travel agencies to obtain more useful displays of airline services.

The Regulatory Flexibility Act also requires each agency to periodically review rules which have a significant economic impact upon a substantial number of small entities. 5 U.S.C. 610. Our rulemaking reexamining the need for the CARS rules and their effectiveness will constitute the required review of those rules.

Our proposed rule contains no direct reporting, recordkeeping, or other compliance requirements that would affect small entities. There are no other federal rules that duplicate, overlap, or conflict with our proposed rules.

Interested persons may address our tentative conclusions under the Regulatory Flexibility Act in their comments submitted in response to this notice of proposed rulemaking.

The Department certifies under section 605(b) of the Regulatory Flexibility Act (5 U.S.C. *et seq.*) that this regulation will not have a significant economic impact on a substantial number of small entities.

Paperwork Reduction Act

This proposal contains no collection-of-information requirements subject to the Paperwork Reduction Act, Pub. L. No. 96–511, 44 U.S.C. Chapter 35.

Federalism Implications

The rule proposed by this notice will have no 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 12812, we have determined that the proposed rule does not have sufficient federalism implications to warrant preparation of a Federalism Assessment.

List of Subjects for 14 CFR Part 255

Air carriers, Antitrust, Consumer protection, Reporting and recordkeeping requirements, Travel agents.

Accordingly, the Department of Transportation proposes to amend 14 CFR Part 255, Carrier-owned Computer Reservations Systems, as follows:

PART 255—[AMENDED]

1. The authority citation for Part 255 continues to read as follows:

Authority: 49 U.S.C. 1301, 1302, 1324, 1381, 1502.

2. Section 255.12 is amended to read as follows:

§ 255.12. Termination.

Unless extended, these rules shall terminate on March 31, 1999.

Issued in Washington, D.C. on October 27, 1997.

Rodney E. Slater,

Secretary of Transportation.

[FR Doc. 97–29001 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–62–P

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

15 CFR Part 960

[Docket No. 951031259–7103–02]

Licensing of Private Land Remote-Sensing Space Systems

AGENCY: National Oceanic and Atmospheric Administration, Commerce.

ACTION: Notice of proposed rulemaking.

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) proposes regulations revising its regime for the licensing of private Earth remote-sensing space systems under Title II of the Land Remote Sensing Policy Act of 1992, 15 U.S.C. 5601 *et seq.* (1992 Act). These proposed regulations implement the licensing provisions of the 1992 Act and the Presidential Policy announced March 10, 1994. They are intended to facilitate the development of the U.S. commercial remote-sensing industry and thus promote the collection and widespread availability of Earth remote sensing data while preserving essential U.S. national security, international obligations and foreign policy interests. A fundamental principle is that restrictions imposed on a licensee must appropriately balance promoting competitive capabilities of U.S. commercial firms and the protection of national security, international obligations and foreign policy. The proposed regulations also describe when a system, though privately owned, has received sufficient financial or other support from the U.S. Government that the operator may have to comply with a nondiscriminatory data access policy that applies to all Government systems. These regulations reflect that policy.

DATES: Comments must be received by January 2, 1998.

ADDRESSES: Comments should be sent to, Charles Wooldridge, NOAA, National Environmental Satellite, Data, and Information Service, 1315 East-West Highway, Room 3620, Silver Spring, MD 20910–3282.

FOR FURTHER INFORMATION CONTACT: Charles Wooldridge at (301) 713–2024, ext. 107 or Kira Alvarez, NOAA, Office of General Counsel at (301) 713–1217.

SUPPLEMENTARY INFORMATION: Tile II of the 1992 Act authorizes the Secretary of Commerce (Secretary) to issue licenses for operation of private remote sensing space systems. The authority to issue licenses has been delegated to the Administrator of NOAA and redelegated to the Assistant Administrator for Satellite and Information Services.

On July 10, 1987, NOAA published final regulations (1987 Regulations) implementing Title IV of the Land Remote Sensing Act of 1984 (the 1984 Act) setting forth the requirements for obtaining a license. In 1988 the Radio Television News Directors Association (RTNDA) filed a Petition for Rulemaking requesting NOAA to reopen these regulations in light of the President's January 5, 1988 Decision Directive encouraging commercial space development. On January 18, 1989, NOAA responded to this Petition, agreeing to reopen the rulemaking and incorporate certain principles favorable to commercial development that were consistent with the Directive. *see* 54 FR 1995.

Shortly thereafter, Congress began to review the 1984 Act and, on October 28, 1992, enacted the 1992 Act which repealed and succeeded the 1984 Act. The 1992 Act made significant changes to the 1984 Act, particularly with regard to the latter's requirement that all unenhanced data must be provide on a nondiscriminatory basis. The 1992 Act also provided for judicial review of

certain licensing and enforcement actions.

On March 10, 1994, the President announced a Policy Decision (the ''President's Policy'') to ''support and enhance U.S. competitiveness in the field of remote sensing space capabilities while at the same time protecting U.S. interests in the national security and international obligations.'' This policy adopted a number of principles that promote an appropriate balance between these interests.

On December 4, 1995 a *Notice of Inquiry and Request for Public Comment* was published in the **Federal Register** (60 FR 62054), wherein NOAA sought public comment to determine the extent the 1987 Regulations needed revision to conform to the President's Policy and the 1992 Act, and, if so, which issues should be addressed. NOAA received seven sets of comments (*see* 61 FR 24480). On May 15, 1996, NOAA published a *Notice of Public Hearing* in the **Federal Register** (61 FR 24480) announcing a public hearing to be held at the Department of Commerce on June 14, 1996. The main theme that emerged at the public hearing was the request of commercial representatives for transparency and predictability in the regulations.

The regulations proposed herein update the 1987 Regulations to reflect these intervening events and information gathered through the public comment process, as well as the experience gained in the issuance of licenses over the last five years. When finalized, these regulations will apply to all existing licenses, as well as to all pending license applications (i.e. those applications which are currently being reviewed and for which no license has yet been issued) and will apply to all future applications to operate a private remote sensing system. The intent of the proposed regulations is to promote the development of the commercial remote sensing industry by keeping Government oversight to the minimum necessary to ensure protection of U.S. national security, international obligations and foreign policy interests. In addition, it is the intent of these regulations to make U.S. Government policies regarding remote sensing and established timeliness, predictable and transparent to licensees and applicants. An underlying premise is that helping the U.S. industry to lead this emerging market supports the long term national security, international obligation and foreign policy interests of the United States.

Major Revisions

1. National Security and Foreign Policy Considerations

The regulations incorporate the basic regulatory principle that any restrictions on a licensee, including those required for national security, international obligations and foreign policy purposes, should be the least burdensome possible to achieve the stated objective § 960.10(a)). This was one of the two principles previously recognized in the January 18, 1989, response to the RTNDA Petition for Rulemaking and is reflected in the President's Policy.

Proposed § 960.10(a) sets forth a presumption that, in the case of systems whose operational capabilities are similar to those of systems already licensed, national security, international obligations and foreign policy concerns can be resolved through license conditions similar to those established by the President's Policy and described in §§ 960.9 and 960.10 without the necessity of permanently barring any area from sensing. For systems whose operational capabilities exceed those of systems already licensed, the Government will make every effort to resolve any national security, international obligation and foreign policy concerns that may arise in review of license applications with license conditions rather than by denying the license.

Section 960.10(b) sets forth the basic license condition that has been designed to preserve national security, international obligations and foreign policy interests. This condition was established in the first license issued after the 1992 Act, refined slightly in the President's Policy, and is contained in all licenses issued since then. This condition provides that the Secretary of Commerce may require the licensee to stop imaging an area and/or stop distributing data of an area after being informed by the Secretary of Defense or State, as appropriate, that a period exists when national security, international obligations or foreign policy interests may be compromised. It should be noted that the consultation and decisionmaking must take place at the Secretarial level, thus ensuring that invoking this provision will be invoked only at the highest levels within the U.S. Government. The decision will take into account the potential negative economic impact of interrupting commercial operations.

In reaching determinations as to whether the unrestricted data collection and distribution capabilities of a licensed commercial remote sensing system would adversely affect the U.S. national security, international obligations and/or foreign policies, the Secretary of Defense or Secretary of State will exercise his or her judgment in light of the existing or emerging international situation. Of particular concern will be situations in which: (a) A condition of crisis or war exists or is developing and this condition poses an immediate and serious threat to U.S. or allied national security objectives such as affecting the lives or resources of U.S. or allied personnel; (b) a condition of crisis or serious impairment to U.S. international obligations or foreign policy exists or is developing and this condition poses an immediate serious and permanent threat to U.S. or allied relations with one or more foreign countries; (c) an adversary's ability to receive and exploit the data from the licensee's system contributes to the threat U.S. or allied national security objectives, concerning military planning and operations, or to implement international obligations, taking into account the ability of the adversary to receive and exploit similar data from other sources.

Subsection (c) also includes additional criteria that reflect the principle that restrictions be the least burdensome possible to achieve the stated objective: restrictions will be imposed on the smallest area and during the shortest period of time possible; alternatives to the complete suspension of operations such as delaying transmission of data and/or restricting the field of view will be considered; and the distribution of data will generally not be restricted if comparable data is otherwise available from foreign systems with comparable resolution and accessibility over which the U.S. has no jurisdiction or control.

The regulations implementing this condition recognize the need for close coordination between the U.S. Government and the licensee during periods when concerns relating to national security, international obligations and foreign policies have been raised.

Subsection (d) allows (but does not require) the inclusion in a license of a related condition, also derived from the President's Policy, that ensures that, during periods when imaging or data distribution are restricted for national security, international obligations or foreign policy purposes under subsection (c), on request the licensee will provide the data exclusively to the U.S. Government by means of government furnished rekeyable encryption on the downlink. This condition makes commercial remote sensing assets available as appropriate

to enhance U.S. Government national security capabilities. Subsection (e) provides that technical modifications needed to meet this condition may be required to be paid for by the requesting agency in accordance with section 507(d) of the Act.

2. Changes in Data Policy

A major change made by the 1992 Act was to remove the 1984 requirement that all private operators must make their unenhanced data available on a nondiscriminatory basis. The 1992 Act retains this requirement of essentially Governmental systems, such as the Landsat system and those systems that are substantially funded by the U.S. Government, but allows the operator of a non-governmental system to follow normal commercial practices unless U.S. interests dictate otherwise. (section 201(e), 202(b)(3), and 501).

Section 960.11 of the regulations implements this change within the Act's overall objective of making environmental data available to the widest possible spectrum of users, particularly for scientific and operational purposes in support of the public good. This section addresses three categories of licensees. The first are those whose development, fabrication, launch, or operations costs have been funded entirely or in substantial part directly by the Government. As dictated by the Act, these operators must make their unenhanced data available on a nondiscriminatory basis (§ 960.11(a)). This requirement ensures that the data are broadly accessible and is consistent with the basic policy codified in the Paperwork Reduction Act, 44 U.S.C. 3506 *et. seq.* and included in OMB Circular A–130, that data paid for by the taxpayer is a public good to be made equally available to all members of the public *see* 44 U.S.C. 3506(d).

The second category of licensees are those that are fully commercial, i.e., not funded by the Government in whole or in part. These operators will be allowed to follow their preferred commercial data practices, subject to providing the unenhanced data to the governments of those states sensed, subject to national security, international obligations and foreign policy concerns, as discussed below (§ 960.11(b)). These licensees will be encouraged to promote access to their data on as widespread a basis as possible and it is anticipated that, in most cases, there will be a commercial incentive to reach a broad customer base. It is recognized that in some cases, some of the data collected by such systems may not become generally accessible. However, NOAA believes that overall this loss will be outweighed by the substantially greater volume of data that will be collected by a vigorous commercial industry. It should be noted that limited purchases by the United States Government as a normal customer of the licensee would not constitute funding or support for purposes of this section.

The third category of licensees falls between the first two and consists of those for whom the U.S. Government provides some support. Here, the Government's interest is more significant, because of the investment by the taxpayer and the possible precedential effect hat permitting restricted access could have on future U.S. access to the data from foreign international data exchange involving government subsidized public-private ventures. The data policy applicable to these licensees will be determined on a case-by-case basis, balancing the effect on the licensee of limiting its commercial options against the potential benefits of providing widespread access of the data for scientific, educational or other non-commercial purposes supporting the public good. In evaluating the potential for data loss, NOAA will consider both the data to be gathered by the particular licensee as well as the possible implications for future intergovernmental data exchanges.

It is anticipated that the U.S. Government interest in making the data available frequently can be addressed through terms and conditions in the license that do not require full nondiscriminatory data access policy. For example, it may be possible to accommodate such interests by ensuring access for research, education, and other governmental purposes, while protecting a licensee's commercial options.

3. The Sensed State Provision

When Congress removed the blanket nondiscriminatory data access requirement, it was careful to ensure that access to the unenhanced data would remain consistent with the basic international principle, contained in the United Nations' Principles on Remote Sensing, that the government of a sensed state should have timely access to all such data concerning its own territory. Section 202(b)(2) of the 1992 Act requires that all licenses include the condition that the licensee shall make available to the government of any country, including the United States, unenhanced data collected by the system concerning the territory under the jurisdiction of such government on reasonable terms and conditions as soon as such data are available; consistent with national security, international obligations and foreign policy of the U.S.

Section 960.9(c) of the proposed regulations incorporates this requirement and discusses the terms and conditions that are ''reasonable'' in those cases where the data will not be made available on a nondiscriminatory basis. Making the data available to different classes of customers, e.g. researcher, commercial end user, and value-added redistributor, at different prices is reasonable provided the data is available to the sensed state on the most favorable terms available to any member of the class appropriate to the intended use by that state.

If a licensee intends to provide its unenhanced data on a restricted or exclusive basis, it becomes more difficult to determine what is ''reasonable'' vis-a-vis a sensed state. The price of these data, if measured in terms of their value to a particular commercial customer, may be prohibitive to a small government that simply wishes to monitor its own natural resources or to use the data, for example, for purposes of land use planning or to mitigate the effects of a recent natural disaster. On the other hand, the same price may be reasonable if the sensed state intends to use the data for competitive purposes. The terms and conditions will have to be considered on a case-by-case basis. In any event, the sensed state has the opportunity to demonstrate that the terms result in an undue hardship (§ 960.9(c)(3)(D)).

4. Procedural Changes

The existing regulations state that they are intended to provide the ''minimum practicable procedures'' for licensing private operators of remote sensing space systems. In order to promote the growth of the U.S. remote sensing industry, U.S. Government review of license applications and foreign agreements must be as efficient and expeditious as possible. Congress recognized this need by establishing certain statutory deadlines for U.S. Government administrative action.

The Government's remote sensing policy with regards to preserving national security, international obligations and foreign affairs interests should be clear and predictable. Predictability is critical in terms of the conditions that may require restrictions on imaging after a system is operational. The provisions of the regulations describing these conditions are discussed under number 1 above and set forth at § 960.10.

The proposed regulations clearly state, and are intended to promote adherence to, the time limits that Congress has established for these reviews.

The specific process by which the various agencies of the U.S. Government will interact in the review of a license and amendment applications, significant or substantial foreign agreement, and determinations concerning the restrictions and limitation on imaging and data collection, will be established in a Memorandum of Understanding (MOU) among the agencies. The MOU will specify that disagreements among the agencies will be decided by the President. To promote transparency and predictability of government action in these procedures, we expect that the MOU will be publicly available. The MOU will be finalized by the time of issuance of a final rule.

Section 960.6 of both the existing and proposed regulations require a license applicant to supply the NOAA Administrator with sufficient information about a proposed remote-sensing space system's orbit and data collection characteristics to determine that a system will be operated in a manner that preserves the national security and international obligations of the United States.

Section 960.8(f) allows the applicant to request a hearing before an Administrative Law Judge (ALJ) regarding any adverse action on a license application. The documentation in the record will serve as the basis for the ALJ's determination as to whether the Administrator's action regarding any conditions imposed on the license, denial of the license, or a decision that no action can be taken within the required limit, was appropriate.

Section 960.12 sets forth regulations for the review of proposed significant and substantial foreign agreements between licensees and foreign nations or persons for which notification is required pursuant to section 202(b)(6) of the Act and § 960.9(g) of these regulations. We would note that the Act does not expressly confer the right to approve foreign agreements, but it is our interpretation that the Secretary has sufficient authority under the statute to prevent a licensee from entering into an agreement that violates the national security, international obligation or foreign policy interests of the United States. Accordingly, submission and approval of these will be a condition of the license (960.9(c)).

To provide due process, the regulations treat negative advice to a licensee concerning a proposed foreign agreement as an ''adverse action'' under section 203(b) of the Act, which grants the right to a hearing on the record for certain actions, e.g., denying or conditioning a license. Finally, § 960.12 contains a number of implementing record keeping requirements similar to those for the initial license review (*see* § 960.12(b)–(d)).

5. Investors in Licensees

Section 960.14 is new. It is intended to encourage investment in the space remote sensing industry while ensuring that those licensed to operate these systems retain sufficient control to be able to preserve U.S. national security, international obligations and foreign policies. In essence, it requires a licensee to notify NOAA of significant changes in ownership and to give the Government the opportunity to review those changes that might result in a shift of control, particularly to foreign persons or nations.

Section 960.14(a)(1) simply requires the licensee to notify NOAA when a domestic investor's financial interest in the licensee reaches ten percent. Certain basic information such as the identity of the investor and the extent of the holdings must be provided within ten days after the 10 percent threshold is reached.

Section 960.14(a)(2) recognizes that the potential for transfer of control of the management and/or operations of a licensee is more likely when a single domestic investor acquires a financial interest in the licensee of 25 percent or more. If the licensee, notwithstanding the acquisition of such interest, will retain control, it must document this fact and include the information described in this section.This documentation is to be filed within 10 days of the transaction.

Section 960.14(a)(3) requires an amendment where the financial interest of a single domestic investor will reach or exceed 40 percent of the licensee. In effect, it is presumed that an investment at this level results in a transfer of control.

Section 960.14(b)(1) requires the licensee to notify NOAA when a foreign investor's financial interest in the licensee reaches five percent. Certain basic information such as the identity of the investor and the extent of the holdings, and any updates to the technology control plans, if necessary, must be provided within ten days after the five percent threshold is reached.

Section 960.14(b)(2) recognizes that the potential for transfer of control of the management and/or operations of a of a licensee is more likely when a foreign investor holds a financial interest in the licensee of 15 percent or more. If the licensee, notwithstanding such acquisition, will retain control, it must document this fact and include the information described in this section. Section 960.14(b)(3) provides that this documentation must be filed 60 days prior to acquisition together with the relevant investment agreement which is considered a ''significant agreement'' under § 960.12.

Section960.14(b)(4) requires an amendment to the license where the financial interest of either a foreign investor or foreign investors as a whole will exceed 40 percent of the licensee. In effect, it is presumed that an investment at this level results in control. Since control by foreign investors generally will not be approved, licensees may obtain approval for an amendment of this nature only by rebutting this presumption with clear documentation that it retains control over its management and operations. In addition to other specified information for an amendment, it must include a certification that no foreign persons can influence the corporation's activities and that the control of the Board of Directors is still exerted by the majority U.S. shareholders. The licensee must also establish a technology control plan that ensures that the company complies with relevant U.S. laws such as export control laws.

Foreign investment that exceeds 49 percent of the licensee is prohibited in § 960.14(b)(5).

Section 960.14(c) provides that if through the acquisition of a financial interest by any person(s) or nation(s), regardless of the percentage of investment, or a through contractual or other relationship, there will be a transfer of control of the licensee, § 960.13(d)(2) requires an amendment of the license. However, as this section makes clear, control of these sensitive remote-sensing systems to foreign investors generally raises national security, international obligation or foreign policy concerns and an amendment involving such a transfer of control is unlikely to be approved.

The procedures in this section applies only to U.S. operators that are subject to U.S. jurisdiction or control. However, a foreign operator over which the U.S. initially has no jurisdiction or control, may decide to carry out its activities in the U.S. to the extent that it becomes subject to U.S. jurisdiction and control under § 960.2(c). In such cases the provisions with respect to changes in foreign ownership will be set forth in the license.

6. New Enforcement Provisions

Section 203(a) of the 1992 Act revised the administrative authorities granted to the Secretary, primarily to provide grater judicial oversight and more predictability for the licensees. Thus, the Administrator now may seek an injunction in order to terminate, modify, or suspend a license or to terminate licensed operations in the case of violations of the Act, regulations, or license. Further, the Administrator may obtain a warrant in order to seize records or objects believed to be used in a violation.

Subpart C of the proposed regulations would implement these changes. They also continue to set forth the procedures for imposing any administrative civil penalty under section 203(b) of the Act. These include provisions for the formal agency adjudication on the record to which the licensee is entitled which are found in 15 CFR part 904.

7. Additional Changes

a. Definitions

Several new technical definitions have been added relating to the operational capability of a remote sensing system. These include the terms: ''ground sample distance,'' ''field of view,'' ''instantaneous field of view,'' ''resolution,'' ''spatial resolution,'' and ''tasking.'' Experience in prior licensing exercises has shown that these parameters help define the operational characteristics of the system for the purpose of determining national security and foreign policy concerns and the definitions are intended to establish these informational requirements as precisely as possible.

In accordance with the President's policy, the regulations define the term ''foreign agreement'' to establish those that are ''significant and substantial'' and, therefore, subject to the advance notification requirement of sections 202(b)(6) of the Act and implemented in § 960.9(g) of the regulations. The definition focuses on the two types of agreements that could have particular national security or foreign policy implications: Those that give a foreign party a degree of control over the operation of the system, e.g. the ability to control the spacecraft, task the sensors, or exercise managerial control over the system, including technology transfer; and those that establish a particularly important role for a foreign party in distributing the data from the system, either by operating a foreign ground station or by acting as a major customer or distributor; and those that involve foreign investment. If the agreement effectively expands the capability of the system, for example by adding a ground station that could collect data not anticipated by the license, the process would require an amendment to the license (*see* § 960.13(e)(3)).

The proposed regulations would state that ordinary data sales agreements might be considered a significant or substantial foreign agreement. However, NOAA requests comment on this issue.

New definitions have also been added defining ''beneficial owner'' and ''voting interest,'' as part of the new foreign investment agreement provisions.

Finally, the definition of ''unenhanced data'' has been modified consistent with the 1992 Act, and the definition of ''value-added activity'' has been deleted as no longer necessary.

b. Informational Requirements

The proposed regulations update the informational requirements of a license application. As with the existing regulations, the intent is to solicit only that information relevant to those limited U.S. interests covered by the 1992 Act while ensuring that applications will be as complete as possible. The information of primary importance is that describing the orbit and data collection characteristics aspects of a proposed system which are significant in terms of its national security and foreign policy implications (§ 960.6(c). Additional relevant information concerns the applicant's data distribution plans and the extent of any U.S. government support of the system. This information is needed to determine the appropriate data access policy (§§ 960.6(d) and (e)).

c. The Archive Provision

In accordance with section 502 of the Act § 960.9(h) states that licenses will include terms and conditions for making unenhanced data available to U.S. Government agencies, including the Archive, for the specific purpose of including it in the basic data set. The negotiation to provide such data on reasonable terms and conditions will take into account the commercial value of the data. This section also states that before the licensee unenhanced data obtained under the license is purged, the licensee shall offer such unenhanced data to the Archive, at the cost of reproduction and transmission, which the Archive will then distribute at the cost of fulfilling user requests. Because the licensee will offer this unenhanced data at this minimum cost and the Archive will distribute the data at the cost of fulfilling user requests, it is presumed that the commercial value of the data is negligible. No licensee can negotiate terms with a potential customer or distributor that would prohibit or otherwise prevent the licensee from meeting its obligation to make all data collected available to the Archive.

d. Protecting Proprietary Information

Proposed § 960.7 would require that the applicant for a license submit two different versions of their application. One version would be the proprietary version, with brackets around the information that should be given confidential treatment; and the other would be the public version, with the information inside the brackets taken out. The prospective licensee must include a general justification for such confidential treatment. This requirement reflects a balance between the needs of the licensees to be assured that the sensitive information which they submit will be treated confidentially, and the need to enable the public to have access to these government records.

Request for Public Comment

NOAA is requesting public comment on the major revisions in the proposed regulations, as described above. NOAA is particularly seeking comment on the following: (1) The definition of ''Significant or Substantial Foreign Agreement''; (2) the review of foreign investment agreements; (3) the reporting of ''beneficial owners''; and (4) the information requirements of the application process.

With regards to the definition of ''Significant or Substantial Foreign Agreement'' as well as the review of such foreign agreements, NOAA has proposed a regime for addressing issues of foreign ownership, or control over U.S. licensed private remote sensing systems. As stated in an earlier section, the intent is to set up a regime that ensures that undue foreign control or influence over satellite operations does not compromise national security or foreign policy goals while at the same time promoting and permitting investment in these capital intensive systems. By monitoring the investment closely and having certain thresholds which raise the level of scrutiny, the intent is that detailed review at certain thresholds will be able to prevent the occurrence of any imperiling national security situations. We are interested in hearing if our approach adequately achieves our intentions, or, given our intent, it would be better to adopt a regime similar to that found at 10 U.S.C. 2327 for defense procurements or 50 U.S.C. app. 2710, the Exon-Florio investment review procedures. Also of

concern is whether the requirement to provide information about beneficial owners should be qualified to require that information only need be provided about ''known'' beneficial owners. This would make the NOAA regulatory requirement consistent with the Security and Exchange Commission's requirement to provide information on ''known'' beneficial owners.

Concerning information requirements of the application process, and technical definitions found in these proposed regulations, NOAA is considering placing these requirements in an appendix to the regulations. This would make it easier to change the required contents of an application, as only notice in the **Federal Register** need be provided for changes. This would give the Administrator greater flexibility in the face rapidly changing technology. NOAA has also increased the information requested in the application to include information about export licenses which the applicant holds or intends to apply for. NOAA is seeking comment on whether this requirement is duplicative of the existing export control regime.

Classificaiton

A. Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

This proposed rule establishes a process intended to promote the development of the industry and to minimize any adverse impact on any entity, large or small, that may seek a license to operate a private remote-sensing space system. Even though there has been a substantial reduction in size and cost of Earth remote-sensing space projects, costs of development and launch still involve extraordinary capitalization. As such, small entities have yet to enter this field and appear highly unlikely to do so.

Accordingly, the Assistant General Counsel for Legislation and Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that the proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities.

B. Paperwork Reduction Act of 1995 (35 U.S.C. 3500 et seq.)

This proposed rule contains collection-of-information requirements subject to review and approval by OMB under the Paperwork Reduction Act (PRA). The proposed rule revises collection of information requirements that were previously approved by the Office of Management and Budget under control number 0648–0174. A request to make these revisions has been submitted to the Office of Management and Budget for approval. Public reporting burden for these collections of information is estimated to average 20 hours per license applications; 5 hours for amendment submissions; 10 hours for foreign agreement notification; 2 hours for notification of disposition/orbital debris change; and 1 hour for notification of deviation of orbit. This estimates include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including, through the use of automated collection techniques or other forms of information technology. Send comments regarding this burden estimate or any other aspect of this collection of information to Charles Woolbridge, NOAA, National Environmental Satellite, Data, and Information Service, 1315 East West Highway, Room 3620, Silver Spring, MD 20910–3282 and to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503 (Attention: NOAA Desk Officer). Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number.

C. National Environmental Policy Act (42 U.S.C. 4321 et seq.)

Publication of the proposed regulations does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required.

List of Subjects in 15 CFR Part 960

Scientific equipment, Space transportation and exploration.

Dated: October 28, 1997.

Robert S. Winokur,

Assistant Administrator.

Accordingly, for the reasons set forth above, part 960 of Title 15 of the Code of Federal Regulations is proposed to be revised to read as follows:

PART 960—LICENSING OF PRIVATE REMOTE-SENSING SYSTEMS

Subpart A—General

Sec.
960.1 Purpose.
960.2 Scope.
960.3 Definitions.

Subpart B—Application Process

960.4 Pre-application consultation.
960.5 Filing Information.
960.6 Information to be included with application.
960.7 Confidentiality of information.
960.8 Review procedures for license applications.
960.9 Conditions for operation.
960.10 National security, International Obligations and Foreign Policy concerns.
960.11 Data policy for remote sensing space systems.
960.12 Notification of foreign agreements.
960.13 Amendments to licenses.
960.14 Investment agreements.
960.15 Certain rights not conferred by license.

Subpart C—Enforcement Procedures

960.16 General.
960.17 Prohibitions.
960.18 Sanctions.
960.19 Civil penalties.
960.20 Seizure.

Authority: 15 U.S.C. 5624.

Subpart A—General

§ 960.1 Purpose.

(a) These regulations set forth the procedural and informational requirements for licensing and supervising the operation of a private remote sensing space system under Title II of the Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5601 *et seq.*) (Pub. L. 102–555) (the Act). The regulations are intended to facilitate development of the commercial space remote-sensing industry in the United States and broadly promote the beneficial use of remote sensing data while ensuring compliance with basic requirements of the Act:

(1) Preserving the national security of the United States;

(2) Observing the international obligations and policies of the United States;

(3) Ensuring that unenhanced data collected by licensed systems concerning the territory of any country are made available to the government of that country as soon as such data are

available and on reasonable terms and conditions;

(4) Ensuring that remotely sensed data from space are widely available for research, particularly environmental and global change research; and

(5) Maintaining a permanent comprehensive government archive of global land remote sensing data for long-term monitoring and study of the changing global environment and other archival purposes.

(b) In accordance with the Act and the President's Policy announced on March 10, 1994 entitled, ''U.S. Policy on Foreign Access to Remote Sensing Space Capabilities'', decisions regarding the issuance of licenses and operational conditions (*see* §§ 960.8, 960.9, 960.12, 960.13 and 960.14) will be made by the Secretary of Commerce, or his or her designee, after consultation with the Secretaries of Defense and State with respect to national security, international obligations, and foreign policy.

(c) Obtaining a license to operate a satellite pursuant to these regulations does not affect related licensing requirements of other Federal agencies such as the Department of State, the Federal Communications Commission, and the Department of Transportation.

§ 960.2 Scope.

(a) The Act and these regulations apply to any person subject to the jurisdiction or control of the United States who operates or proposes to operate a private remote-sensing system either directly or through affiliate, or subsidiary. For the purposes of these regulations a person is subject to the jurisdiction or control of the United States if such person is:

(1) An individual who is a United States citizen; or

(2) A corporation, partnership, association, or other entity organized or existing under the laws of any state, territory, or possession of the United States.

(b) Other private space system operators may be subject to U.S. jurisdiction and control, and their operations, therefore, subject to the provisions of the Act and these regulations, if they have substantial connections with the United States or deriving substantial benefits from U.S. law that support their international remote-sensing operations. Substantial connections include factors or a combination of factors such as using a U.S. launch vehicle and/or platform, operating a spacecraft command and/or data acquisition station in the U.S., and processing the data at and/or marketing it from facilities within the U.S. The following examples are intended to illustrate the application of this paragraph, and should not be considered limitations thereon, or as an indication of how other Federal agencies may interpret related licensing requirements that they administer.

Example 1: A non-U.S. corporation launches an operational remote-sensing space system, pursuant to a Department of Transportation license, using a U.S. operated launch vehicle and/or a platform launched from U.S. territory. The company operates no spacecraft command ground station in the U.S. although it has technicians and supervisors present in the U.S. to ensure integration of the foreign-built satellite or space system with the launch vehicle. The company acquires data directly from the space system and processes and distributes it from facilities outside the U.S., although it advertises the availability of data and/or information in U.S. publications.

The company is not subject to U.S. jurisdiction or control and requires no license for its remote-sensing activities.

Example 2: A company's operation is the same as in Example 1 except that it acquires, processes and distributes the data to U.S. and foreign customers from one or more facilities within the U.S.

The company is subject to U.S. jurisdiction and control and requires a license for the purposes of this Act and these regulations.

Potential applicants with questions concerning the application of these regulations to specific operations may consult with the Administrator prior to filing an application. Such consultations shall not be included in the record of any subsequently filed application unless the applicant specifically so requests or the Administrator so advises the applicant.

(c) These regulations are applicable to any action taken on or after the effective date of these regulations by the Secretary with respect to any existing, proposed or future license.

§ 960.3 Definitions.

For purposes of these regulations, the following terms have the following meanings:

Act means the Land Remote Sensing Policy Act of 1992.

Administrator means the Administrator of NOAA or his or her designee.

Affiliate means any person who is under common ownership or control with the applicant or licensee.

Archive means the National Satellite Land Remote Sensing Data Archive established by the Secretary of the Interior pursuant to the archival responsibilities defined in sec. 502 of the Act.

Basic data set means those unenhanced data generated by the Landsat system or by any remote sensing space system licensed under the Act that have been selected by the Secretary of the Interior to be maintained in the Archive, as described in section 502(c) of the Act.

Beneficial Owner means any person who, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise has or shares: the right to exercise the voting power of any security or financial interest in a licensee; and the power to dispose of, or to direct the disposition of, any security or other financial interest in a licensee. All securities or other financial interests of the same class beneficially owned by a person, regardless of the form which such beneficial ownership takes, shall be aggregated in calculating the number of shares beneficially owned by such person. A person shall be deemed to be the beneficial owner of a security or other financial interest if that person has the right to acquire beneficial ownership, as defined above, within sixty days including but not limited to any right to acquire: through the exercise of any option, warrant or right; through the conversion of a security; pursuant to the power to revoke a trust, discretionary account, or similar arrangement; or pursuant to the automatic termination of a trust, discretionary account or similar arrangement.

Field of view means the solid angle through which an instrument is sensitive to radiation.

Ground sample distance (GSD) means the distance of the terrain between successive ground resolution cells (the area on the terrain that is covered by the instantaneous field of view of a detector).

Instantaneous field of view (IFOV) means the narrow angle within which incident energy is focused on the detector of the radiometer at a particular instant in time; defined as the radio of detector size to the focal length of the optical system, and often expressed in microradians.

Measured values means the assigned numbers, shades or colors, which represent, in a standardized system, an amount of electromagnetic radiation sensed in a spectral band.

NOAA means the National Oceanic and Atmospheric Administration.

Party (to a licensing process of foreign agreement notification) shall include the Secretary, the applicant, or the Secretary of Defense, the Secretary of State and the head of any other Federal organization, as appropriate, recognized by the Secretary of Commerce as being involved in any proceedings between the U.S. Government and a licensee/applicant.

Person means any individual (whether or not a citizen of the United

States), corporation, partnership, association, or other entity organized or existing under the laws of any nation, or consortium of any such entities acting together for the acquisition, holding, or disposal of securities or other financial interests in the licensee. ''Person'' does not include any government or intergovernmental organization or agency thereof.

President's Policy means the President's Policy entitled ''U.S. Policy on Foreign Access to Remote Sensing Space Capabilities'' announced on March 10, 1994.

Remote sensing space system means any instrument or device or combination thereof flown on any space-borne platform and any related ground based facilities capable of actively or passively sensing the Earth's surface (including bodies of water) from space by making use of the properties of the electromagnetic waves emitted, reflected, or diffracted by the sensed objects. For purposes of these regulations, small, hand-held cameras shall not be considered remote sensing systems.

Resolution means the ability of an entire remote sensing system, including lens, antennae, display, exposure, processing, and other factors, to render an interpretable image.

Secretary means the Secretary of Commerce.

Security means any note, stock, treasury stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral trust certificate, pre-organization certificate or subscription, transferable share, investment contract, voting trust certificate, certificate of deposit for a security, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly as a ''security'', or any certificate of interest or participation in, temporary or interim certificate for, recipe for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

Significant or substantial foreign agreement means an agreement with a foreign nation or person that provides for:

(1) Cooperation in the operation of the spacecraft;

(2) Tasking of the satellite sensors, modifying satellite tasking commands, or revising the priority of tasking requests, or otherwise providing an opportunity to exercise a significant level of managerial control over the system's operation;

(3) Real-time direct access to the system's unenhanced data.

(4) Distributorship arrangements involving the receipt of high volumes of the system's unenhanced data;

(5) An equity interest in the Licensee, if the equity interest in the Licensee by a foreign nation and/or person equals or exceeds or will equal or exceed 15 percent of total outstanding shares, or entitles the foreign person to a position on the Licensee's Board of Directors;

(6) The acquisition by any person(s) or nation(s) of any security or other financial interest of the licensee, regardless of the percentage acquired, that will result in a transfer of sufficient voting power to control the management, policies, and/or operations of the licensee; or any contractual or other relationship with a foreign person or nation, wherein the foreign person or nation obtains the ability to control the management, policies, technology transfer and/or operations of the licensee.

(7) Significant or Substantial Foreign agreements may include agreements for the sale of data, for the sale of value added products, or for the establishment of marketing outlets in foreign countries, pursuant to operations in the ordinary course of business as described in the applicant's plan for sale and distribution contained in a license application submitted pursuant to these regulations.

Spatial resolution means the ground area sensed by a radiometers's IFOV calculated at nadir as the product of the IFOV and the satellite altitude.

Spectral band means the interval in the electromagnetic spectrum defined by two wavelengths, frequencies, or wave numbers.

Subsidiary means a person in which the applicant or licensee holds the voting power necessary to control its management, policies, and/or operations. If a subsidiary is the entity responsible for operation a remote sensing space system, and the subsidiary is under the jurisdiction or control of the United States, the subsidiary must obtain the license.

Tasking means any action taken to command a satellite or it's sensor to acquire data for direct transmission or storage on the satellite's recording subsystem. Such action can be in the form of commands sent to the satellite from a ground site for immediate execution or for storage in the satellite's memory for execution at a specified time or location within a given orbit.

Unenhanced data means Earth remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing. Data preprocessing may include rectification of system and sensor distortions in remote-sensing data received directly from the satellite; registration of such data with respect to features of the Earth; and calibrations of spectral response with respect to such data, but does not include conclusions, manipulations, or calculations derived from such data, or a combination of the remote-sensing data with other data and excludes phase history data for synthetic aperture radar systems or other space based radar systems.

Voting Power means the power to vote, or direct the voting of, any security or other financial interest in a licensee, including the power to vote on or for:

(1) The conduct of the operations or significant policies of the licensee;

(2) The selection or appointment of directors, trustees, or partners (or persons exercising similar functions of the licensee); and/or

(3) The power to vote on the appointment of the principal executive officers of the licensee.

Subpart B—Application Process

§ 960.4 Pre-application consultation.

Potential applicants are encouraged to contact the Administrator at the earliest possible planning stages. Such consultation may reveal design or data collection requirements that may be accommodated early at low cost or avoid costly changes in design or data collection characteristics. Consultation before a license application is submitted may also prove useful in defining informational requirements and in expediting review. Informal consultations held prior to the submission of an application will not be considered part of the agency record of an application. The agency record will be open upon the filing of the application pursuant to § 960.5.

§ 960.5 Filing Information.

(a) *Who must file.* A person desiring to operate a private remote space sensing system and/or establish substantial connections with the United States relating to the operation of a private remote space sensing system shall file an application for such a license under these regulations. The holder of an existing license seeking to modify the terms of that license shall file an application for an amendment under § 960.13.

(b) *Where to file.* Applications and all related documents shall be filed with the Assistant Administrator, National

Environmental Satellite, Data and Information Service (NESDIS), NOAA, Department of Commerce, Washington, D.C. 20233.

(c) *Form.* No particular form is required but each application must be in writing, must include all of the information specified in this subpart, and must be signed by an authorized principal executive officer.

(d) *Number of copies.* Three (3) copies of each application must be submitted in a readily reproducible form. If proprietary treatment is requested for any portion of the application, one (1) copy of the public version required by § 960.7(b) must also be submitted in a readily reproducible form.

§ 960.6 Information to be included in the application.

The following information shall be filed by the applicant and revised as necessary:

(a) The name, mailing address, telephone number and citizenship of: The applicant and any affiliates or subsidiaries; the chief executive officer of the applicant and each director, if the applicant is a corporation, or each general partner, if the applicant is a partnership; all executive personnel or senior management; any directors, partners, executive personnel or senior management who hold positions with or serve as consultants for any foreign nation or person; each domestic beneficial owner of an interest equal to or greater than 10 percent in the applicant; each foreign owner of an interest equal to or greater than 5 percent in the applicant; each foreign lender and amount of debt where foreign indebtedness exceeds 25 percent of an applicants total indebtedness; and a person upon whom service of all documents may be made.

(b) A copy of the charter or other authorizing instrument certified by the jurisdiction in which the applicant is incorporated or organized and authorized to do business.

(c) Orbital and data collection characteristics regarding the applicant's proposed remote sensing space system in sufficient detail to enable the secretary to determine whether the proposal meets requirements of the Act and the President's Policy. These characteristics shall include:

(1) The date of the intended commencement of operations and the expected duration of the operations;

(2) The number and type of satellites and sensors proposed;

(3) The range of orbits and altitudes proposed, orbital characteristics such as inclination angle, equator crossing time, and those parameters which affect swath width;

(4) The range of ground sample distance, spatial resolution, field of view, and instantaneous field of view proposed;

(5) The specific spectral bands and/or radar characteristics that are proposed;

(6) The data collection capabilities proposed including on board storage capacity, off-nadir viewing, scene revisit time, tasking procedures, and scheduling plans;

(7) The command (uplink and downlink) and mission data (downlink) transmission frequencies and system transmission (uplink and downlink) footprint;

(8) The methods applicant will use to ensure that integrity of its operations during a national security crisis, including plans for: positive control of the spacecraft and relevant ground stations; denial of unauthorized access to data transmissions to or from the satellite; and restriction of collection and/or distribution of unenhanced data from specific areas at the request of the U.S. Government. If such plans include encryption, encryption devices used will require U.S. Government approval.

(9) A description of an significant or substantial agreements between the applicant, its affiliates and subsidiaries, with foreign nation or person, including copies if available;

(10) The proposed concept of operations for the system; and

(11) If the applicant wishes, information concerning the extent to which data comparable to those generated by the applicant's system could be acquired or made available from foreign systems which are not subject to these regulations.

(d) The applicant's proposed technology control plan, if the concept of operations includes any international component which requires an export license. Such plan should ensure that the applicant:

(1) Maintain policies and procedures to safeguard the export of controlled information that is entrusted to it; and

(2) Complies with U.S. export control laws and regulations, and does not take actions adverse to the conditions of the license; and

(3) Protects the operational control of the licensed system from foreign influence and any technology transfer that would impinge on national security, international obligations and foreign policy; and

(4) Informs the Administrator of all export licenses which the applicant holds or intends to apply for.

(e) The applicant's plans for providing access to or distributing the unenhanced data generated by the system including:

(1) A description of the plan for the sale and distribution of such data;

(2) The method for making the data available to governments whose territories have been sensed;

(3) A description of the place for making data available to the Archive inclusion in the basic data set; and

(4) Opportunities for the data to be made available for long term monitoring, protection, and study of the changing global environment and study of the changing global environment.

(f) If the applicant is proposing to follow a commercial data distribution and pricing policy as provided for by § 960.11(b) or (c), the application shall include the following additional financial information:

(1) The extent of the private investment in the system;

(2) The extent of any direct funding or other direct assistance which the applicant or its affiliates or subsidiaries have received or anticipate receiving from any agency of the U.S. Government for the development, fabrication, launch, or operation of the system including direct financial support, loan guarantees, or the use of U.S. Government equipment or services;

(3) Any existing or anticipated contract(s) between the applicant, affiliate, or subsidiary and U.S. Government agencies for the purchase of data, information, or services from the proposed system;

(4) Any other relationship between the applicant, affiliate, or subsidiary and the U.S. Government which has supported the development, fabrication, launch, or operation of the system; and

(5) Any plans to provide preferred or exclusive access to the unenhanced data to any particular user or class of users.

(g) The plan for post-mission disposition of any remote-sensing satellites owned or operated by the applicant to allow a determination that the plan minimizes orbital debris and does not endanger public safety. If the satellite disposition involves an uncontrolled re-entry the applicant must provide an analysis of the total debris casualty area of the system's components and structure surviving re-entry and assure that the system design minimizes the threat to the public from such re-entry.

(h) If information supplied in an application becomes materially inaccurate or incomplete prior to issuance of the license, the operator must promptly file the new or corrected information with the Administrator. If new or revised information is filed

during the application process, the Administrator shall promptly determine whether the deadline imposed by section 201(c) of the Act must be extended to allow adequate review of the revised application and, if so, for how long.

§ 960.7 Confidentiality of information.

(a) *Proprietary information*. The Administrator will treat business or trade secrets or commercial or financial information, the release of which to the public would cause substantial harm to the competitive position of the submitter, as proprietary information, if that information is so designated by the submitter.

(1) Any person who submits information to the Administrator in connection with any requirements imposed by these regulations may request that the Administrator consider that information, or any specified part, be treated as proprietary.

(2) The submitter shall identify proprietary information on each page by placing brackets around the proprietary information and clearly stating at the top of each page containing such information ''Proprietary Treatment Requested.''

(3) The submitter shall provide a general explanation as to why proprietary treatment is being requested.

(b) Public summary. Prior to issuance of a license, any person submitting information for which proprietary treatment is requested, shall also provide to the Administrator a public version of the document. This public summary shall be available for public review at a location designated by the Administrator. The public summary shall include:

(1) An adequate public summary of all proprietary information; and

(2) A statement itemizing those portions of the proprietary information which cannot be summarized adequately and all arguments supporting that conclusion for each portion.

(c) Status during consideration of request. While considering whether to grant a request for proprietary treatment, the Administrator will not disclose or make public the information. The Administrator normally will decide not later than 14 days after the Secretary receives the request. The Administrator will give persons whose request for proprietary treatment of their information has been denied seven (7) working days notice before the information is disclosed.

(d) *Treatment of proprietary information.* Unauthorized disclosure of any proprietary information marked in accordance with this section is subject to the criminal penalties set forth in 18 U.S.C. 1905. NOAA shall provide marked information only to those interested agencies which require the information for review purposes and shall ensure that the copies provided to these agencies contain all markings provided.

(e) *Requests for disclosure.* (1) Requests for public disclosure of information submitted, reported, or collected pursuant to this part shall be in accordance with 15 CFR 903.1 (which directs the reader to 15 CFR part 4).

(2) Upon receipt of a request for disclosure of information for which proprietary treatment has been requested, NOAA will immediately notify the applicant or licensee who submitted the information and inquire whether the applicant or licensee continues to request proprietary treatment.

(3)(i) If the applicant or licensee waives or withdraws a request for proprietary treatment in full or in part, the person shall deliver to NOAA a written statement to that effect. If the person confirms the request for proprietary treatment, such person is strongly encouraged to deliver to NOAA a written statement in sufficient time for NOAA to fully consider it in making its formal determination (generally, not later than the close of business on the seventh working day after being notified under paragraph (e)(3) of this section). Such statement shall provide an explanation as to why each piece of information subject to the request is entitled to proprietary treatment under this section. The explanation should describe:

(A) The commercial or financial nature of the information;

(B) The nature and extent of competitive advantage enjoyed as a result of possession of the information;

(C) The nature and extent of the competitive harm that would result from public disclosure of the information;

(D) The extent to which the information has been disseminated to employees and contractors of the person submitting the information;

(E) The extent to which persons other than the person submitting the information possess, or have access to, the information; and

(F) The nature of the measures that have been and are being taken to protect the information from disclosure; and

(G) Present any other arguments against disclosure of information.

(ii) Failure to respond to the agency notification in a written statement will be deemed as a waiver of confidential treatment.

§ 960.8 Review procedures for license applications.

(a)(1) Within twenty-one (21) days after the receipt of an application, the Administrator, shall notify the applicant, in writing whether the application omits any of the information required by § 960.6.

(2) For any systems whose operational capabilities are similar to those of previously licensed systems, an application will be considered to be complete on the date of receipt if all information required in § 960.6 has been provided. For any systems whose operational capabilities exceed those of previously licensed systems, the Administrator shall determine the additional information necessary to complete the application. The Administrator shall notify the applicant of the need for this information and specify the period of time in which to provide it. The 120 day review period prescribed in section 201(c) of the Act will commence upon receipt of the information requested by the Administrator.

(b) The Administrator shall review any completed application and make a determination thereon, in accordance with the Act and § 960.1(b) within 120 days of the receipt of such completed application. If final action has not occurred within such time, the Administrator shall inform the applicant of any pending issues and of actions required to resolve them.

(c) Before issuing a licensee, the Administrator shall find, in writing, that the applicant will comply subject to penalties prescribed by law with any national security concerns, international obligations, and foreign policies of the United States and with all other requirements of the Act and these regulations.

(d)(1) If the Administrator denies the license or includes additional conditions in the license other than those set forth in §§ 960.9 and 960.10, the Administrator shall notify the applicant in writing together with a concise statement, of the facts in the record which the Administrator has determined support the action. Such notice shall inform the applicant that, within twenty-one (21) days of the date the notice was mailed, the applicant may request a hearing on the record on the Administrator's decision by serving a written request on the Administrator at the address specified in the Notice.

(2) The applicant shall be entitled at any time during business hours to inspect and copy the entire record, in

accordance with applicable law (e.g. 5 U.S.C. 552b, the Freedom of Information Act), upon which the decision was made.

(3) In the interest of compiling an accurate record of the decisionmaking for later possible review, oral communications on matters affecting the substance of a pending receives such a communication, the Administrator shall include in the record a summary of the communication and the circumstances surrounding its receipt.

(e)(1) The hearing requested under paragraph (d)(1) of this section may be granted unless, in accordance with 5 U.S.C. 554(a)(4), the hearing would involve the conduct of a military or foreign affairs function, i.e. determinations concerning license conditions necessary to meet national security concerns, international obligations and foreign policy concerns are not subject to review. A determination to deny a hearing on this basis shall constitute final agency action.

(2) Any hearing shall be closed to the public as necessary to protect classified information.

(3) A hearing under this section shall be based solely on the record developed in accordance with § 960.6 and this section.

(4) The hearing shall be held in accordance with the procedures set forth at 15 CFR part 904, subpart C, except to the extent that these sections allow the introduction of testimony or other evidence not contained in the administrative record upon which the decision was made (*see* e.g. §§ 904.204(d) and (e); 904.240–242; and 904.252).

(f) The Administrator shall terminate the license application process if:

(1) The application is withdrawn before the decision approving or denying it is issued; or

(2) the applicant, after receiving a request for additional information pursuant to paragraph (c) of this section, does not provide such information within the time stated in the notice.

§ 960.9 Conditions for operation.

(a) Each license issued for the operation of a remote sensing space system shall specify that the licensee shall comply with all the requirements of the Act and these regulations, and shall set forth the conditions necessary to ensure compliance.

(b) A licensee shall operate its system in a manner that preserves the national security and observes the international obligations and the foreign policies of the United States. The basic license conditions to ensure compliance with these requirements are set forth in § 960.10 and conditions consistent with this section will be incorporated in each license. Any additional conditions necessary to ensure compliance with these requirements will be incorporated into that license in accordance with § 960.8(d).

(c)(1) A licensee shall make available to the government of any country (including the United States) unenhanced data collected by its system concerning the territory under the jurisdiction of such government as soon as such data are available and on reasonable terms and conditions. However, no sensed data shall be provided to the sensed state if such release is contrary to U.S. national security, international obligations or foreign policy concerns, e.g. where the sensed state is deemed to be a state sponsor of terrorism or a country subject to U.S. or international arms embargoes.

(2) To comply with this subsection, a licensee must make its unenhanced data available on request to the affected government as soon as the licensee is able to distribute them commercially or as soon as the licensee has processed them into a format that the licensee uses for its own purposes, whichever occurs sooner.

(3) For purposes of this subsection, terms and conditions are reasonable if the licensee:

(i) Follows a nondiscriminatory data access policy that complies with section 501 of the Act and § 960.11 of this part;

(ii) Makes the unenhanced data available to all users on a regular commercial basis and does not establish terms and conditions which favor any user, or any class or users over the affected government in terms of delivery, format pricing, or technical considerations; or

(iii) Establishes separate, reasonable terms and conditions for the affected government if the licensee makes some or all of the unenhanced data available only to particular users. In establishing these reasonable terms and conditions the licensee shall take into account the intended use of the data by the affected government; and

(iv) Has provided affected governments an opportunity to demonstrate that the above terms and conditions present an undue hardship in acquiring the unenhanced data.

(4) Issues relating to appropriate notification of affected governments including issues concerning disputed territories and the methods for ensuring availability, international obligations and foreign policy will be referred to the Department of State.

(5) Issues relating to national security will be referred to the Department of Defense.

(d) A licensee shall make available on a nondiscriminatory basis in accordance with section 501 of the Act and § 960.11 of this part any unenhanced data designated by the Administrator in the license in accordance with section 201(e) of the Act and § 960.11.

(e) A licensee shall dispose of any space platforms owned or operated by the licensee upon termination of operations under the license in a manner satisfactory to the President. The licensee shall obtain approval from the Administrator of all plans and procedures for the disposition of such platforms, e.g. uncontrolled re-entry, burn on re-entry or controlled de-orbit, providing sufficient notification to allow determination that the proposed procedures will minimize orbital debris and not jeopardize safety.

(f) A licensee shall inform the Administrator immediately of any deviation or proposed deviation from the approved operational characteristics of the system furnished pursuant to § 960.6 or § 960.13. Such notification is required sufficiently prior to the deviation so as to enable government approval of such deviation if circumstances permit or, if advance notice is not possible because of an emergency posing an imminent and substantial threat of harm to human life, property, the environment or the remote sensing space system itself, the licensee shall notify the Administrator of the deviation as soon as circumstances permit.

(g) A licensee shall notify the Administrator, for review under § 960.12, or its intent to enter into any significant or substantial foreign agreement. The proposed agreement may not be implemented by the licensee until the licensee has been advised by the Administrator that the document's provisions are acceptable or acceptable with conditions.

(h) A licensee shall make available unenhanced data requested by the Archive for the basic data set on reasonable terms as agreed by the licensee and the Archive. A licensee shall make available to the Administrator for review upon request the record of unenhanced data obtained pursuant to the license. Before any unenhanced data so obtained is purged from its holdings, or the holdings of its distributors, or customers that may have rights to distribute such data, the licensee shall make such data available to the Archive at the cost of reproduction and transmission with no

further restrictions on release of the data to the public.

(i) If the space system will utilize a U.S. Government platform, the licensee will reach an agreement with the appropriate agency to reimburse the Government for all related costs and to ensure that use of the platform will not interfere with the Government's mission.

§ 960.10 National security, international obligations and foreign policy concerns.

(a) For any system whose operational capabilities are similar to those of previously licensed systems, it is presumed that any concerns relating to national security, international obligations, and foreign policies can be resolved through the imposition of similar license conditions. For any system whose operational capabilities exceed those of previously licensed systems, the Administrator shall make every effort to resolve these concerns through license conditions and any additional ones as necessary, but may deny the issuance of a license if necessary to avoid compromising these concerns.

(b) The conditions in licenses shall include:

(1) The licensee shall maintain positive control of the spacecraft at all times and shall include safeguards to ensure the integrity of spacecraft operations. The Licensee shall also maintain and make available to the U.S. Government, upon request, a record of all satellite tasking operations for the previous year, and allow the Administrator to inspect such records at all reasonable times.

(2) During periods when national security or international obligations and/or foreign policies may be compromised, as defined by the Secretary of Defense or the Secretary of State, respectively, the Secretary may, after consultation with the appropriate agency(ies), require a Licensee to limit data collection and/or distribution by the system to the extent necessitated by the given situation. Decisions to impose such limits only will be made by the Secretary of Commerce in consultation with the Secretary of Defense or the Secretary of State, as appropriate.

(3) During those periods when, and for those geographic areas that, the Secretary will require the Licensee to limit distribution under paragraph (b)(2) of this section the licensee shall, on request, make the unenhanced data thus limited available exclusively to the U.S. Government by means of government furnished rekeyable encryption on the down-link. To make this possible, the conditions in the license shall also require the licensee to use only encryption devices approved by the U.S. Government and to use a data down-link format that allows the U.S. Government access and use of these data during such periods.

(c) In determining the extent of required controls on the collection or distribution of imagery, the Government will give full consideration to:

(1) Making limitations imposed applicable to the smallest geographic area feasible and for the briefest period of time necessary for the full achievement of the intended objective.

(2) Alternative actions such as delaying the transmission or distribution of data, restricting the field of view of the system, encryption of the data if this is possible, or other means to control access to the data so as to justify the overall impact on commercial operations.

(d) In accordance with section 507(d) of the Act, if the conditions described in paragraph (b)(3) of this section or any other license conditions result in technical modifications being imposed on a licensee on the basis of national security concerns and the Administrator, in consultation with the appropriate federal agencies, determines that additional costs will be incurred by the licensee, or that past development costs (including the cost of capital) will not be recovered by the licensee, the agency or agencies requesting such technical modifications may be required to reimburse the licensee for such additional or development costs, but not for anticipated profits. Reimbursements may cover costs associated with required changes in system performance, but not costs ordinarily associated with doing business abroad. The costs and terms associated with meeting this condition will be negotiated directly between the Licensee and the agency or agencies requesting the technical modifications in accordance with section 507(d) of the Act. In no event shall licensees be entitled to reimbursements for license conditions imposed on the basis of international obligations and foreign policy considerations.

§ 960.11 Data policy for remote sensing space systems.

(a) In accordance with section 501 of the Act, if the U.S. Government has or will directly fund all or a substantial part of the development, fabrication, launch, or operation costs of a licensed system, the Administrator shall state in the license that all of the unenhanced data from the system shall be made available on a nondiscriminatory basis.

(b) If the U.S. Government has not funded and will not fund, either directly or indirectly,any of the development, fabrication, launch, or operations costs of a licensed system, the Administrator shall make no designation in the license and the licensee may provide access to its unenhanced data in accordance with normal commercial policies, subject to the requirement for providing data to the government of any sensed state in § 960.9(c) and subject to implementation of the licensee's plan contained in its application to provide widespread access to its unenhanced data for non-commercial scientific and educational purposes.

(c) If the U.S. Government has funded some of the development, fabrication, launch, or operations costs of a licensed system (either directly or indirectly), the Administrator, in consultation with other appropriate U.S. agencies, shall determine whether the interest of the United States in promoting widespread availability of remote-sensing data requires that some or all of the unenhanced data from the system be made available on a nondiscriminatory basis in accordance with section 501 of the Act and shall designate in the license any data subject to this requirement. In making this determination, the Administrator shall consider:

(1) The extent and proportion of private and federal funding of the system;

(2) The extent of the governmental versus the commercial market for the unenhanced data;

(3) The effect of a nondiscriminatory data access designation on the applicant's commercial activity;

(4) The extent to which the applicant's proposed commercial data policies would encourage foreign operators to limit access, particularly for research and public benefit purposes; and

(5) The extent to which the U.S. interest in promoting widespread data availability can be satisfied through license conditions that ensure access to the data for research and public benefit purposes without requiring full nondiscriminatory access.

(d) The data policy established pursuant to this section shall be consistent with any contract or other agreement entered into between a U.S. government agency and the licensee.

§ 960.12 Notification of Foreign Agreements

(a) Upon notification by a licensee, pursuant to § 960.9(g), the Administrator shall initiate review of the proposed significant or substantial

agreement in light of the national security, international obligations and foreign policy concerns of the U.S. Government.

(b)(1) If the Administrator determines, pursuant to the Act and § 960.1(b), that a proposed agreement will impair his or her ability to enforce the terms or conditions of the license, the Administrator shall identify the terms and conditions of the license and specify how the agreement impairs enforcement.

(2) If the Administrator determines, under paragraph (d)(1) of this section that a proposed agreement will compromise a specific national security interest, international obligation, or foreign policy of the United States, the Administrator shall provide the Licensee with an unclassified explanation of the U.S. interest that is at risk, if such is possible without jeopardizing the interest at risk. Such notice shall inform the licensee that, within twenty-one (21) days from the date the notice was mailed, the licensee may provide an alternative that will not jeopardize the U.S. interest that is at risk or request a hearing or, within seven (7) days of such date, may request an expedited hearing.

(e)(1) The Administrator shall grant the hearing requested under paragraph (d) of this section unless, in accordance with 5 U.S.C 554(a)(4), the hearing would involve the conduct of a military or foreign affairs function, i.e. determinations of the concerning license conditions necessary to meet national security concerns, international obligations and foreign policy concerns are not subject to review. A determination to deny a hearing on this basis shall constitute final agency action. Any hearing shall be closed as necessary to protect classified information. The hearing shall be based solely on the record developed in accordance with this section and shall be for the purpose of determining whether a preponderance of the evidence in that record supports the objection raised to the proposed agreement.

(2) The applicant shall be entitled at any time during business hours to inspect and copy the entire record, in accordance with applicable law, upon which the decision was made.

(3) In the interest of compiling an accurate record of the decisionmaking for later possible review, oral communications on matters affecting the substance of a pending receives such a communication, the Administrator shall include in the record a summary of the communication and the circumstances surrounding its receipt.

(f)(1) A hearing requested under paragraph (d) of this section shall be held in accordance with the procedures set forth as 15 CFR part 904, subpart C, except insofar as those procedures provide for the introduction of testimony or other evidence not contained in the administrative record upon which the decision was made (*see* e.g. §§ 904.204 (d) and (e); 904.240–242; and 904.251–252).

(2) The Licensee shall be entitled to an expedited hearing as provided for in 15 CFR 904.209 if the request is filed and all other parties are served within seven (7) days of the date the Administrator's notice under paragraph (d) of this section, was mailed, specifically sets forth the Licensee's objections to the determinations contained in the notice, and demonstrates that delaying the proposed agreement during the time necessary to complete the normal hearing process will jeopardize that agreement. Where an expedited hearing is granted, the procedures of subpart C of 15 CFR part 904 shall be modified to accommodate the following schedule:

(i) The hearing shall commence within 5 days after the filing of the request with the Office of the Administrative Law Judge (ALJ) unless the ALJ postpones the date of the hearing or grants continuation of the hearing in the interest of justice or the parties agree that it shall commence at a later time.

(ii) The ALJ shall make provision for daily transcripts. Hearing shall be stenographically reported, transcribed, and made available to the public as required by statute.

(iii) Within 5 days of the conclusion of the hearing, the parties shall propose findings and conclusions to the ALJ accompanied by a supporting brief.

(iv) Within 10 days after receipt of such brief, the ALJ shall issue his or her findings and conclusions and a statement of the reasons on which they are based. The ALJ's decision shall become final in 10 days unless a party files suit in the United States District Court contesting the decision as not based upon substantial evidence in the record considered as a whole.

(v) Extensions of procedural dates shall be granted only when required in the interest of justice, unless the parties otherwise agree.

(g) Notification of any agreement that provides for an on-going or a continuous relationship serves as notification of specific transactions carried out within the scope of that agreement.

(h) A Licensee seeking to enter a foreign agreement that would require the modification of the terms of an existing license shall submit a license amendment as provided in § 960.14 and the proposed foreign agreement shall be considered in the context of the amendment review process.

§ 960.13 Amendments to licenses.

(a) The licensee shall notify the Administrator when the information supporting a license has become inaccurate and shall file all necessary amendment applications in a timely manner. Notifications shall contain all relevant new information and shall be filed at the same address identified in § 960.5(a). Amendment applications shall be filed in accordance with the procedures specified in §§ 960.5 and 960.6 for original license applications.

(b) Pursuant to the Act and § 960.1(b), the Administrator shall determine whether the amendment is permissible under the Act and § 960.9.

(c) If the Administrator determines that the notification omits information required for an amendment application, the Administrator shall notify the licensee of the items omitted.

(d) A licensee may not take any of the following actions until it has been granted an amendment to the license:

(1) Assign the license;

(2) Transfer sufficient voting power to control the management, policies and/or operations of the licensee or an operating subsidiary to any person or to foreign nations or persons collectively;

(3) Incur any change in citizenship of the chairman of the board, president, or other chief executive officer; or

(4) Deviate from the orbital characteristics, performance specifications, data collection and exploitation capabilities, and any other operational characteristic identified under § 960.6(c), except to the extent necessitated by an emergency posing an imminent and substantial threat of harm to human life, property, the environment or the remote sensing space system itself. In such emergency cases, the licensee shall return to previously approved operations as soon as circumstances permit. Any request to depart from approved orbital and data collection characteristics of the system for an extended period shall be in the form of a timely request to amend the license.

§ 960.14 Investment agreements.

(a)(1) *Domestic investment agreements.* If the acquisition of any security or other financial interest in a licensee results in any domestic person becoming the beneficial owner of 10 percent or more of such securities or class of such securities, or of any other financial interest in the licensee, the

acquisition constitutes a material change in the information supporting the license and requires notification under § 960.13. The licensee shall file this notification within ten days of the acquisition and shall include:

(i) The name of the acquirer;

(ii) The date of acquisition;

(iii) The number of shares of securities or the extent of any other financial interest in the licensee owned; and

(iv) Such other information as NOAA may specify.

(2) If the acquisition of any security or other financial interest in a licensee results in any domestic person becoming the beneficial owner of 25 percent or more of such class of securities, or any other financial interest of the licensee, the licensee shall provide assurance that such acquisition will not result in a transfer of sufficient voting power to control its management, policies, and/or operations. The licensee shall file a statement within 10 days of such acquisition setting forth the basis for its conclusion that no such transfer of voting power will occur and include the following information in addition to that required by paragraph (a)(1) of this section:

(i) The identity and residence of the beneficial owner and of all other persons by whom or on whose behalf the purchases are to be effected;

(ii) The number of shares of such securities or the extent of any other financial interest in the licensee which are beneficially owned, and the number of shares or other financial interests which there is a right to acquire, directly or indirectly, by

(A) Such person, and

(B) By each affiliate of such person, giving the background, identity, and residence of each such associate;

(iii) Information as to any contracts, arrangements, or understandings with any person with respect to any securities of or other financial interests in the licensee, including but not limited to transfer of any of the securities, joint ventures, loan or option arrangements, guaranties of loans, guaranties against loss or guaranties of profits, division of losses or profits, or the giving or withholding of proxies, naming the persons with whom such contracts, arrangements, or understandings have been entered into, and giving the details thereof;

(iv) The number of shares of the securities and the particular class of securities, or the extent of the other financial interests in the licensee, which are retained by existing beneficial owners; and

(v) Such additional information, as NOAA may prescribe as necessary or appropriate to protect the national security interests or international obligations of the United States.

(3) Before any domestic person becomes the beneficial owner of 40 percent or more of any securities, any class of securities, or any other financial interest of the licensee, the licensee must file an amendment application in accordance with § 960.13 at least 90 days prior to acquisition.

(b)(1) *Foreign investment agreements.* If the acquisition of any security or other financial interest in a licensee results in any foreign person or nation becoming the beneficial owner of 5 percent or more of such securities or class of such securities, or of any other financial interest in the licensee, the acquisition constitutes a material change in the information supporting the license and requires notification under § 960.13 unless the licensee has provided notice in advance of acquisition pursuant to paragraphs (b)(2)–(5) of this section. The licensee shall file this notification within ten days of the acquisition and shall include:

(i) The name of the acquirer;

(ii) The date of acquisition;

(iii) The number of shares of securities or the extent of any other financial interest in the licensee owned;

(iv) Any updates to the technology control plan, if necessary; and

(v) Such other information as NOAA may specify.

(2) Before any foreign person or nation, becomes the beneficial owner or 15 percent or more of any securities, any class of securities, or any other financial interest of the licensee, the licensee shall provide assurance that such acquisition will not result in a transfer of sufficient voting power to control its management, policies, and/or operations. The licensee shall file a statement setting forth the basis for its conclusion that no such transfer will occur and include the following information in addition to that required by paragraph (b)(1) of this section:

(i) The identity, residence, and citizenship of the beneficial owner and of all other foreign persons or nations by whom or on whose behalf the purchases are to be effected;

(ii) The number of shares of such securities or the extent of any other financial interest in the licensee which are beneficially owned, and the number of shares or other financial interests which there is a right to acquire, directly or indirectly, by

(A) Such foreign person or nation, and

(B) By each affiliate of such foreign person or nation, giving the background, identity, residence and citizenship of each such associate;

(iii) Information as to any contracts, arrangements, or understanding with any foreign person or nation with respect to any securities of or other financial interests in the licensee, including but not limited to transfer of any of the securities, joint ventures, loan or option arrangements, guaranties of loans, guaranties against loss or guaranties of profits, division of losses or profits, or the giving or withholding of proxies, naming the persons with whom such contracts, arrangements, or understandings have been entered into, and giving the details thereof;

(iv) The number of shares of the securities and the particular class of securities, or the extent of the other financial interests in the licensee, which are retained by existing beneficial owners;

(v) Any updates to the technology control plan, if necessary; and

(vi) Such additional information, as NOAA may prescribe as necessary or appropriate to protect the national security interests or international obligations of the United States.

(3) The statement required by this section shall be provided at least 60 days prior to acquisition by foreign persons or nations. The statement shall be filed with the relevant investment agreement which shall be deemed a ''significant or substantial agreement'' and reviewed in accordance with § 960.12.

(4) Before any foreign person(s) or nation(s) collectively become the beneficial owners of more than 40 percent of any securities, any class of securities, or any other financial interest of the licensee, the licensee must file an amendment application in accordance with § 960.13 at least 90 days prior to acquisition. The amendment application must clearly rebut the presumption that the acquisition will result in the transfer of sufficient voting power to control the licensee's management, policies, and/or operations and shall include a certification, in writing, to the Administrator that no foreign persons or nations, either individually or collectively, can influence the Licensee's corporate activity related to its obligations under the terms and conditions of its license; this certification must show that control over the Board of Directors is still exercised by the majority U.S. shareholders and explain how the Board of Directors insures that there is no undue influence exercised by the foreign shareholders on the appointment of key officers of the corporation.

(5) No amendment shall be granted where more than 49% of the voting interest will be beneficially owned by foreign persons or nations.

(c) If the acquisition by any person(s) or nation(s) of any security or other financial interest of the licensee, regardless of the percentage acquired, will result in a transfer of sufficient voting power to control the management, policies, and/or operations of the licensee; or if any person(s) or nation(s) will through a contractual relationship or any other means obtain the ability to control the management, policies and/or operations of the licensee, the licensee must file an amendment application in accordance with § 960.13 at least 90 days prior to acquisition. There is a strong presumption that the transfer of such an interest to foreign persons or nations will not preserve the national security or international obligations of the United States and will not be approved.

(d) The provisions of this section apply only to licensees that are subject to U.S. jurisdiction or control under § 960.2(a). Foreign persons that are subject to U.S. jurisdiction or control under § 960.2(b) shall report changes in their financial interests in accordance with the terms and conditions of their licensees.

§ 960.15 Certain rights not conferred by license.

Issuance of a license does not affect the authority of the Federal Communications Commission under the Communications Act of 1934 (47 U.S.C. 151 *et seq.*), or the authority of the Secretary of Transportation under the Commercial Space Launch Act of 1984 (49 U.S.C. app. 2601 *et seq.*), the authority of the Secretary under the Export Administration Act (50 U.S.C. app. 2401 *et seq.*), or the authority of the Secretary of State under the Arms Export Control Act (22 U.S.C. 2778).

Subpart C—Enforcement Procedures

§ 960.16 General.

The Administrator may take appropriate actions against a licensee if the licensee fails to comply with the Act, these regulations, or any condition or restriction in the license, Such actions may include any or all of the following: pursuit of judicial determinations to terminate, modify or suspend licenses or to terminate licensed operations, administratively imposed civil penalties, and seizure pursuant to warrant. Such actions shall be taken in accordance with this subpart.

§ 960.17 Prohibitions.

It is unlawful for any person who is subject to the jurisdiction or control of the United States, directly or through any subsidiary or affiliate to:

(a) Operate a private remote sensing system without possession of a valid license issued under the Act and these regulations;

(b) Violate any provision of the Act or these regulations or any term, condition, or restriction of the license; or

(c) Violate any order, directive, or other notice issued by the Secretary in accordance with § 960.10(b)(2) to inform the licensee of any temporary restrictions imposed or necessary actions to be followed during periods when national security or international obligations/and or foreign policies may be compromised.

§ 960.18 Sanctions.

As authorized by section 203(a) of the Act, if the Administrator determines that the licensee has substantially failed to comply with the Act, these regulations, or any term, condition or restriction of the license, the Administrator may request the appropriate U.S. Attorney to seek an order of injunction or similar judicial determination from the U.S. District Court for the District of Columbia Circuit or a U.S. District Court within which the licensee resides or has its principal place of business, to terminate, modify, or suspend the license, and/or to terminate licensed operations on an immediate basis. For purposes of this section, failure to comply with the Act, these regulations or a term, condition, or restriction of a license or of the Act shall be considered substantial where

(a) The failure is knowing; or

(b) The failure occurs after notice by the Administrator; or

(c) The licensee has been advised that it failed to comply with an international obligation, foreign policy or national security concern of the United States.

§ 960.19 Civil penalties.

(a) In addition to the sanctions provided in § 960.16, any person who violates any provision of the Act or of any license issued thereunder or regulation contained in this part may be assessed a civil penalty by the Administrator of not more that $10,000 for each violation. Each day of operation in violation constitutes a separate violation.

(b) When the Administrator proposes the assessment of a civil penalty under this section, the Administrator will serve upon the licensee by mail a Notice of Civil Penalty and Assessment (Notice) containing:

(1) A concise statement of the facts believed to show a violation;

(2) A specific reference to the provisions of the Act, regulation, or license allegedly violated;

(3) The amount of the proposed penalty in accordance with paragraph (a) of this section.

(c) Within 30 days after receipt of the Notice, the licensee may request a hearing by serving a written request on the Administrator either in person or by certified or registered mail, return receipt requested, at the address specified in the Notice. Such hearing shall be held in accordance with procedures set forth at 15 CFR part 904, supart C.

(d) If the respondent does not request a hearing within thirty days of the date of the Notice, the civil penalty and the assessment shall become the final determination of the Administrator.

§ 960.20 Seizure.

If the Administrator believes that any object, record, or report, was used, is being used or is likely to be used in violation of the Act, these regulations or any condition or restriction of the license, the Administrator may seek a warrant from a magistrate to seize such item(s) by showing probable cause for this belief. Seizure shall be conducted in accordance with 15 CFR part 904, subpart F.

[FR Doc. 97–28948 Filed 10–31–97; 8:45 am]
BILLING CODE 3510–12–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[CA 083–0053b; FRL–5911–5]

Approval and Promulgation of State Implementation Plans; California State Implementation Plan Revision, San Diego County Air Pollution Control District, Ventura County Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve revisions to the California State Implementation Plan (SIP) which concern the control of volatile organic compound (VOC) emissions from metal container, metal closure, and metal coil coating operations and marine vessel coating operations. The intended effect of proposing approval of these rules is

to regulate emissions of VOCs in accordance with the requirements of the Clean Air Act, as amended in 1990 (CAA or the Act). In the Final Rules Section of this **Federal Register**, the EPA is approving the state's SIP revision as a direct final rule without prior proposal because the Agency views this as a noncontroversial revision amendment and anticipates no adverse comments. A detailed rationale for this approval is set forth in the direct final rule. If no adverse comments are received in response to this proposed rule, no further activity is contemplated in relation to this rule. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. The EPA will not institute a second comment period on this document. Any parties interested in commenting on this action should do so at this time.

DATES: Comments on this proposed rule must be received in writing by December 3, 1997.

ADDRESSES: Written comments on this action should be addressed to: Andrew Steckel, Rulemaking Office (AIR–4), Air Division, U.S. Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105–3901.

Copies of the rule revisions and EPA's evaluation report of each rule are available for public inspection at EPA's Region 9 office during normal business hours. Copies of the submitted rule revisions are also available for inspection at the following locations:

San Diego County Air Pollution Control District, 9150 Chesapeake Drive, San Diego, CA 92123–1096.

Ventura County Air Pollution Control District, 702 County Square Drive, Ventura, California 93003.

California Air Resources Board, Stationary Source Division, Rule Evaluation Section, 2020 ''L'' Street, Sacramento, CA 95812.

FOR FURTHER INFORMATION CONTACT: Jerald S. Wamsley, Rulemaking Office (AIR–4), Air Division, U.S. Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105–3901, Telephone: (415) 744–1226.

SUPPLEMENTARY INFORMATION: This document concerns SDCAPCD's Rule 67.4, Metal Container, Metal Closure, and Metal Coil Coating Operations, and VCAPCD's Rule 74.24, Marine Vessel Coating Operations. These rules were submitted by the California Air Resources Board (CARB) to EPA on October 18, 1996 and May 24, 1994, respectively. For further information, please see the information provided in the Direct Final action that is located in the Rules Section of this **Federal Register**.

Authority: 42 U.S.C. 7401–7671q.

Dated: September 26, 1997.

Felicia Marcus,

Regional Administrator.

[FR Doc. 97–29051 Filed 10–31–97; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 260

[FRL–5916–4]

Project XL Site-specific Rulemaking for Molex, Inc., 700 Kingbird Road Facility, Lincoln, Nebraska

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The EPA is proposing to implement a project under the Project XL program for the Molex, Inc. (Molex) facility located at 700 Kingbird Road, Lincoln, Nebraska. The terms of the project are defined in a draft Final Project Agreement (FPA) which is being made available for public review and comment by this document. Also, EPA is making available for informational purposes a draft variance by the Nebraska Department of Environmental Quality necessary for implementation of the project. In addition, EPA is today proposing a site-specific rule, applicable only to the Molex facility, to facilitate implementation of the project. In the final rules section of this **Federal Register**, EPA is also adopting this rule as a direct final rule because EPA views this as a noncontroversial action and anticipates no adverse comments. If no significant adverse comments are received, the direct final rule will become effective in 60 days and no further action will be taken on this proposed rule. If significant adverse comments are received during the comment period, the direct final rule will not go into effect and EPA will proceed pursuant to this proposal, responding to the comments on the direct final rule and this proposal when final action is taken on the rule. EPA does not intend to initiate a further round of notice and comment, if comments are received on this proposal or the direct final rule. Therefore, any parties interested in commenting on this rule, or on the FPA, should do so at this time.

The site-specific rule is intended to provide regulatory changes under the Resource Conservation and Recovery Act (RCRA) to implement Molex's XL project, which will result in superior environmental performance and, at the same time, provide Molex with greater operational flexibility. The flexibility provided by Project XL will allow the facility to segregate waste streams which had previously been co-mingled into a single waste stream. By changing the process lines to generate separate waste streams (nickel, copper, tin/lead), the facility can optimize the precipitation of each metal more effectively before the effluent is sent to the POTW. The environmental benefit from the project will be a substantial reduction in the mass loading of metals entering the City of Lincoln's POTW. In addition, the resultant mono-metal sludges will be commodity-like materials suitable for recycling by smelters. A secondary environmental benefit will be increased recycling and reducing the amount of material that would otherwise be landfilled. The site-specific rule, applicable only to the Molex facility, would change certain RCRA requirements so the implementing agency, the Nebraska Department of Environmental Quality, may issue a temporary variance from classifying as solid waste nickel, copper, and tin/lead non-precious metals containing sludges generated by Molex.

DATES: Comments. All public comments must be received on or before December 3, 1997 except that if a public hearing is held, the public comment period will remain open until December 18, 1997.

Public Hearing. A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning this direct final rule to implement Molex's XL project. If anyone contacts the EPA requesting to speak at a public hearing by November 24, 1997, a public hearing will be held on December 15, 1997. EPA will decide by November 28, 1997 whether a public hearing will be held. Additional information is provided in the section entitled **ADDRESSES.**

Request to Speak at Hearing. Persons wishing to present oral testimony must contact Mr. David Doyle at the EPA by November 24, 1997. Additional information is provided in the section entitled **ADDRESSES.**

ADDRESSES: Comments. Written comments should be submitted in duplicate to: Mr. David Doyle, U.S. Environmental Protection Agency, Region VII, Air, RCRA & Toxics

Division, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7667.

Docket. A docket containing supporting information used in developing this rulemaking, including the draft FPA and draft variance, is available for public inspection and copying at U.S. EPA, Region VII, Air, RCRA & Toxics Division, 726 Minnesota Avenue, during normal business hours, and at EPA's RCRA docket (Docket name ''XL-Molex''); 401 M Street, SW, Washington, DC 20460. For access to the Water docket materials, call (202) 260–3027 between 9 a.m. and 3:30 p.m. (Eastern time) for an appointment. A reasonable fee may be charged for copying. A docket is also available for public inspection at the Nebraska Department of Environmental Quality, Lincoln, Nebraska.

Public Hearing. If a public hearing is held, it will be held at 7 pm on +40 days next business day, 1997 at the following location: Nebraska Department of Environmental Quality, Lincoln, Nebraska. Persons interested in attending the hearing should notify Mr. David Doyle, (913) 551–7667, to verify that a hearing will be held. Same change as in final rule.

FOR FURTHER INFORMATION CONTACT: Mr. David Doyle, U.S. Environmental Protection Agency, Region VII, Air, RCRA & Toxics Division, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7667.

SUPPLEMENTARY INFORMATION: For further information on the rule proposed today, including the text of the proposed rule, see the direct final rule which appears in the Final Rules section of today's **Federal Register**.

Dated: October 27, 1997.

Carol M. Browner,

Administrator.

Before The Nebraska Department of Environmental Quality

In the Matter of Molex, Inc.; Applicant. Case No. 1898.

Order for a Temporary Variance

This matter comes before the Director of the Department of Environmental Quality (DEQ) on the application of Molex, Inc. (Molex), for an Order granting a temporary variance pursuant to Title 128, Rules and Regulations Governing Hazardous Waste Management in Nebraska, chapter 5, section *001.04.* The variance requests a temporary exemption from the classifying as solid waste of segregated sludges generated during wastewater treatment at the Molex Upland facility located at 700 Kingbird Road, Lincoln, Nebraska. The purpose of the variance request is to allow Molex sufficient time to collect information to demonstrate that segregation and separate treatment of various wastestreams at its facility results in a significantly reduced metals content in its wastewater effluent discharge to the City of Lincoln's publicly owned treatment works (POTW) and produces a readily recyclable sludge with market value. The variance is necessary to remove a regulatory barrier which would otherwise classify the sludges generated from the segregation and treatment of wastewater from Molex's electroplating operation as a solid waste and a listed hazardous waste. The sludge generated from wastewater treatment at the Molex facility, prior to the implementation of process changes to segregate and separately treat wastestreams, was considered a recyclable material utilized for precious metal recovery subject to reduced management requirements under title 128, chapter 7, section *010.* The Director has investigated the claims made by the applicant and the interests of others likely to be affected and the general public.

The Director finds that the application of the regulation which would classify the sludge generated from the treatment of electroplating wastestreams at the Molex facility as a listed hazardous waste as applied to the applicant discourages innovative treatment by greatly increasing the cost and ability of the company to continue the recycling of the sludges. However, the Director possesses insufficient information to determine whether the sludges generated from the segregation and separate treatment of wastestreams should not be classified as solid waste because they have been reclaimed and are commodity-like, but must be reclaimed further.

The Director finds that the granting of a temporary variance to allow Molex to obtain this information removes a significant barrier to the achievement of the environmental performance goal of a cleaner effluent discharge from the facility and reduced mass metals loading on the POTW and continued recycling of sludges. Among the factors to be considered in any final variance determination are:

The degree of processing the material has undergone and the degree of further processing that is required;

- The value of the material after it has been reclaimed;
- The degree to which the reclaimed material is like an analogous raw material;
- The extent to which an end market for the reclaimed material is guaranteed; and
- The extent to which the reclaimed material is handled to minimize the loss.

The Director further finds that the granting of this temporary variance fosters the incentive for innovation demonstrated by Molex and provides an opportunity to test monitoring requirements that may result in modified performance standards for the material at issue.

It Is Therefore Ordered that the temporary variance request for up to two years from classification as solid waste of the sludges generated from the segregation and treatment of wastestreams at the Molex facility is granted subject to the following conditions and requirements:

1. The temporary variance is limited to three sludges which are being recycled to reclaim nickel, copper, and tin/lead. These sludges shall not be mixed with each other and any other materials at the Molex facility.

2. Molex shall maintain records to document the volume of these materials generated, stored, and recycled during the two years this temporary variance is in effect.

3. Within 30 days of the date of issuance of this variance, Molex shall conduct an initial waste analysis on all three sludges (nickel, copper, and tin/lead) for TCLP and total metals (to be reported in milligrams per kilogram dry weight, in accordance with the procedures found in 40 CFR part 261, Appendices I, II, and III, and for pH and moisture content and report this analysis to the DEQ within 30 days of receipt of analytical results. This data shall be included in the initial baseline report required in paragraph 10.

4. Molex shall conduct waste analysis for a representative composite sample from each shipment of sludge prior to shipment for reclamation for the following parameters: Total copper, nickel, lead, tin, zinc; pH; and moisture content; to be reported in milligrams per kilogram dry weight.

5. The DEQ reserves the right to require additional waste analysis based on the results of any waste analysis performed on the sludges, including any testing conducted by the DEQ.

6. Molex shall maintain records of test results, waste analyses and other determinations made in accordance with this temporary variance.

7. Within sixty days of the date of issuance of this variance, Molex shall notify the DEQ of the name, address, and facility contact for each facility to which material is sent for reclamation and provide a description of the processing to be done on the sludge, including specifications on material which the facility will accept for processing.

8. Molex shall maintain non-hazardous waste manifests identifying the specific shipment by an individual number, the date on which the material was shipped and confirmation from the reclamation facility of the date on which the shipment is received.

9. The sludges containing nickel and copper destined for reclamation pursuant to this temporary variance shall not be accumulated at the facility for longer than 180 days. The sludge containing tin/lead destined for reclamation pursuant to this temporary variance shall be stored in closed containers which are clearly marked to identify the contents and the date on which accumulation in the container began. Containers shall be stored in a secure location, inspected on a weekly basis, and otherwise managed to prevent any exposure to the environment. Materials subject to this variance shall be transported in accordance with U.S. Department of Transportation requirements for hazardous materials, including use of a non-hazardous waste manifest.

10. Within 60 days of the date of issuance of this variance, Molex shall provide an initial report in accordance with Attachment 1 describing baseline data for: (a) the combined treatment system for the most recent 12 month period prior to implementation of the segregated treatment system, including a description of the wastewater treatment process, estimated daily average metals mass loading and pH

measurement in the effluent discharge, capital and operating costs of the combined treatment system, volume and fate of the sludge, TCLP and total metals analysis of the sludge if previously done, reclamation value of the sludge and the associated costs to Molex for the storage, transportation, and reclamation of the sludge, and (b) the segregated treatment system including descriptions of each wastewater treatment process, capital costs of the segregated treatment system, the proposed volume and fate of the sludge, and an estimate of the cost to transport and treat or dispose of the sludge as hazardous waste based on anticipated generation rate and transportation and treatment or disposal costs.

11. Quarterly reports in accordance with Attachment 2 shall be due on the last day of the month every three months after the initial report describing current data for the segregated treatment system including the actual daily average mass metals loading in the facility discharge and associated metal effluent concentrations including pH measurements; operating costs of the segregated treatment system; storage, recycling volume, and fate of the sludge; waste analysis of the sludge; and reclamation value of the sludge and the associated costs to Molex for the storage, transportation, and reclamation of the sludge.

12. Within 90 days of the end of this two year temporary variance, Molex shall provide a final report that: (a) provides an overview of the demonstration project; (b) incorporates the initial report and quarterly reports as appendices; (c) describes the technical aspects of the project; (d) describes and quantifies the environmental aspects of the project; (e) describes and quantifies the economic aspects of the project, including a comparison of the mass treatment system to the segregated treatment system and calculation of costs saved by this variance.

It Is Further Ordered that Molex shall at all times remain in compliance with its Pretreatment Permit #NE0131776 and comply with all other applicable requirements in Title 128 and Nebraska law.

It Is Further Ordered that this temporary variance shall expire two years from the date signed below. This temporary variance shall be subject to cancellation at any time for violation of any of the conditions and requirements identified in this temporary variance or refusal to conduct any additional waste analysis required pursuant to paragraph 5 above.

By The Director.

Randolph Wood,

Nebraska Department of Environmental Quality.

[FR Doc. 97–29053 Filed 10–31–97; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Reopening of Comment Period for Additional Information Relative to the Status of the Lesser Prairie-Chicken

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Reopening of public comment period

SUMMARY: On July 8, 1997, the U.S. Fish and Wildlife Service (Service) published a positive 90-day finding on a petition to list the lesser prairie-chicken (*Tympanuchus pallidicinctus*) as threatened under the Endangered Species Act of 1973 (Act), as amended, and requested that any additional information be submitted by September 8, 1997. The Service has been asked by the Lesser Prairie-chicken Interstate Working Group to reopen the comment period to allow for submission of a conservation strategy for the lesser prairie-chicken.

Thus, the Service announces that it will reopen the comment period to allow additional time for submission of information regarding the status, population trend, distribution, and habitat use of the lesser prairie-chicken.

DATES: The comment period, which originally closed on September 8, 1997, is reopened and now closes on December 3, 1997. To be considered in the 12-month finding for this petition, additional information on the lesser prairie-chicken should be submitted to the Service by December 3, 1997.

ADDRESSES: Information, comments, or questions should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Ecological Services Field Office, 222 S. Houston, Suite A, Tulsa, Oklahoma 74127–8909. The petition finding and supporting data are available for public inspection by appointment during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Jerry Brabander, Field Supervisor, at the above address, or telephone (918) 581–7458 ext. 224.

SUPPLEMENTARY INFORMATION: Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq.*), requires that the Service make an initial finding within 90 days, if practicable, on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information to indicate that the petitioned action may be warranted. A petition to list the lesser prairie-chicken (*Tympanuchus pallidicinctus*) as threatened was received by the Service on October 6, 1995, from the Biodiversity Legal Foundation, Boulder, Colorado, and Marie E. Morrissey. On July 8, 1997 (62 FR 36482), the Service published a 90-day finding on that petition. The finding stated that the petition contained substantial information to indicate that listing under the Act may be warranted, and announced that the Service would conduct a thorough status review of the species in conjunction with the affected states. In addition, the Service requested that any additional information on lesser prairie-chicken population abundance, population trends, distribution, and use of habitats be submitted to the Service by September 8, 1997.

On September 3, 1997, the Service received a request from the Lesser Prairie-chicken Interstate Working Group (Working Group) to extend or reopen the comment period to allow this group additional time to submit a Conservation Plan for the lesser prairie-chicken. The Working Group stated in their letter that they are currently editing the first draft of a conservation strategy that contains goals, objectives, and action items that will significantly reduce the threats to the species.

This notice reopens the comment period for submission of information on the status of the species throughout its range until December 3, 1997. The Service invites the public to submit additional information on the population abundance, population trends, distribution, use of habitats including native prairie and cropland, and factors documented to influence population abundance, distribution, and habitat use of lesser prairie-chickens.

Authors

This document was prepared by Noreen E. Walsh, at the Service's Oklahoma Ecological Services Field Office (see **ADDRESSES** above).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531–1544).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Dated: October 28, 1997.

Thomas Bauer,

Acting Regional Director, Region 2, Fish and Wildlife Service.

[FR Doc. 97–28981 Filed 10–31–97; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 222

Docket No. 971021250–7250–01; I.D. 092297E

RIN 0648–AK46

Endangered Fish or Wildlife; Special Prohibitions; North Atlantic Right Whale Protection

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce

ACTION: Proposed rule; temporary closure of fishery.

SUMMARY: NMFS proposes to close the Mid-Atlantic and Northeast Coastal segments of the Atlantic pelagic drift gillnet fishery for swordfish, tuna, and shark through July 31, 1998. The swordfish portion of the Atlantic pelagic drift gillnet fishery has been closed since December 5, 1996, under an emergency Magnuson-Stevens Fishery Conservation and Management Act closure which expires on November 26, 1997. This action is necessary to avoid jeopardy to the continued existence of the northern right whale (*Eubalaena glacialis*), a species listed as endangered under the Endangered Species Act (ESA). The purpose of this action is to continue the existing closure of the swordfish portion of the Atlantic pelagic drift gillnet fishery and to close the tuna and shark portions of the Atlantic pelagic drift gillnet fishery until regulatory measures implementing one or more reasonable and prudent alternatives necessary to avoid jeopardy to the continued existence of the northern right whale are completed and implemented.

DATES: Written comments must be received on or before November 18, 1997.

ADDRESSES: Send comments to the Chief, Marine Mammal Division (F/PR2), Office of Protected Resources (F/PR), NMFS, 1315 East West Highway, Silver Spring, MD 20910–3282. Copies of the May 29, 1997, Biological Opinion (BO), of the August 29, 1997, Amended BO, and, a draft environmental assessment on the Atlantic Offshore Cetacean Take Reduction Plan are available upon request from Gregory Silber, Ph.D., Marine Mammal Division, Office of Protected Resources, NMFS, 1315 East West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Gregory Silber, Ph.D. or Michael Payne, Office of Protected Resources, (F/PR2), NMFS, 1315 East West Highway, Silver Spring, MD 20910, 310–713–2322; or by facsimile at 301–713–0376.

SUPPLEMENTARY INFORMATION:

The Atlantic pelagic fishery (which includes the swordfish, tuna, and shark drift gillnet fishery) is managed by NMFS under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 *et seq.*) and the Atlantic Tunas Convention Act (16 U.S.C. 971 *et seq.*). Section 7(a)(2) of the ESA (16 U.S.C. 1531 *et seq.*) requires an agency to ensure that any action proposed by a Federal agency is not likely to jeopardize the continued existence of a threatened or endangered species. Due to new information concerning the status of the northern right whale, NMFS re-initiated consultation on the Atlantic pelagic fishery on September 25, 1996.

One right whale entanglement has been documented by a NMFS observer in Atlantic pelagic drift gillnet gear. The potential exists for further entanglements in this gear because the geographic distribution of right whales overlaps with that of the Atlantic drift gillnet fishery during part of the year. On December 5, 1996, NMFS published an emergency closure pursuant to the Magnuson-Stevens Act closing the drift gillnet fishery for swordfish in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, from December 1, 1996, through May 29, 1997 (61 FR 64486). In its December 5, 1996, notice, NMFS announced that it had reinitiated consultation under the ESA for the entire Atlantic pelagic fishery (which includes the drift gillnet fishery for swordfish, tuna, and shark).

On May 29, 1997, NMFS issued a BO which concluded that continued operation of the swordfish, tuna, and shark drift gillnet portions of the Atlantic pelagic fishery was likely to jeopardize the continued existence of the northern right whale. This BO identified two reasonable and prudent alternatives for the use of drift gillnet gear that would avoid the likelihood of jeopardy for the northern right whale. The first alternative is to prohibit the use of drift gillnet gear for the taking of pelagic swordfish, tuna, and shark. The second alternative is to allow the restricted use of drift gillnet gear. Under this alternative, drift gillnet fishing for swordfish, tuna, and shark would take place under a limited entry system with 100 percent observer coverage, time/area closures, and elimination of the derby nature of the fishery during certain times of the year.

On June 5, 1997, pursuant to the Magnuson-Stevens Act, NMFS extended the closure of the swordfish portion of fishery until November 26, 1997, or until a preferred option to avoid the likelihood of jeopardy was identified and implemented (62 FR 30775).

Based on new information on the implementation of additional right whale management measures, consultation under section 7 of the ESA was again re-initiated on August 12, 1997. On August 29, 1997, NMFS issued an amended BO identifying a third reasonable and prudent alternative to avoid jeopardy to the northern right whale from the Atlantic pelagic drift gillnet fishery. The reasonable and prudent alternative would be 100 percent observer coverage with expanded time/area closures. The BO concluded that the distribution of right whales overlaps with that of the swordfish component of the drift gillnet fishery from November 1 until July 31 and that closure of the fishery during that period is likely to avoid jeopardy for northern right whales.

NMFS is now proposing to implement the time/area closure component of the reasonable and prudent alternatives developed through this consultation process. However, there is not sufficient time to implement the alternatives identified in the BO under the Magnuson-Stevens Act. As a result, NMFS is proposing to implement this measure under the ESA on an temporary basis pending full implementation of the reasonable and prudent alternative(s). This proposed temporary closure would provide necessary protections to the northern right whale while NMFS develops a long term fishery management solution in conformance with alternatives identified in the BOs for this fishery.

The BO issued on August 29, 1997, requires that the driftnet fishery for swordfish, shark, and tunas be prohibited from operating from November 1 to July 31 to avoid jeopardy to the continued existence of northern right whales. Although the final rule version of this document will not become effective until late November, NMFS has determined that the risk to right whales from drift gillnet gear from November 1, 1997, to the effective date of this rule is remote for the following

reasons: (1) Swordfish - This proposed action would extend the existing closure for swordfish, which expires on November 26, 1997, through July 31, 1998, thereby avoiding jeopardy for the swordfish component of the drift gillnet fishery until the expiration date of the closure; and (2) Tuna and sharks - Although the tuna and shark portions of the pelagic drift gillnet fishery were not closed by the December 5, 1996, emergency closure and subsequent extension, no directed drift gillnet operations historically exist to target these species in pelagic waters during the month of November, as evidenced by the lack of landings records and the lack of requests for observer coverage required under the Marine Mammal Protection Act (MMPA). In addition, the directed fishery for large coastal sharks was closed on July 21, 1997, through December 31, 1997, because that fishery has reached its allowable quota (62 FR 32942, July 21, 1997). The directed gillnet fishery for small coastal sharks during fall and winter generally occurs south of Cape Hatteras along the Georgia and Florida coastal areas south to Sebastian Inlet, Florida (approximately 27°51' N latitude). This is a known high-use area for northern right whales during winter and, as such, was the focus of the Atlantic Large Whale Take Reduction Team established under section 118 of the MMPA. The interim final rule implementing the Atlantic Large Whale Take Reduction Plan (62 FR 39157, July 22, 1997) closes the area to drift gillnet fishing from 32°00' N latitude (approximately Savannah, Georgia) south to 27°51' N latitude from November 1 to March 31.

This proposed rule would prohibit vessels operating in the North Atlantic off the coast of the United States in waters south and east of the 100 fathom contour from having on board, fishing with, or otherwise possessing or controlling drift gillnet gear from November 1, 1997, through July 31, 1998, except as authorized under 50 CFR 229.32 (regulations implementing the Atlantic Large Whale Take Reduction Plan that allow for restricted drift gillnet operations targeting sharks in the Southeast United States, 62 FR 39157, July 22, 1997).

NMFS has prepared a draft environmental assessment on the Atlantic Offshore Cetacean Take Reduction Plan that considers several alternatives for reducing the bycatch of marine mammals in the Mid-Atlantic and Northeast segments of the pelagic drift gillnet and longline fisheries for swordfish, tuna, and shark (see **ADDRESSES**). Although this draft environmental assessment does not indicate a preferred alternative for operation of these fisheries, it does include an analysis of the impact of the proposed action to close the Mid-Atlantic and Northeast segments of the pelagic drift gillnet fisheries for swordfish, tuna, and shark. A final National Environmental Protection Act document analyzing the proposed action will be available to the public upon publication of a final rule.

Section 11(f) of the ESA provides the Secretary of Commerce with broad rulemaking authority to enforce the ESA. Because the affected fisheries may harm, harass, or otherwise ''take'' a right whale, this rule is proposed to prevent this fishery from jeopardizing the continued existence of the northern right whale and to prevent ''take'' of right whales prohibited by section 9(a) of the ESA. NMFS will undertake additional management actions necessary to ensure that conduct of the Atlantic pelagic drift gillnet fishery will not jeopardize the continued existence of the northern right whale before the expiration of this rule.

This action is not intended to place restrictions on coastal drift gillnet or other gillnet fisheries in Mid-Atlantic or Northeast coastal waters (as defined under 50 CFR 229.2), other than those placed on the pelagic driftnet fisheries described in this document. These coastal fisheries are believed to include fisheries targeting bonito, little tunny, croaker, weakfish, shad, herring, striped bass, or bluefish. NMFS requests comments on how to better define or characterize such fisheries so that this and future rules regarding gear restrictions can be specifically targeted to the fisheries for which management actions are intended. Specifically, comments are requested on how best to characterize the boundaries between coastal and pelagic fisheries and/or the specific gear types (e.g., mesh size, net length) used in the different fisheries. This request was previously made in a proposed rule to define fisheries under the Marine Mammal Protection Act list of fisheries (62 FR 28657, May 27, 1997). No comments have been received to date with respect to this request.

Classification

This rule is necessary to enforce the requirements of the ESA.

NMFS has determined that this rule is not significant for purposes of E.O. 12866.

The Assistant General Counsel for Legislation and Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this rule, if adopted, will not have a significant economic impact on a substantial number of small entities as follows:

I certify that the attached proposed rule to close the Mid-Atlantic and Northeast Coastal segments of the Atlantic drift gillnet fisheries for swordfish, tuna, and shark through July 31, 1998, issued under authority of the Endangered Species Act, will not have a significant economic impact on a substantial number of small entities, as defined under the Regulatory Flexibility Act. Between 1987 and 1995, over 1,500 vessels were permitted to participate in the swordfish fishery. Twelve to fifteen of these vessels use drift gillnet gear primarily to target swordfish. All are also permitted to take tuna and shark. All of the vessels fishing for swordfish, tuna, and shark with drift gillnet gear are small entities.

Because NMFS has traditionally apportioned swordfish quota into two semi-annual seasons, fishing effort in the swordfish fishery has traditionally consisted of a summer and a winter season. However, two Magnuson-Stevens Fishery Conservation and Management Act closures have closed the swordfish component of this fishery since December 1996. For 1998, consistent with the BO on the Atlantic pelagic fishery, the proposed rule would prohibit the use of drift gillnet gear during the winter season, and delay the summer season until after July 31, 1998. NMFS has also taken a separate action to apportion the 1998 swordfish quota into one fishing period. Thus participants in this fishery would have the opportunity to fish for the full annual quota during the period of non-closure.

Most pelagic drift gillnet fishing occurs during the summer when swordfish are concentrated off the northeastern U.S. Based on logbooks submitted to NMFS, typically only one vessel has participated in the winter drift gillnet swordfish fishery. Therefore, restricting fishing effort to the summer season should not impact a substantial number of small entities and should result in only minimal economic impacts. Prior to 1991, when drift gillnetters were not restricted by a semi-annual quota, fishing occurred as late as the fourth quarter (October, November, and December). Therefore, delaying the start date of the fishery until August 1, 1998, is not expected to significantly impact fishing effort or landings.

This proposed rule would have no impact on drift gillnetters directly fishing for sharks in the Southeast because participants in the directed shark fishery are covered by regulations implementing the Atlantic Large Whale Take Reduction Plan and would not be further restricted by this proposed rule. In addition, the fishery for large coastal sharks was closed on July 21, 1997, through December 31, 1997, because that fishery has reached its allowable quota (62 FR 32942, July 21, 1997). Based on recent records and the lack of requests for observer coverage as required under the Marine Mammal Protection Act, there is no history of a

directed drift gillnet fishery for tunas in the winter and early summer.

Accordingly, this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities.

As a result, no Initial Regulatory Flexibility Analysis has been prepared.

This proposed rule would be implemented in a manner that is consistent, to the maximum extent practicable, with the coastal zone management programs of the Atlantic and Gulf of Mexico states that have approved programs. This determination has been submitted for review by the responsible agencies under section 307 of the Coastal Zone Management Act.

This rule does not contain policies with federalism implications to warrant preparation of a federalism assessment under Executive Order 12612. This proposed rule does not contain new collection-of-information requirements subject to the Paperwork Reduction Act.

List of Subjects in 50 CFR Part 222

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Dated: October 28, 1997.

David L. Evans,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set forth in the preamble, 50 CFR part 222 is proposed to be amended as follows:

PART 222—ENDANGERED FISH OR WILDLIFE

1. The authority citation for part 222 continues to read as follows:

Authority: 16 U.S.C. 1531–1543.

2. In subpart D, a new § 222.34 is proposed to be added to read as follows:

Subpart D—Special Prohibitions

§ 222.34 Restrictions on taking right whales incidental to fishery operations.

During the period from November 1, 1997, through July 31, 1998, it is unlawful for any person or vessel subject to the jurisdiction of the United States to have on board a vessel, to fish with, or otherwise to posses or control drift gillnet gear, as defined in 50 CFR 229.2, in the North Atlantic Ocean in waters off the coast of the eastern United States south and east of the 100 fathom contour except that such gear may be used in southeast waters, as defined under 50 CFR 229.2, if that gear is used in compliance with the requirements of 50 CFR 229.32(f).

[FR Doc. 97–29022 Filed 10–29–97; 1:14 pm]

BILLING CODE 3510–22–F

Notices

Federal Register

Vol. 62, No. 212

Monday, November 3, 1997

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

Animal and Plant Health Inspection Service

[Docket No. 97–071–1]

Availability of an Environmental Assessment and Finding of No Significant Impact for Field Testing Salmonella Typhimurium Vaccine

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice.

SUMMARY: We are advising the public that the Animal and Plant Health Inspection Service has prepared an environmental assessment and a finding of no significant impact for the shipment for field testing of an unlicensed bacterial vaccine for use in chickens. A risk analysis, which forms the basis for the environmental assessment, has led us to conclude that shipment of this veterinary vaccine for field testing will not have a significant impact on the quality of the human environment. Based on our finding of no significant impact, we have determined that an environmental impact statement need not be prepared. With this notice, we state our intention to authorize shipment of this vaccine for field testing 14 days after the date of this notice, unless new substantial issues bearing on the effects of the action contemplated here are brought to our attention. We also state our intention to issue a veterinary biological product license for this vaccine, provided the field trial data support the conclusions of the environmental assessment and finding of no significant impact and the product meets all other requirements for licensure.

ADDRESSES: Copies of the environmental assessment and finding of no significant impact may be obtained by contacting the person listed under **FOR FURTHER INFORMATION CONTACT**. Please refer to the docket number, date, and complete title of this notice when requesting copies. Copies of the environmental assessment and finding of no significant impact (as well as the risk analysis with confidential business information removed) are also available for public inspection at USDA, room 1141, South Building, 14th Street and Independence Avenue SW., Washington, DC, between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to inspect those documents are requested to call ahead on (202) 690–2817 to facilitate entry into the reading room.

FOR FURTHER INFORMATION CONTACT: Dr. Jeanette Greenberg, Technical Writer-Editor, Center for Veterinary Biologics, Licensing and Policy Development, VS, APHIS, USDA, 4700 River Road Unit 148, Riverdale, MD 20737–1231; telephone (301) 734–5338; fax (301) 734–8910; e-mail jgreenberg@aphis.usda.gov.

SUPPLEMENTARY INFORMATION: Under the Virus-Serum-Toxin Act (21 U.S.C. 151 *et seq.*), a veterinary biological product must be shown to be pure, safe, potent, and efficacious before a veterinary biological product license may be issued. A field test is generally necessary to satisfy prelicensing requirements for veterinary biological products. In order to ship an unlicensed veterinary biological product for the purpose of conducting a proposed field test, a person must receive authorization from the Animal and Plant Health Inspection Service (APHIS).

In determining whether to authorize shipment for field testing of the unlicensed veterinary biological product referenced in this notice, APHIS conducted a risk analysis to assess the potential effect of this product on the safety of animals, public health, and the environment. Based on the risk analysis, APHIS has prepared an environmental assessment (EA). APHIS has concluded that shipment of the unlicensed veterinary biological product for field testing will not significantly affect the quality of the human environment. Based on this finding of no significant impact (FONSI), we have determined that there is no need to prepare an environmental impact statement. An EA and FONSI have been prepared by APHIS for the shipment of the following unlicensed veterinary biological product for field testing:

Requester: Maine Biological Laboratories, Inc.

Product: Salmonella Typhimurium Vaccine, Avirulent Live Culture, Code 19C1.01.

Field test locations: Alabama, Delaware, Georgia, Maryland, North Carolina, and Virginia.

The above-mentioned product is a gene-deleted vaccine for use as an aid in preventing paratyphoid in young chickens.

The EA and FONSI have been prepared in accordance with: (1) The National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321 *et seq.*), (2) regulations of the Council on Environmental Quality for implementing the procedural provisions of NEPA (40 CFR parts 1500–1508), (3) USDA regulations implementing NEPA (7 CFR part 1b), and (4) APHIS' NEPA Implementing Procedures (7 CFR part 372).

Unless substantial environmental issues are raised in response to this notice, APHIS intends to authorize the shipment of the above product and the initiation of the field tests 14 days from the date of this notice.

Because the issues raised by authorization of a field trial and issuance of a license are identical, APHIS has concluded that the EA and FONSI that were generated for the field trial would also be applicable to the proposed licensing action. Furthermore, provided that the field trial data support the conclusions of the original EA and FONSI, APHIS does not intend to generate a separate EA to support the issuance of the product license, and would determine that an environmental impact statement need not be prepared. Therefore, APHIS intends to issue a veterinary biological product license for this vaccine following the completion of the field trial, provided no adverse impacts on the human environment are identified as a result of field testing and provided the product meets all other requirements for licensure.

Authority: 21 U.S.C. 151–159.

Done in Washington, DC, this 28th day of October 1997.

Terry L. Medley,

Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 97–29018 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. 96–046–4]

Agency Information Collection Activities; OMB Approval Received

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act, this notice announces the Office of Management and Budget's approval of a collection of information contained in the Animal and Plant Health Inspection Service final rule amending the regulations concerning the importation into the United States of fruits and vegetables.

FOR FURTHER INFORMATION CONTACT: Ms. Cheryl Groves, APHIS Information Collection Coordinator, AIM, APHIS, suite 2C48, 4700 River Road Unit 103, Riverdale, MD 20737–1235, (301) 734–5086.

SUPPLEMENTARY INFORMATION:

Background

On September 25, 1997, we published in the **Federal Register** (62 FR 50231–50237, Docket No. 96–046–3) a final rule amending the regulations at 7 CFR part 319, ''Foreign Quarantine Notices.'' This rule contains information collection requirements. On October 3, 1997, the Office of Management and Budget (OMB) approved the collection of information requirements with respect to this final rule under OMB control number 0579–0128 (expires October 31, 2000).

Done in Washington, DC, this 28th day of October 1997.

Terry L. Medley,

Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 97–29019 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

[Docket No. 97–064N]

National Advisory Committee on Microbiological Criteria for Foods Meeting

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Notice.

SUMMARY: The National Advisory Committee on Microbiological Criteria for Foods (NACMCF) will hold a meeting to discuss microbial-based topics relating to Risk Assessment, Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Point (HACCP), and Codex food safety standards for Cheese, Fresh Produce, Meat, Poultry, and Seafood.

DATES: The meeting will be held on November 18–20, 1997, from 8:30 a.m. to 4:30 p.m. The morning session on November 18 and the all-day session on November 20 are designated as full committee meeting times. The afternoon session on November 18 and the all-day session on November 19 will include several subcommittee breakout sessions.

ADDRESSES: The NACMCF meeting will be held at the Kellogg Conference Center at Gallaudet University, Florida and 8th Streets, NE, in Washington, D.C.

FOR FURTHER INFORMATION CONTACT: The Committee encourages persons with information or data on these matters to present their comments. Persons interested in making presentations, submitting technical papers, or providing comments are requested to mail or FAX their name, title, firm name, address, and telephone number to Ms. Amelia L. Wright, Advisory Committee Specialist, Scientific Research Oversight Staff, Department of Agriculture, Suite 6913, Franklin Court, 1099 14th Street, NW, Washington, DC 20250–3700; FAX (202) 501–7628. Comments and requests may be provided by E-mail to: amelia.wright@usda.gov. Participants may also reserve time to comment publicly when they register. Persons requiring a sign language interpreter or other special accommodations should contact Ms. Wright at the above telephone or FAX numbers by November 9, 1997.

SUPPLEMENTARY INFORMATION: The meeting will be open to the public on a space available basis. Persons wishing to make an oral presentation should notify Ms. Wright in writing. Presentations will be scheduled on a time available basis in accordance with the timeliness of the written request. Comments may be made before or after the meeting. All comments received will become part of the public record of this meeting. Technical papers also will be accepted and made part of the official record.

NACMCF provides advice and recommendations to the Secretary of Agriculture and the Secretary of Health and Human Services about the development of microbiological criteria to assess the safety and wholesomeness of food. NACMCF also provides guidance to the Departments of Commerce and Defense.

Done at Washington, DC, on October 24, 1997.

Thomas J. Billy,

Administrator.

[FR Doc. 97–29035 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–DM–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

[Docket No. 97–059N]

Third Annual Federal/State Conference on Food Safety

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Notice.

SUMMARY: The Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS), in cooperation with the Food and Drug Administration (FDA), an agency of the Department of Health and Human Services (HHS), will hold ''The Third Annual Federal/State Conference on Food Safety.'' The conference will focus on building Federal and State partnerships to facilitate the management of food safety concerns at the State and local levels.

DATES: The conference will be held on November 20 and 21, 1997, from 8:30 a.m. to 5:00 p.m. Registration will begin at 8:00 a.m.

ADDRESSES: The conference will be held at the Ramada Inn, 2600 Auburn Boulevard, Sacramento, California 95821; telephone (916) 487–7600; FAX (916) 481–7112.

FOR FURTHER INFORMATION CONTACT: To register for the meeting, contact Ms. Traci Phebus at (202) 501–7138, FAX (202) 501–7642, or E-mail to HACCP.Confer@USDA.GOV. If you require a sign language interpreter or other accommodations, contact Ms. Mary Harris at (202) 501–7315.

SUPPLEMENTARY INFORMATION: On July 25, 1996, FSIS published a final rule, ''Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems (61 FR 38806). The rule introduced sweeping changes to the inspection of meat and poultry products. In the preamble of the rule, FSIS addressed ''farm-to-table'' strategies which include preventive approaches to hazards that occur during transportation, distribution, and retail sale of meat, poultry, and egg products. To implement these strategies, close coordination between Federal and State governments is necessary.

For the past two years, FSIS has held a ''Federal/State Conference on Food

Safety.'' The 1995 and 1996 conferences brought together representatives from the principal Federal and State food safety organizations who discussed their views on the best ways to apply limited resources to improve farm-to-table food safety.

This year's conference will explore ways in which Federal and State partnerships can be organized to maximize valuable resources and facilitate the management of food safety concerns at the State and local levels. California, which has developed successful partnerships with Federal agencies, will highlight some of its experiences. Other States also are encouraged to discuss their recent initiatives in farm-to-table food safety.

Representatives from USDA, FDA, the Centers for Disease Control and Prevention, and State food safety agencies have been invited to participate and discuss other topics of mutual interest.

Done at Washington, DC on October 24, 1997.

Thomas J. Billy,

Administrator.

[FR Doc. 97–29036 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–DM–P

DEPARTMENT OF AGRICULTURE

Grain Inspection, Packers and Stockyards Administration

Designations for the Idaho (ID), Lewiston (ID), and the State of Utah Areas

AGENCY: Grain Inspection, Packers and Stockyards Administration (GIPSA).

ACTION: Notice.

SUMMARY: GIPSA announces the designation of Idaho Grain Inspection Service, Inc. (Pocatello), Lewiston Grain Inspection Service, Inc. (Lewiston), and the Utah Department of Agriculture (Utah) to provide official services under the United States Grain Standards Act, as amended (Act).

EFFECTIVE DATE: December 1, 1997.

ADDRESSES: USDA, GIPSA, Janet M. Hart, Chief, Review Branch, Compliance Division, STOP 3604, Room 1647-S, 1400 Independence Avenue, S.W., Washington, DC 20250–3604.

FOR FURTHER INFORMATION CONTACT: Janet M. Hart, telephone 202–720–8525.

SUPPLEMENTARY INFORMATION: This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12866 and Departmental Regulation 1512–1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

In the June 2, 1997, **Federal Register** (62 FR 29707), GIPSA asked persons interested in providing official services in the geographic areas assigned to Pocatello, Lewiston, and Utah to submit an application for designation. Applications were due by July 1, 1997. Pocatello, Lewiston, and Utah, the only applicants, each applied for designation to provide official services in the entire area currently assigned to them.

Since Pocatello, Lewiston, and Utah were the only applicants for the respective areas, GIPSA did not ask for comments on the applicants.

GIPSA evaluated all available information regarding the designation criteria in Section 7(f)(l)(A) of the Act and, according to Section 7(f)(l)(B), determined that Pocatello, Lewiston, and Utah are able to provide official services in the geographic areas for which they applied. Effective December 1, 1997, and ending November 30, 2000, Pocatello, Lewiston, and Utah are designated to provide official services in the geographic areas specified in the June 2, 1997, **Federal Register**.

Interested persons may obtain official services by contacting Pocatello at 208–233–8303, Lewiston at 208–746–0451, and Utah at 801–392–2292.

Authority: Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 et seq.).

Dated: October 24, 1997.

Neil E. Porter,

Director, Compliance Division.

[FR Doc. 97–28852 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–EN–P

DEPARTMENT OF AGRICULTURE

Grain Inspection, Packers and Stockyards Administration

Opportunity to Comment on the Applicant for the Northeast Indiana (IN) Region.

AGENCY: Grain Inspection, Packers and Stockyards Administration (GIPSA).

ACTION: Notice.

SUMMARY: GIPSA requests comments on the applicant for designation to provide official services in part of the geographic area currently assigned to East Indiana Grain Inspection, Inc. (East Indiana).

DATES: Comments must be postmarked, or sent by telecopier (FAX) by December 2, 1997.

ADDRESSES: Comments must be submitted in writing to USDA, GIPSA, Janet M. Hart, Chief, Review Branch, Compliance Division, STOP 3604, Room 1647-S, 1400 Independence Avenue, S.W., Washington, DC 20250–3604. Telecopier (FAX) users may send comments to the automatic telecopier machine at 202–690–2755, attention: Janet M. Hart. All comments received will be made available for public inspection at the above address located at 1400 Independence Avenue, S.W., during regular business hours.

FOR FURTHER INFORMATION CONTACT: Janet M. Hart, telephone 202–720–8525.

SUPPLEMENTARY INFORMATION: This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12866 and Departmental Regulation 1512–1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

In the August 21, 1997, **Federal Register** (62 FR 44439), GIPSA asked persons interested in providing official services in the Northeast Indiana area, currently assigned to East Indiana, to submit an application for designation. There was one applicant: Northeast Indiana Grain Inspection, Inc., a proposed organization to be established by Steve Walker to be located at Hoagland, Indiana, applied for designation to provide official services in the Northeast Indiana region. The Northeast Indiana region consists of the following geographic area, in the State of Indiana:

Bounded on the North by the northern Lagrange and Steuben County lines;

Bounded on the East by the eastern Steuben, De Kalb, Allen, and Adams, County lines;

Bounded on the South by the southern Adams and Wells County lines; and

Bounded on the West by the western Wells County line; the southern Huntington and Wabash County lines; the western Wabash County line north to State Route 114; State Route 114 northwest to State Route 19; State Route 19 north to Kosciusko County; the western and northern Kosciusko County lines; the western Noble and Lagrange County lines.

The following grain elevator, located outside of the above contiguous geographic area, is part of this geographic area assignment: E. M. P. Grain, Payne, Paulding County, Ohio (located inside Lima Grain Inspection Service, Inc.'s, area).

GIPSA is publishing this notice to provide interested persons the opportunity to present comments concerning the applicant. Commenters are encouraged to submit reasons and pertinent data for support or objection to the designation of this applicant. All comments must be submitted to the

Compliance Division at the above address. Comments and other available information will be considered in making a final decision. GIPSA will publish notice of the final decision in the **Federal Register**, and GIPSA will send the applicants written notification of the decision.

Authority: Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 et seq.).

Dated: October 24, 1997.

Neil E. Porter,

Director, Compliance Division.

[FR Doc. 97–28850 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–EN–P

DEPARTMENT OF AGRICULTURE

Grain Inspection, Packers and Stockyards Administration

Opportunity for Designation in the Detroit (MI), Keokuk (IA), and Michigan (MI) Areas

AGENCY: Grain Inspection, Packers and Stockyards Administration (GIPSA).

ACTION: Notice.

SUMMARY: The United States Grain Standards Act, as amended (Act), provides that official agency designations will end not later than triennially and may be renewed. The designations of Detroit Grain Inspection Service, Inc. (Detroit), Keokuk Grain Inspection Service (Keokuk), and Michigan Grain Inspection Services, Inc. (Michigan), will end April 30, 1998, according to the Act. GIPSA is asking persons interested in providing official services in the Detroit, Keokuk, and Michigan areas to submit an application for designation.

DATES: Applications must be postmarked or sent by telecopier (FAX) on or before December 2, 1997.

ADDRESSES: Applications must be submitted to USDA, GIPSA, Janet M. Hart, Chief, Review Branch, Compliance Division, STOP 3604, Room 1647–S, 1400 Independence Avenue, S.W., Washington, DC 20250–3604. Applications may be submitted by FAX on 202–690–2755. If an application is submitted by FAX, GIPSA reserves the right to request an original application. All applications will be made available for public inspection at this address located at 1400 Independence Avenue, S.W., during regular business hours.

FOR FURTHER INFORMATION CONTACT: Janet M. Hart, telephone 202–720–8525.

SUPPLEMENTARY INFORMATION: This Action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12866 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 authorizes GIPSA's Administrator to designate a qualified applicant to provide official services in a specified area after determining that the applicant is better able than any other applicant to provide such official services. GIPSA designated Detroit, main office located in Emmett, Michigan, Keokuk, main office located in Keokuk, Iowa, and Michigan, main office located in Marshall, Michigan, to provide official inspection services under the Act on May 1, 1995.

Section 7(g)(1) of the Act provides that designations of official agencies shall end not later than triennially and may be renewed according to the criteria and procedures prescribed in Section 7(f) of the Act. The designations of Detroit, Keokuk, and Michigan end on April 30, 1998, according to the Act.

Pursuant to Section 7(f)(2) of the Act, the following geographic area, in the State of Michigan, is assigned to Detroit.

Bounded on the North by the northern Clinton County line; the eastern Clinton County line south to State Route 21; State Route 21 east to State Route 52; State Route 52 north to the Shiawassee County line; the northern Shiawassee County line east to the Genesee County line; the western Genesee County line; the northern Genesee County line east to State Route 15; State Route 15 north to Barnes Road; Barnes Road east to Sheridan Road; Sheridan Road north to State Route 46; State Route 46 east to State Route 53; State Route 53 north to the Michigan State line;

Bounded on the East by the Michigan State line south to State Route 50;

Bounded on the South by State Route 50 west to U.S. Route 127; and

Bounded on the West by U.S. Route 127 north to U.S. Route 27; U.S. Route 27 north to the northern Clinton County line.

The following grain elevator, located outside of the above contiguous geographic area, is part of this geographic area assignment: Countrymark, Inc., St. Johns, Clinton County (located inside Michigan Grain Inspection Services, Inc.'s, area).

Pursuant to Section 7(f)(2) of the Act, the following geographic area, in the States of Illinois and Iowa, is assigned to Keokuk.

Adams, Brown, Fulton, Hancock, Mason, McDonough, and Pike (northwest of a line bounded by U.S. Route 54 northeast to State Route 107; State Route 107 northeast to State Route 104; State Route 104 east to the eastern Pike County line) Counties, Illinois.

Davis, Lee, and Van Buren Counties, Iowa.

Pursuant to Section 7(f)(2) of the Act, the following geographic area, in the State of Michigan, is assigned to Michigan.

Bounded on the North by the northern Michigan State line;

Bounded on the East by the eastern Michigan State line south and east to State Route 53; State Route 53 south to State Route 46;

Bounded on the South by State Route 46 west to Sheridan Road; Sheridan Road south to Barnes Road; Barnes Road west to State Route 15; State Route 15 south to the Genesee County line; the northern Genesee County line west to the Shiawassee County line; the northern Shiawassee County line west to State Route 52; State Route 52 south to State Route 21; State Route 21 west to Clinton County; the eastern and northern Clinton County lines west to U.S. Route 27; U.S. Route 27 south to U.S. Route 127; U.S. Route 127 south to the southern Hillsdale County line; the southern Hillsdale and Branch County lines; the western Branch County line north to the Kalamazoo County line; the southern Kalamazoo and Van Buren County lines; and

Bounded on the West by the western Michigan State line north to the northern Michigan State line.

Michigan's assigned geographic area does not include the following grain elevator inside Michigan's area which has been and will continue to be serviced by the following official agency: Detroit Grain Inspection Service, Inc.: St. Johns Coop., St. Johns, Clinton County.

Interested persons, including Detroit, Keokuk, and Michigan, are hereby given the opportunity to apply for designation to provide official services in the geographic areas specified above under the provisions of Section 7(f) of the Act and section 800.196(d) of the regulations issued thereunder. Designation in the Detroit, Keokuk, and Michigan areas is for the period beginning May 1, 1998, and ending April 30, 2001. Persons wishing to apply for designation should contact the 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.

Authority: Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 *et seq.*).

Dated: October 24, 1997.

Neil E. Porter,

Director, Compliance Division.

[FR Doc. 97–28853 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–EN–P

DEPARTMENT OF AGRICULTURE

Grain Inspection, Packers and Stockyards Administration

Designation for the Fostoria (OH) Area

AGENCY: Grain Inspection, Packers and Stockyards Administration (GIPSA).

ACTION: Notice.

SUMMARY: GIPSA announces the designation of Fostoria Grain Inspection, Inc. (Fostoria), to provide official services under the United States Grain Standards Act, as amended (Act).

EFFECTIVE DATE: December 1, 1997.

ADDRESSES: USDA, GIPSA, Janet M. Hart, Chief, Review Branch, Compliance Division, STOP 3604, Room 1647-S, 1400 Independence Avenue, S.W., Washington, DC 20250–3604.

FOR FURTHER INFORMATION CONTACT: Janet M. Hart, telephone 202–720–8525.

SUPPLEMENTARY INFORMATION: This action has been reviewed and determined not to be a rule or regulation as defined in Executive Order 12866 and Departmental Regulation 1512–1; therefore, the Executive Order and Departmental Regulation do not apply to this action.

In the June 2, 1997, **Federal Register** (62 FR 29707), GIPSA asked persons interested in providing official services in the geographic area assigned to Fostoria to submit an application for designation. Applications were due by July 1, 1997. Fostoria, the only applicant, applied for designation to provide official services in the entire area currently assigned to them.

Since Fostoria was the only applicant for the area, GIPSA did not ask for comments on the applicant.

GIPSA evaluated all available information regarding the designation criteria in Section 7(f)(l)(A) of the Act and, according to Section 7(f)(l)(B), determined that Fostoria is able to provide official services in the geographic area for which they applied. Effective December 1, 1997, and ending November 30, 1998, Fostoria is designated to provide official services in the geographic area specified in the June 2, 1997, **Federal Register**.

Interested persons may obtain official services by contacting Fostoria at 419–435–3804.

Authority: Pub. L. 94–582, 90 Stat. 2867, as amended (7 U.S.C. 71 *et seq.*).

Dated: October 24, 1997.

Neil E. Porter,

Director, Compliance Division.

[FR Doc. 97–28854 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–EN–P

DEPARTMENT OF AGRICULTURE

Grain Inspection, Packers and Stockyards Administration

Notice of Request for Extension and Revision of a Currently Approved Information Collection

AGENCY: Grain Inspection, Packers and Stockyards Administration.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), this notice announces the Grain Inspection, Packers and Stockyards Administration's (GIPSA) intention to request an extension for and revision to the currently approved information collection for ''Regulations Governing the National Inspection and Weighing System Under the United States Grain Standards Act and the Agricultural Marketing Act of 1946.''

DATES: Comments on this notice must be received by January 2, 1998.

ADDITIONAL INFORMATION OR COMMENTS: Contact Sharon Vassiliades, ARTS, GIPSA, USDA, STOP 3649, 1400 Independence Avenue, SW, Washington, D.C. 20250-3649, or FAX 202 720–4628, telephone: 202 720–1738, e-mail: svassili@fgisdc.usda.gov.

SUPPLEMENTARY INFORMATION: The United States Grain Standards Acts (USGSA) and the Agricultural Marketing Act (AMA) were enacted to facilitate the marketing of grain, oilseeds, pulses, rice, and related commodities. These statutes establish standards and terms which accurately and consistently measure the quality of grain and related products, provide for uniform official inspection and weighing, provide regulatory and service responsibilities, and furnish the framework for commodity quality improvement incentives to both domestic and foreign buyers. The Federal Grain Inspection Service of USDA's Grain Inspection, Packers and Stockyards Administration establishes policies, guidelines, and regulations to carry out the objectives of the USGSA and the AMA.

The USGSA, with few exceptions, requires official certification of export grain sold by grade. Official services are provided, upon request, for grain in domestic commerce. The AMA authorizes similar inspection and weighing services, upon request, for rice, pulses, flour, corn meal, and certain other agricultural products. Conversely, the regulations promulgating the USGSA and AMA require specific information collection and recordkeeping necessary to carry out requests for official services. Applicants for service must specify the kind and level of service desired, the identification of the product, the location, the amount, and other pertinent information in order that official personnel can efficiently respond to their needs.

Official services under the USGSA are provided through FGIS field offices and delegated and/or designated State and private agencies. Delegated agencies are State agencies delegated authority under the Act to provide official inspection service, Class X or Class Y weighing services, or both, at one or more export port locations in the State. Designated agencies are State or local governmental agencies or persons designated under the Act to provide either official inspection services, Class X or Class Y weighing services, or both, at locations other than export port locations. State and private agencies, as a requirement for delegation and/or designation, must comply with all regulations, procedures, and instructions in accordance with provisions established under the USGSA. FGIS field offices oversee the performance of these agencies and provide technical guidance as needed.

Official services under the AMA are performed, upon request, on a fee basis for domestic and export shipments either by FGIS employees, individual contractors, or cooperators. Contractors are persons who enter into a contract with FGIS to perform specified inspection services. Cooperators are agencies or departments of the Federal Government which have an interagency agreement or State agencies which have a reimbursable agreement with FGIS.

Title: Regulations Governing the National Inspection and Weighing System Under the USGSA and AMA of 1946.

OMB Number: 0580–0013.

Expiration Date of Approval: February 28, 1998.

Type of Request: Extension and revision of a currently approved information collection.

Abstract: The United States Grain Standards Act (7 U.S.C. 71 et seq.) and the Agricultural Marketing Act of 1946 (7 U.S.C 1621 et seq.) provide that USDA inspect, certify and identify the class, quality, quantity and condition of agricultural products shipped or

received in interstate and foreign commerce. Also, that USDA may enter contracts or agreements with delegated or designated agencies to provide official inspection personnel to perform the services.

Estimate of Burden: Public reporting and record keeping burden for this collection of information is estimated to average .16 hours per response.

Respondents: Grain producers, buyers, and sellers, elevator operators, grain merchandisers and official grain inspection agencies.

Estimated Number of Respondents: 3200.

Estimated Number of Responses per Respondent: 899.3.

Estimated Total Annual Burden on Respondents: 468,109.55 hours.

Copies of this information collection can be obtained from Cathy McDuffie, the Agency Support Services Specialist, at (301) 734–5190.

Comments: Comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or forms of information technology. Comments may be sent to: Sharon Vassiliades, ARTS, GIPSA, USDA, STOP 3649, 1400 Independence Avenue, SW, Washington, D.C. 20250-3649 or FAX 202 720–4628, telephone: 202 720–1738. All comments will be available for public inspection during regular business hours at the same address.

All responses to this notice will be summarized and included in the request for OMB approval. All comments will also become a matter of public record.

Dated: October 28, 1997.

James R. Baker,

Administrator.

[FR Doc. 97–29020 Filed 10–31–97; 8:45 am]

BILLING CODE 3410–EN–P

DEPARTMENT OF COMMERCE

Bureau of the Census

Construction Project Reporting Surveys (CPRS)

ACTION: Proposed Collection; Comment Request.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995, Pub. L. 104–13 (44 U.S.C. 3506(c)(2)(A)).

DATES: Written comments must be submitted on or before January 2, 1998.

ADDRESSES: Direct all written comments to Linda Engelmeier, Departmental Forms Clearance Officer, Department of Commerce, Room 5327, 14th and Constitution Avenue, NW, Washington, DC 20230.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument(s) and instructions should be directed to George A. Roff, Jr., Bureau of the Census, Room 2225, Building 4, Washington, DC 20233 on (301) 457–1605.

SUPPLEMENTARY INFORMATION:

I. Abstract

The Census Bureau is the preeminent collector and provider of timely, relevant and quality data about the people and economy of the United States. Economic data are the Census Bureau's primary program commitment during nondecennial census years. The Census Bureau, under the authority of Title 13, United States Code, Section 182, conducts the following three Construction Project Reporting Surveys (CPRS); Private Construction Projects, State and Local Governments and Multifamily Residential. These surveys provide the dollar value of construction put in place by private companies, individuals, private multifamily residential buildings, and state and local government sectors. The C–700 form (Private Construction Projects) collects construction put in place data for nonresidential projects owned by private companies or individuals. The C–700(R) (Multifamily Residential Projects) form collects construction put in place data for private multifamily residential buildings. Form C–700(SL) (State and Local Government Projects) collects construction put in place data for state and local government projects.

The Census Bureau uses the information from the CPRS to publish the value of construction put in place series. Published estimates are used by a variety of private business and trade associations to estimate the demand for building materials and to schedule production, distribution, and sales efforts. They also provide various governmental agencies with a tool to evaluate economic policy and to measure progress towards established goals. For example, Bureau of Economic Analysis staff use data to develop the construction components of gross private domestic investment in the gross domestic product. The Federal Reserve Board and the Department of Treasury use the value in place data to predict the gross domestic product, which is presented to the Board of Governors and has an impact on monetary policy.

II. Method of Collection

The universes for these surveys are as follows:

(1) Private nonresidential and state and local projects are obtained from F.W. Dodge, a division of the McGraw-Hill Information Systems Company, for projects valued at $50,000 or more in the United States, except Hawaii. Building permit notifications are used for sampling in permit-issuing places of Hawaii and for projects in areas not covered by Dodge.

(2) Multifamily projects are sampled from the Census Bureau's Housing Starts Survey.

An independent systematic sample of projects is selected each month according to predetermined sampling rates. Once a project is selected it remains in the sample until completion of the project. Preprinted forms are mailed monthly to respondents to fill in current month data and any revisions to previous months. To manage CPRS data, a database was created. A portion of this database is used for computer assisted telephone interviewing. Repondents are contacted on the day and time specified by them, thereby reducing their burden.

III. Data

OMB Numbers: 0607–0153 C–700 (Private Construction Projects), 0607–0163 C–700(R) (Multifamily Residential Projects), 0607–0171 C–700(SL) (State and Local Government Projects).

Form Numbers: C–700, C–700(R), C–700(SL).

Type of Review: Regular Review.

Affected Public: Individuals, Businesses or Other for Profit, Non Profit Institutions, Small Businesses or Organizations, and State or Local Governments.

Estimated Number of Respondents: C–700= 6,000, C–700(R)=1,440, C–700(SL)= 6,000.

Estimated Time Per Response: .25 hrs per month.

Estimated Total Annual Burden Hours: C–700= 18,000, C–700(R)=4,320, C–700(SL)=18,000.

Estimated Total Annual Cost: The cost to the Government for this work is estimated to be $2.702 million.

Respondents Obligation: Construction Project Reporting Surveys are voluntary.

Legal Authority: Title 13, United States Code, Section 182.

IV. Request for Comments

Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: October 28, 1997.

Linda Engelmeier,

Departmental Forms Clearance Officer, Office of Management and Organization.

[FR Doc. 97–29005 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–07–P

DEPARTMENT OF COMMERCE

International Trade Administration

Export Trade Certificate of Review

AGENCY: International Trade Administration, Commerce.

ACTION: Notice of revocation of Export Trade Certificate of Review No. 94–00004.

SUMMARY: The Secretary of Commerce issued an export trade certificate of review to Allegheny Highland Hardwoods, Inc. Because this certificate holder has failed to file an annual report as required by law, the Secretary is revoking the certificate. This notice summarizes the notification letter sent to Allegheny Highland Hardwoods, Inc.

FOR FURTHER INFORMATION CONTACT: Morton Schnabel, Acting Director, Office of Export Trading Company Affairs, International Trade Administration, 202/482–5131. This is not a toll-free number.

SUPPLEMENTARY INFORMATION: Title III of the Export Trading Company Act of 1982 (''the Act'') (Pub. L. No. 97–290, 15 U.S.C. 4011–21) authorizes the Secretary of Commerce to issue export trade certificates of review. The regulations implementing Title III (''the Regulations'') are found at 15 CFR part 325 (1997). Pursuant to this authority, a certificate of review was issued on July 13, 1994 to Allegheny Highland Hardwoods, Inc.

A certificate holder is required by law to submit to the Department of Commerce annual reports that update financial and other information relating to business activities covered by its certificate (Section 308 of the Act, 15 U.S.C. 4018, Section 325.14(a) of the Regulations, 15 CFR 325.14(a)). The annual report is due within 45 days after the anniversary date of the issuance of the certificate of review (Sections 325.14(b) of the Regulations, 15 CFR 325.14(b)). Failure to submit a complete annual report may be the basis for revocation (Sections 325.10(a) and 325.14(c) of the Regulations, 15 CFR 325.10(a)(3) and 325.14(c)).

On October 6, 1995, the Department of Commerce sent to Allegheny Highland Hardwoods, Inc. a letter containing annual report questions with a reminder that its annual report was due by August 28, 1995. Additional reminder letters were sent on July 18, 1996, October 18, 1996, and on January 3, 1997. The Department has received no written response from Allegheny Highland Hardwoods, Inc. to any of these letters.

On August 4, 1997, and in accordance with Section 325.10(c)(1) of the Regulations, (15 CFR 325.10(c)(1)), the Department of Commerce sent a letter by certified mail to notify Allegheny Highland Hardwoods, Inc. that the Department was formally initiating the process to revoke its certificate for failure to file an annual report. In addition, a summary of this letter allowing Allegheny Highland Hardwoods, Inc. thirty days to respond was published in the **Federal Register** on August 11, 1997 at 62 FR 42965. Pursuant to 325.10(c)(2) of the Regulations (15 CFR 325.10(c)(2)), the Department considers the failure of Allegheny Highland Hardwoods, Inc. to respond to be an admission of the statements contained in the notification letter.

The Department has determined to revoke the certificate issued to Allegheny Highland Hardwoods, Inc. for its failure to file an annual report. The Department has sent a letter, dated October 28, 1997, to notify Allegheny Highland Hardwoods, Inc. of its determination. The revocation is effective thirty (30) days from the date of publication of this notice. Any person aggrieved by this decision may appeal to an appropriate U.S. district court within 30 days from the date on which this notice is published in the **Federal Register** (325.10(c)(4) and 325.11 of the Regulations, 15 CFR 324.10(c)(4) and 325.11 of the Regulations, 15 CFR 325.10(c)(4) and 325.11).

Dated: September 28, 1997.

Morton Schnabel,

Acting Director, Office of Export Trading Company Affairs

[FR Doc. 97–29000 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–DR–P

DEPARTMENT OF COMMERCE

International Trade Administration

[Docket No. 971023252–7252–01]

CFDA No.: 11.115; Cooperative Agreement Program for an American Business Center in Russia

AGENCY: International Trade Administration, Commerce.

ACTION: Notice.

Background

On September 15, 1997, ITA published a notice in the **Federal Register** (62 FR 48219) solicitating proposals to operate American Business Centers in five (5) cities in Russia and the New Independent States. Closing date for receipt of proposals was October 15, 1997. No proposals were received to operate a center in Novosibirsk. Accordingly, ITA is hereby providing notice that the portion of the September 15, 1997 (62 FR 48219) solicitation pertaining to Novosibirsk is canceled. Since ITA did not receive any applications under the closed solicitation, we are issuing this solicitation with revised requirements.

Summary

The International Trade Administration (ITA) is soliciting competitive applications to establish and operate an American Business Center (ABC) in Novosibirsk, Russia for a two (2) year multi-year award period. ABC Novosibirsk will encourage the export of U.S. goods and services and stimulate trade and investment in

Russia's regions. Funds to support the new ABC Award are not currently available. Any award resulting from this announcement is contingent upon the availability of appropriated funds.

ABC Novosibirsk will provide, on a user fee basis, a broad range of business development and facilitation services to United States companies in Russia's regions. Services provided by ABC Novosibirsk will be designed to encourage more U.S. firms to explore opportunities for trade and investment in Russia's regions and to help them conduct business there more effectively. The core services to be provided by the ABC include: international telephone, fax, and data transmission; temporary office space; space for meetings, small seminars, and small product exhibitions or demonstrations; secretarial support (e.g. word processing, typing, message taking); translator/interpreters; photocopying; market research; counseling on local business conditions; and arranging appointments with Russian business contacts. The Center also will work closely with Russian businesses to help them become more attractive trading partners; identify and report obstacles to trade and investment; and serve as a link between financial institutions, U.S. companies, and Russian enterprises.

In addition to these core services, the ABC will support U.S. Government activities under the Regional Investment Initiative (RII). This will include providing, at cost, support for the activities of the RII coordinators. Such support may include office space, computers, telecommunications equipment and secretarial and translation services.

Projects supported under the terms of this notice will establish and operate an ABC in Novosibirsk.

DATES: ITA will accept only those applications which are received at the U.S. Department of Commerce, Room 1235, HCHB, no later than 3:00 pm E.S.T. December 3, 1997. Late applications will not be accepted and will not be considered. On November 7, 1997, competitive application kits are available from the Department of Commerce.

ADDRESSES: To obtain a copy of the application kit, please send a written request with a self-addressed mail label to: Russia-NIS Program Office, U.S. & Foreign Commercial Service, Room 1235, HCHB, U.S. Department of Commerce, Washington, D.C. 20230. Requests for application kits also may be faxed to 202–482–2456. Only one application kit will be provided to each organization requesting it, but the kit may be reproduced by the requester. All forms necessary to submit an application will be included in the application kit. Completed applications should be returned to the same address. Applicants must submit a signed original and two copies of the application and supporting materials. It is anticipated that it will take ten weeks after the deadline for receipt of applications to process applications and make an award.

FOR FURTHER INFORMATION CONTACT: Applicants wishing further information should contact Ms. E. Vivian Spathopoulos, Deputy Director, Russia-NIS Program Office, U.S. & Foreign Commercial Service, U.S. Department of Commerce, room 1235, HCHB, Washington, D.C. 20230, telephone: (202) 482–2902, or Fax: (202) 482–2456.

SUPPLEMENTARY INFORMATION:

Program Authority

The American Business Center program is authorized by Title III of the ''Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act of 1992'' or the ''FREEDOM Support Act'', Pub. L. 102–511. Funding for the program is provided by the Agency for International Development under Section 632(a) of the Foreign Assistance Act of 1961, as amended.

Eligible Applicants

United States for-profit firms, non-profit organizations, non-Federal government agencies, industry and trade associations, and educational institutions are eligible to apply. An enterprise which includes or intends to include participation of host country citizens or entities will be considered an eligible applicant so long as the applicant is and will remain, throughout the award period, controlled by citizens or entities of the United States.

Funding Guidelines

Since it is anticipated that ITA will be involved in the implementation of the project for which an award is made, the funding instrument for the program will be a cooperative agreement. Examples of ITA involvement include but are not limited to the following: supplemental marketing to promote the ABC, guidance on eligibility of ABC clients, and coordination with other U.S. government assistance programs.

ITA anticipates $200,000 will be available for the first year of funding for one multi-year cooperative agreement award during FY 1998. Applicants will be requested to submit a work-plan and budget which cover a one (1) year period for a total amount of not more than $200,000 in Federal funds. Applicants must supply at least thirty-percent (30%) of total project costs, with the Federal portion of total project costs to be no more than seventy-percent (70%). A minimum of one-half (½) of the support supplied by the applicant must be in the form of cash. The remaining portion of the applicant's support may consist of cash or in-kind contributions (goods and services contributed by a third-party). Applicants are requested to also submit a work-plan and budget for a second year of operation based on the level of funding for the first year with the understanding that funding levels may or may not be the same as the first year.

Applicant receipt of future funding is contingent upon the availability of appropriated funds, and satisfactory performance, and will be at the sole discretion of ITA. Publication of this notice does not constitute an obligation by the Department of Commerce to enter into a cooperative agreement with any responding applicant.

Evaluation Criteria

Consideration for financial assistance under the program will be based on the following evaluation criteria:

(1) Quality of Work Plan: core commercial activities, marketing strategy, management/staffing, cooperation with ITA and outreach programs to NIS firms;

(2) Qualifications of Applicant: financial history, personnel's experience in region and in delivering commercial products/services;

(3) Market Knowledge of Locations: applicant's demonstrated familiarity with the market conditions in the proposed city and/or region;

(4) Project Timetable: ability of applicant to complete major stages in the scope of work quickly, particularly bringing an ABC into the fully-operational stage;

(5) U.S. Small Business Utility: accessibility of services to small firms and reasonableness of fees;

(6) Cost-Effectiveness: reasonableness, allowability and allocability of costs.

For purpose of evaluation of the applications, the above criteria will be weighted as follows: Criterion (1) will be worth a maximum of 30 (thirty) percent; criterion (2) will be worth a maximum of 30 (thirty) percent; criterion (3) will be worth a maximum of 20 (twenty) percent; criterion (4) will be worth a maximum of 10 (ten) percent; criterion (5) and (6) will be worth a maximum of 5 (five) percent each.

Selection Procedure

Each application will be evaluated by a panel of at least three independent reviewers qualified to evaluate applications submitted under the program. Applications will be evaluated on a competitive basis in accordance with the evaluation criteria set forth above. This announcement is for applicants in Novosibirsk only. Awards will be based on highest total accumulated score and geographic location.

Notifications

All applicants are advised of the following:

(1) Unsatisfactory performance under prior Federal awards may result in an application not being considered for funding.

(2) If applicants incur any cost prior to an award being made, they do so solely at their own risk of not being reimbursed by the Federal Government. Not withstanding any verbal assurance that they may receive, there is no obligation on the part of the Department of Commerce to cover pre-award costs.

(3) If an application is selected for funding, the Department of Commerce has no obligation to provide any additional future funding in connection with the award. Renewal of an award to increase funding or extend the period of performance is at the total discretion of the Department of Commerce.

(4) No award of Federal funds shall be made to an applicant who has an outstanding debt until either:

a. The delinquent account is paid in full;

b. A negotiated repayment schedule is established and at least one payment is received; or

c. Other arrangements satisfactory to the Department of Commerce are made.

(5) All primary applicants must submit a completed Form CD–511, ''Certification Regarding Debarment, Suspension and other Responsibility Matters; Drug-Free Workplace Requirements and Lobbying''. Prospective participants (as defined at 15 CFR part 26, section 105) are subject to 15 CFR part 26, ''Nonprocurement Debarment and Suspension'' and the related section of the certification form prescribed above applies. Grantees (as defined at 15 CFR part 26, section 605) are subject to 15 CFR part 26, subpart F ''Government wide Requirement for Drug-Free Workplace (Grants)'' and the related section of the certification form prescribed above applies. Persons (as defined at 15 CFR part 28, section 105) are subject to the lobbying provisions of 31 U.S.C. 1352, ''Limitation on the use of appropriated funds to influence certain Federal contracting and financial transactions;'' and the lobbying section of the certification form prescribed above applies to applications/bids for grants, cooperative agreements, and contracts for more than $100,000 and loans and loan guarantees for more than $150,000 or the single family maximum mortgage limit for affected programs, whichever is greater''. Any applicant that has paid or will pay for lobbying using any funds must submit an SF–LLL, ''Disclosure of Lobbying Activities,'' as required under 15 CFR part 28. Appendix B.

(6) Recipients shall require applicants/bidders for subgrants, contracts, subcontracts, or other lower tier covered transactions at any tier under the award to submit, if applicable, a completed Form CD–512, ''Certifications Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction and Lobbying'' and disclosure form, SF–LLL, ''Disclosure of Lobbying Activities.'' Form CD–512 is intended for the use of recipients and should not be submitted by any tier recipient or sub-recipient should be submitted to the Department of Commerce in accordance with instructions contained in the award document.

(7) A false statement on an application is grounds for denial or termination of funds and grounds for possible punishment by a fine or imprisonment as provided in 18 U.S.C. 1001 and denial or termination of Federal funding.

(8) All recipients and sub-recipients are subject to all applicable Federal laws and Federal Department of Commerce policies, regulations, and procedures applicable to Federal assistance awards. For-profit organizations shall be subject to OMB Circular A–110 and 15 CFR 29a.

(9) All non-profit and for-profit applicants are subject to a name check review process. Name checks are intended to reveal if any key individuals associated with the applicant have been convicted of or are presently facing criminal charges such as fraud, theft, perjury, or other matters which significantly reflect on the applicant's management honesty or financial integrity.

(10) Recipients are subject to the Fly America Act (49 U.S.C. sec. 1517 as implemented by 41 CFR sec. 301–3.6).

(11) Executive Order 12372 ''Intergovernmental Review of Federal Programs'' does not apply to this program.

(12) Paperwork Reduction Act does apply to this program. This document involves collections of information subject to the Paperwork Reduction Act, which have been approved by the Office of Management and Budget under OMB Control Numbers 0348–0043, 0348–0044, 0348–0040, 0348–0046, and 0651–0001. Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number.

(13) The total dollar amount of the indirect costs proposed in an application under this program must not exceed the indirect cost rate negotiated and approved by a cognizant Federal agency prior to the proposed effective date of the award or 100 percent of the total proposed direct costs dollar amount in the application, whichever is less.

Dated: October 29, 1997.

E. Vivian Spathopoulos,

Deputy Director, US&FCS/Russia-NIS Program Office

[FR Doc. 97–29118 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–FP–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 102897A]

Fisheries of the Exclusive Economic Zone Off Alaska; Recordkeeping and Reporting Requirements; Public Workshop

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of workshop

SUMMARY: NMFS announces a workshop to explain provisions of the 1998 recordkeeping and reporting requirements for the Alaska groundfish fisheries, to introduce the proposed electronic reporting system, to provide detailed instructions on completion and submittal of the required forms and logsheets, and to answer questions on recordkeeping and reporting from members of the fishing industry and other interested parties.

DATES: Tuesday, December 16, 1997, 8:00 a.m. to 5:00 p.m. Alaska local time.

ADDRESSES: The workshop will be held in the Windsor Room at the Westmark Hotel located at 720 West Fifth Avenue, Anchorage, Alaska.

FOR FURTHER INFORMATION CONTACT: Patsy A. Bearden, 907-586-7228.

SUPPLEMENTARY INFORMATION: This workshop is scheduled by NMFS in response to requests by the affected fishing industry for a training workshop on the groundfish recordkeeping and reporting system.

Dated: October 28, 1997.

Bruce C. Morehead,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 97–29023 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–22–F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 102797B]

Gulf of Mexico Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: The Gulf of Mexico Fishery Management Council (Council) will convene a public meeting of the Texas Habitat Protection Advisory Panel (AP).

DATES: The meeting will be held on Tuesday, November 18, 1997, and is scheduled to begin at 9:00 a.m. and adjourn at 3:00 p.m.

ADDRESSES: The meeting will be held at the Hobby Airport Hilton Hotel, 8181 Airport Boulevard, Houston, TX; telephone: 713–645–3000.

Council address: Gulf of Mexico Fishery Management Council, 3018 U.S. Highway 301 North, Suite 1000, Tampa, FL 33619.

FOR FURTHER INFORMATION CONTACT: Jeff Rester, Habitat Specialist, Gulf States Marine Fisheries Commission; telephone: 601–875–5912.

SUPPLEMENTARY INFORMATION: The Texas Habitat Protection AP will be convened to discuss the recent red tide events in Texas, a seagrass conservation plan, the introduction of exotic viruses from shrimp mariculture and the monitoring for exotic viruses in coastal waters, and representatives will discuss Galveston Bay Estuary Program and the Corpus Christi National Estuary Program. The AP will also hear reports on the status of completion of the Essential Fish Habitat (EFH) guidelines being developed by NMFS; and of completion of a generic amendment by the Council which describes EFH as required by the Sustainable Fisheries Act.

A copy of the agenda can be obtained by calling 813–228–2815. Although other issues not on the agenda may come before the AP for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal AP action during this meeting. AP action will be restricted to those issues specifically identified in the agenda listed as available by this notice.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Anne Alford at the Council (see ADDRESSES) by November 11, 1997.

Dated: October 28, 1997.

Bruce C. Morehead,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 97–29024 Filed 10–31–97; 8:45 am]

BILLING CODE 3510–22–F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 102797D]

North Pacific Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of Committee Meeting

SUMMARY: The North Pacific Fishery Management Council's Observer Advisory Committee (OAC) will meet in Seattle, WA.

DATES: The meeting will be held on Monday, November 24, 1997, beginning at 8:30 a.m.

ADDRESSES: The meeting will be held at the Alaska Fisheries Science Center (Building 4, Observer Training Room) 7600 Sand Point Way, NE., Seattle, WA.

Council address: North Pacific Fishery Management Council, 605 W. 4th Ave., Suite 306, Anchorage, AK 99501–2252.

FOR FURTHER INFORMATION CONTACT: Chris Oliver; telephone: 907–271–280 9.

SUPPLEMENTARY INFORMATION: The Committee will review a proposed joint partnership agreement structure and alternatives for the proposed third-party observer program.

Although other issues not contained in this agenda may come before this Committee for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal Committee action during this meeting. Committee action will be restricted to those issues specifically identified in the agenda listed in this notice.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Helen Allen, 907–271–2809, at least 5 working days prior to the meeting date.

Dated: October 28, 1997.

Bruce C. Morehead,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 97–29026 Filed 10-31-97; 8:45 am]

BILLING CODE 3510–22–F

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of an Import Limit for Certain Cotton and Man-Made Fiber Textile Products Produced or Manufactured in Guatemala

October 29, 1997.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs increasing a limit.

EFFECTIVE DATE: November 5, 1997.

FOR FURTHER INFORMATION CONTACT: Roy Unger, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212. For information on the quota status of this limit, refer to the Quota Status Reports posted on the bulletin boards of each Customs port or call (202) 927–5850. For information on embargoes and quota re-openings, call (202) 482–3715.

SUPPLEMENTARY INFORMATION:

Authority: Executive Order 11651 of March 3, 1972, as amended; section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854); Uruguay Round Agreements Act.

The current limit for Categories 342/642 is being increased for carryforward.

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 61 FR 66263, published on December 17, 1996). Also

see 61 FR 58038, published on November 12, 1996.

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 Uruguay Round Agreements Act and the Uruguay Round Agreement on Textiles and Clothing, but are designed to assist only in the implementation of certain of their provisions.

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

October 29, 1997.

Commissioner of Customs,
Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on November 4, 1996, by the Chairman, Committee for the Implementation of Textile Agreements. That directive concerns imports of certain cotton, wool and man-made fiber textile products, produced or manufactured in Guatemala and exported during the twelve-month period which began on January 1, 1997 and extends through December 31, 1997.

Effective on November 5, 1997, you are directed to increase the limit for Categories 342/642 to 454,215 dozen [1], as provided for under the Uruguay Round Agreements Act and the Uruguay Round Agreement on Textiles and Clothing (ATC).

The Guaranteed Access Level for Categories 342/642 remains unchanged.

The Committee for the Implementation of Textile Agreements has determined that this action falls within the foreign affairs exception of the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Troy H. Cribb,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 97–29007 Filed 10-31-97; 8:45 am]

BILLING CODE 3510–DR–F

DEPARTMENT OF EDUCATION

Notice of Proposed Information Collection Requests

AGENCY: Department of Education.

ACTION: Notice of Proposed Information Collection Requests.

SUMMARY: The Deputy Chief Information Officer, Office of the Chief Information Officer, invites comments on the proposed information collection requests as required by the Paperwork Reduction Act of 1995.

DATES: An emergency review has been requested in accordance with the Act (44 U.S.C. Chapter 3507 (j)), since public harm is reasonably likely to result if normal clearance procedures are followed. Approval by the Office of Management and Budget (OMB) has been requested by October 31, 1997.

ADDRESSES: Written comments regarding the emergency review should be addressed to the Office of Information and Regulatory Affairs, Attention: Dan Chenok, Desk Officer: Department of Education, Office of Management and Budget, 725 17th Street, NW., Room 10235, New Executive Office Building, Washington, D.C. 20503. Requests for copies of the proposed information collection request should be addressed to Patrick J. Sherrill, Department of Education, 7th & D Streets, S.W., Room 5624, Regional Office Building 3, Washington, D.C. 20202–4651.

FOR FURTHER INFORMATION CONTACT: Patrick J. Sherrill (202) 708–8196. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Section 3506 (c)(2)(A) of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 3506 (c)(2)(A) requires that the Director of OMB provide interested Federal agencies and the public an early opportunity to comment on information collection requests. The Office of Management and Budget (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 Deputy Chief Information Officer, Office of the Chief Information Officer, publishes this notice containing proposed information collection requests at the beginning of the Departmental review of the information collection. 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) Summary of the collection; (4) Description of the need for, and proposed use of, the information; (5) Respondents and frequency of collection; and (6) Reporting and/or Recordkeeping burden. ED invites public comment at the address specified above. Copies of the requests are available from Patrick J. Sherrill at the address specified above.

The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department, (2) will this information be processed and used in a timely manner, (3) is the estimate of burden accurate, (4) how might the Department enhance the quality, utility, and clarity of the information to be collected, and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology.

Dated: October 30, 1997.

Gloria Parker,

Deputy Chief Information Officer, Office of the Chief Information Officer.

Office of Postsecondary Education

Type of Review: New.
Title: Survey of Deactivated Consolidation Loans.
Abstract: This study will determine why students who initially applied for a loan consolidation, subsequently withdrew. Students will be surveyed regarding their reasons for dropping out of the loan consolidation process so that ED can better address their needs.
Additional Information: This survey is critically important to the Department. It is required so that ED can better manage the backlog of requests for consolidated loan applications. We expect to clear the backlog in November. Therefore, the usual OMB clearance process will not enable the Department to complete this survey in sufficient time.
Frequency: One-time.
Affected Public: Individuals or households.
Annual Reporting and Recordkeeping Hour Burden:
Responses: 500.
Burden Hours: 42.

[FR Doc. 97–29120 Filed 10–31–97; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Submission for OMB Review; Comment Request

AGENCY: Department of Education.

ACTION: Submission for OMB review; comment request.

SUMMARY: The Acting Deputy Chief Information Officer, Office of the Chief Information Officer, invites comments on the submission for OMB review as required by the Paperwork Reduction Act of 1995.

[1] The limit has not been adjusted to account for any imports exported after December 31, 1996.

DATES: Interested persons are invited to submit comments on or before December 3, 1997.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Dan Chenok, Desk Officer, Department of Education, Office of Management and Budget, 725 17th Street, NW., Room 10235, New Executive Office Building, Washington, DC 20503. Requests for copies of the proposed information collection requests should be addressed to Patrick J. Sherrill, Department of Education, 600 Independence Avenue, S.W., Room 5624, Regional Office Building 3, Washington, DC 20202–4651.

FOR FURTHER INFORMATION CONTACT: Patrick J. Sherrill (202) 708–8196. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (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 Acting Deputy Chief Information Officer, Office of the Chief Information Officer, 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) Summary of the collection; (4) Description of the need for, and proposed use of, the information; (5) Respondents and frequency of collection; and (6) Reporting and/or Recordkeeping burden. OMB invites public comment at the address specified above. Copies of the requests are available from Patrick J. Sherrill at the address specified above.

Dated: October 28, 1997.

Linda C. Tague,

Acting Deputy Chief Information Officer, Office of the Chief Information Officer.

Office of Special Education and Rehabilitative Services

Type of Review: New.
Title: Survey of Consumer Choice and Satisfaction in the Choice Demonstration Projects.
Frequency: On occasion.
Affected Public: Individuals or households.
Annual Reporting and Recordkeeping Hour Burden:
Responses: 217.
Burden Hours: 54.
Abstract: As mandated in P.L. 102–569, RSA/ED is conducting an evaluation of the ''effects of increased choice on consumers'' in seven demonstrations projects funded under the legislation. The independent evaluator, InfoUse, will survey a random sample of 217 current and former project participants. Respondents are working-aged persons with disabilities who have received vocational rehabilitation services through the demonstration projects. The results will determine the extent to which the demonstration projects have increased consumer choice and satisfaction with vocational rehabilitation planning, service purchasing, and outcomes. The results will inform key Congressional and Administration policy-makers, personnel in the 82 state vocational rehabilitation agencies, private rehabilitation providers, and organizations serving consumers of vocational rehabilitation.

[FR Doc. 97–28996 Filed 10–31–97; 8:45 am]
BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Notice of Restricted Eligibility Support of Advanced Fossil Resource Utilization Research by Historically Black Colleges and Universities and Other Minority Institutions

AGENCY: U.S. Department of Energy (DOE), Federal Energy Technology Center (FETC).

ACTION: Notice of restricted eligibility.

SUMMARY: The Department of Energy announces that it intends to conduct a competitive Program Solicitation and award financial assistance (grants) to U.S. Historically Black Colleges and Universities and Other Minority Institutions in support of innovative research and development of advanced concepts pertinent to fossil resource conversion and utilization. Applications will be subjected to a review by a DOE technical panel, and awards will be made to a limited number of applicants on the basis of the scientific merit of the application, application of relevant program policy factors, and the availability of funds. Collaboration with private industry is encouraged.

FOR FURTHER INFORMATION CONTACT: Mr. John R. Columbia, U.S. Department of Energy, Federal Energy Technology Center, Acquisition and Assistance Division, P.O. Box 10940, MS 921–143, Pittsburgh PA 15236–0940, Telephone: (412) 892–6219, FAX: (412) 892–6216. The solicitation (created in Word Perfect 6.1 for Windows) will be released on DOE's FETC World Wide Web Server Internet System (http://www.fetc.doe.gov/business) on or about November 7, 1997. If applicants do not have Internet capability or experience difficulty accessing the solicitation file, a 3.5″ double sided/high density diskette copy of the solicitation will be available, upon receipt of a written request submitted via facsimile (fax) at (412) 892–6216 or e-mail at columbia@fetc.doe.gov. No telephone requests will be honored for request of diskettes.

SUPPLEMENTARY INFORMATION:

Title of Solicitation. ''Support of Advanced Fossil Resource Utilization Research by Historically Black Colleges and Universities and Other Minority Institutions''.

Objectives. Through Program Solicitation No. DE–PS26–98FT40047, the Department of Energy seeks applications from Historically Black Colleges and Universities (HBCU) and Other Minority Institutions (OMI) and HBCU/OMI-affiliated research institutes for innovative research and development of advanced concepts pertinent to fossil resource conversion and utilization. The resultant grants are intended to maintain and upgrade educational, training, and research capabilities of our HBCU/OMI in the fields of science and technology related to fossil energy resources; to foster private sector participation, collaboration, and interaction with HBCU/OMI; and to provide for the exchange of technical information and to raise the overall level of HBCU/OMI competitiveness with other institutions in the field of fossil energy research and development. Thus, the establishment of linkages between the HBCU/OMI and the private sector fossil energy community is critical to the success of this program, and consistent with the

Nation's goal of ensuring a future supply of fossil fuel scientists and engineers from a previously under-utilized resource.

Eligibility. Eligibility for participation in this Program Solicitation is restricted to Historically Black Colleges and Universities (HBCU) and Other Minority Institutions (OMI) recognized by the Office for Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's United States Department of Education list of U.S. Accredited Postsecondary Minority Institutions list in effect on the closing date of the program solicitation. *Applications submitted by any institution not on OCR's aforementioned list are ineligible for technical evaluation and award.* For information regarding the qualification criteria and process of becoming recognized by the Education Department's Office for Civil Rights as a ''Minority Institution'', institutions should contact the Education Department directly at the following address: Mr. Peter A. McCabe, Office for Civil Rights, U.S. Department of Education, Washington DC 20202, Telephone (202) 205–9567. Note: The Education Department should only be contacted on matters related to Institutional status; questions regarding the Program Solicitation should be directed to Mr. Columbia at DOE by telefacsimile on (412) 892–6216.

Applications from HBCU/OMI-affiliated research institutes must be submitted through the college or university with which they are affiliated. The university (*not* the university-affiliated research institute) will be the recipient of any resultant DOE grant award. Applications submitted in response to the solicitation must meet the following two criteria: the Principal Investigator or a Co-Principal Investigator must be a teaching professor at the submitting university listed in the application; *and* at least one student registered at the university is to be compensated for a significant portion of the work performed in the conduct of research proposed in the application. Although it is not required as an application qualification criterion, collaboration with the private sector is encouraged, and applications proposing private sector collaboration may be evaluated more favorably. The solicitation will contain a complete description of the technical evaluation factors and relative importance of each factor. Collaboration by the private sector with the HBCU/OMI may be in the form of cash cost sharing, consultation, HBCU/OMI access to industrial facilities or equipment, experimental data and/or equipment not available at the university, or as a subgrantee/subcontractor to the HBCU/OMI.

Areas of Interest. In order to develop and sustain a national program of HBCU/OMI research in advanced and fundamental fossil fuel studies, the Department is interested in innovative research and development of advanced concepts pertinent to fossil fuel conversion and utilization limited to the following seven (7) technical topics:

Topic 1—Advanced Environmental Control Technology for Coal
Topic 2—Advanced Coal Utilization
Topic 3—Coal Liquefaction Technology
Topic 4—Heavy Oil Upgrading and Processing
Topic 5—Advanced Environmental and Recovery Technologies for Oil
Topic 6—Natural Gas Supply, Storage, and Processing
Topic 7—Faculty/Student Exploratory Grants

Note: This is the *only* topic (Topic seven (7)) under this Program Solicitation wherein the inclusion or exclusion of private sector collaboration will not affect the technical evaluation of the application.

Awards. DOE anticipates issuing financial assistance (grants) for each project selected. DOE reserves the right to support or not support any or all applications received in whole or in part, and to determine how many awards may be made through the solicitation subject to funds available in this fiscal year. The limitation on the maximum DOE funding for each selected grant to be awarded under this Program Solicitation is as follows:

	Maximum award
Topics 1–6:	
To 12 months grant duration	$85,000.00
13—24 months grant duration	150,000.00
25—36 months grant duration	200,000.00
Topic 7:	
To 12 months grant duration	15,000.00

Approximately $850,000 is planned for this solicitation. The total should provide support for four to eight R&D application selections (Topics 1–6), and approximately two to four faculty/student exploratory application selections (Topic 7).

Solicitation Release Date. The Program Solicitation is expected to be ready for release on or about November 7, 1997. Applications must be prepared and submitted in accordance with the instructions and forms contained in the Program Solicitation. To be eligible, applications must be *Received* by the designated DOE office by the closing time and date specified in the Program Solicitation (anticipated to be on or about December 19, 1997, at 5:00 pm Eastern Standard Time).

Dale A. Siciliano,

Contracting Officer, Acquisition and Assistance Division.

[FR Doc. 97–29004 Filed 10–31–97; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Office of Fossil Energy

[FE Docket Nos. 97–47–NG; 95–36–NG; 97–60–NG; 92–154–NG; 91–57–NG; 97–61–NG; 97–62–NG; 93–40–NG; 95–66–NG; 97–65–NG; 97–66–NG]

Inland Pacific Resources Inc. (Successor to Inland Pacific Energy Services Corp.); Columbia Energy Services Corporation Successor to PennUnion Energy Services, L.L.C.); Barrett Resources Corporation; Gas Company of New Mexico; Duke Energy LNG Sales, Inc.; (Formerly PanEnergy LNG Sales, Inc.); Public Service Company of New Mexico; Amoco Energy Trading Corporation; El Paso Energy Marketing Company (Formerly El Paso Gas Marketing Company); PG&E Texas Industrial Energy, L.P. (Formerly Valero Industrial Gas, L.P.; PG&E Texas Industrial Energy, L.P.; Panhandle Eastern Pipe Line Company; Orders Granting, Transferring and Vacating Blanket Authorizations to Import and/or Export Natural Gas

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of orders.

SUMMARY: The Office of Fossil Energy of the Department of Energy gives notice that it has issued Orders authorizing, transferring and/or vacating various imports and/or exports of natural gas. These Orders are summarized in the attached appendix.

These Orders are available for inspection and copying in the Office of Natural Gas & Petroleum Import and Export Activities, Docket Room, 3F–056, Forrestal Building, 1000 Independence

Avenue, S.W., Washington, D.C. 20585, (202) 586–9478. The Docket Room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, D.C., on October 27, 1997.

Wayne E. Peters,

Manager, Natural Gas Regulation Office of Natural Gas & Petroleum Import and Export Activities, Office of Fossil Energy.

APPENDIX.—BLANKET IMPORT/EXPORT AUTHORIZATIONS GRANTED

[DOE/FE Authority]

Order No.	Date Issued	Importer/Exporter FE Docket No.	Two-year maximum		Comments
			Import volume	Export volume	
1284–A	09/08/97	Inland Pacific Resources Inc. (Successor to Inland Pacific Energy Services Corp.) 97–47–NG.	.....	.....	Transfer of authority.
1055–A	09/09/97	Columbia Energy Services Corporation (Successor to PennUnion Energy Services, L.L.C.) 95–36–NG.	.....	.....	Transfer of authority.
1298	09/15/97	Barrett Resources Corporation 97–60–NG	109.5 Bcf	.....	Import from Canada.
930–A	09/16/97	Gas Company of New Mexico 92–154–NG	.....	.....	Vacate.
569–B	09/15/97	Duke Energy LNG Sales, Inc. (Formerly PanEnergy LNG Sales, Inc.) 91–57–NG.	.....	.....	Name change.
1299	09/16/97	Public Service Company of New Mexico 97–61–NG	300 Bcf	300 Bcf	Import up to a combined total from Canada and Mexico. Export up to a combined total to Canada and Mexico.
1300	09/19/97	Amoco Energy Trading Corporation 97–62–NG	.....	300 Bcf	Export to Mexico.
801–A	09/30/97	El Paso Energy Marketing Company (Formerly El Paso Gas Marketing Company) 93–40–NG.	.....	.....	Vacate.
1084–A	09/30/97	PG&E Texas Industrial Energy, L.P. (Formerly Valero Industrial Gas, L.P.) 95–66–NG.	.....	.....	Name change.
1301	09/30/97	PG&E Texas Industrial Energy, L.P. 97–65–NG	300 Bcf		Import and export up to a combined total from and to Mexico.
1302	09/30/97	Panhandle Eastern Pipe Line Company 97–66–NG	5 Bcf	5 Bcf	Export domestic gas to Canada for reimport into the United States.

[FR Doc. 97–29002 Filed 10–31–97; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Office of Fossil Energy

[FE Docket Nos. 97–58–NG; 97–57–NG; 97–55–NG; 96–67–NG; 97–56–NG; 97–59–NG]

MC², Inc.; CMS Marketing, Services and Trading Company; ONXY Gas Marketing Company, L.C., Duke Energy Trading and Marketing, L.L.C. (Formerly PanEnergy Trading and Marketing Services, L.L.C.), Conoco Inc.; Valero Gas Marketing, L.P.; Orders Granting, Transferring and Vacating Blanket Authorizations To Import and/or Export Natural Gas

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of Orders.

SUMMARY: The Office of Fossil Energy of the Department of Energy gives notice that it has issued Orders authorizing, transferring and/or vacating various imports and/or exports of natural gas. These Orders are summarized in the attached appendix.

These Orders are available for inspection and copying in the Office of Natural Gas & Petroleum Import and Export Activities, Docket Room, 3F–056, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C. 20585, (202) 586–9478. The Docket Room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

Issued in Washington, D.C., on October 27, 1997.

Wayne E. Peters,

Manager, Natural Gas Regulation, Office of Natural Gas & Petroleum Import and Export Activities, Office of Fossil Energy.

Attachment.

APPENDIX.—BLANKET IMPORT/EXPORT AUTHORIZATIONS GRANTED

[DOE/FE Authority]

Order No.	Date issued	Importer/Exporter FE Docket No.	Two-year maximum		Comments
			Import volume	Export volume	
1293	08/18/97	MC², Inc. 97–58–NG	600 Bcf	.....	Import from Canada.
1294	08/18/97	CMS Marketing, Services and Trading Company 97–57–NG.	140 Bcf	140 Bcf	Import/export from and to Canada.

APPENDIX.—BLANKET IMPORT/EXPORT AUTHORIZATIONS GRANTED—Continued

[DOE/FE Authority]

Order No.	Date issued	Importer/Exporter FE Docket No.	Two-year maximum		Comments
			Import volume	Export volume	
1295	08/19/97	Onyx Gas Marketing Company, L.C. 97–55–NG	110 Bcf		Import/export combined total from and to Mexico.
1215–A	08/19/97	Duke Energy Trading and Marketing, L.L.C. (Formerly PanEnergy Trading and Marketing Services, L.L.C.) 96–67–NG.	.....	.....	Transfer of authority.
1296	08/20/97	CONOCO Inc. 97–56–NG	100 Bcf		Import/export combined total from and to Canada and Mexico.
1297	08/27/97	Valero Gas Marketing, L.P. 97–59–NG	150 Bcf	150 Bcf	Import and export, including LNG from and to Canada and Mexico.
	.....	.....	25 Bcf	.....	Import LNG from other countries.

[FR Doc. 97–29003 Filed 10–31–97; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP98–43–000]

PG&E-Tex, L.P.; Notice of Petition for Declaratory Order

October 28, 1997.

Take notice that on October 21, 1997, PG&E-Tex, L.P. (PG&E-Tex) filed in the above docket, a petition for Declaratory Order requesting the Commission to declare that certain facilities being acquired by PG&E-Tex from Transwestern Pipeline Company (Transwestern) and Northern Natural Gas Company (Northern) are ''intrastate pipeline'' facilities as defined in section 2(16) of the Natural Gas Policy Act of 1978 (NGPA) and are exempt from the Commission's Natural Gas Act (NGA) jurisdiction; and that the acquisition of the facilities will not subject PG&E-Tex, or its affiliate, PG&E-Tex Pipeline, L.P., which will operate the facilities, to the Commission's NGA jurisdiction.

The Transwestern facilities that are the subject of the petition consist of Transwestern's Gomez Lateral located in Ward and Pecos Counties, Texas. Transwestern has filed in Docket No. CP98–13–000 seeking permission to abandon by sale, its Gomez Lateral that consists of approximately 33 miles of 20-inch diameter pipeline and other appurtenances.

The facilities to be acquired from Northern are located in the Permian Area of West Texas and consist of approximately 250 miles of 6-inch through 24-inch diameter pipeline, 9 compressor units at two compressor stations, treating and dehydration facilities, all delivery points located along the length of the pipelines and all other appurtenant facilities attached. These facilities are the subject of an abandonment application filed by Northern in Docket No. CP98–14–000.

Any person desiring to be heard or to make any protest with reference to said petition should on or before November 6, 1997, file with the Federal Energy Regulatory Commission, 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 385.214 or 385.211) 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 proceedings. 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 the jurisdiction conferred upon the Federal Energy Regulatory Commission by Sections 7 and 15 of the Natural Gas Act and Commission's Rules of Practice and Procedure, a hearing will be held without further notice before the Commission or its designee on this petition 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 petition 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 PG&E-Tex to appear or be represented at the hearing.

Lois D. Cashell,

Secretary.

[FR Doc. 97–28975 Filed 10–31–97; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket Nos. RP97–71–000 and RP97–312–000]

Transcontinental Gas Pipe Line Corporation; Notice of Informal Settlement Conference

October 28, 1997.

Take notice that an informal settlement conference will be convened in this proceeding on Monday, November 3, 1997, at 2:00 p.m., at the offices of the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, DC, for the purpose of exploring the possible settlement of the above-referenced dockets. If necessary, the conference will continue to Tuesday, November 4, 1997.

Any party, as defined by 18 CFR 385.102(c), or any participant, as defined by 18 CFR 385.102(b), is invited to attend. Persons wishing to become a party must move to intervene and receive intervenor status pursuant to the Commission's regulations (18 CFR 385.214).

For additional information, contact David R. Cain at (202) 208–0917, Donald A Heydt at (202) 208–0740 or Paul B. Mohler at (202) 208–1240.

Lois D. Cashell,

Secretary.

[FR Doc. 97–28977 Filed 10–31–97; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 11286 South Carolina]

City of Abbeville; Notice of Availability of Environmental Assessment

October 28, 1997.

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's (Commission's) regulations, 18 CFR part 380 (Order No. 486, 52 F.R. 47897), the Office of Hydropower Licensing has reviewed the application for major license for the proposed Abbeville Project located on the Rocky River in Abbeville and Anderson counties, near Abbeville, South Carolina, and has prepared an Environmental Assessment (EA) for the proposed project. In the EA, the Commission's staff has analyzed the potential environmental impacts of the proposed project and has concluded that approval of the proposed project, with appropriate mitigative measures, would not constitute a major federal action significantly affecting the quality of the human environment.

Copies of the EA are available for review in the Public Reference Branch, of the Commission's offices at 888 First Street, N.E., Washington, D.C. 20426.

Lois D. Cashell,

Secretary.

[FR Doc. 97–28976 Filed 10–31–97; 8:45 am]

BILLING CODE 6717–01–M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP97–626–000]

Texas Eastern Transmission Corporation, Notice of Intent To Prepare an Environmental Assessment for the Proposed 1998 Lebanon Expansion Project and Request for Comments on Environmental Issues

October 28, 1997.

The staff of the Federal Energy Regulatory Commission (FERC or Commission) will prepare an environmental assessment (EA) that will discuss the environmental impacts of the construction and operation of an additional 17,070 horsepower (hp) of compression, proposed in the 1998 Lebanon Expansion Project.[1] This EA will be used by the Commission in its decision-making process to determine whether the project is in the public convenience and necessity.

Summary of the Proposed Project

Texas Eastern Transmission Corporation (Texas Eastern) proposed to expand the capacity of its facilities in Indiana and Ohio to transport an additional 302,290 dekatherms per day of natural gas for Spectrum Interstate Pipeline Corporation. Texas Eastern seeks authority to construct and operate:

- One reciprocating gas engine rated at 3,400 hp and one reciprocating gas engine rated at 5,500 hp at the existing Gas City Compressor Station in Grant Country, Indiana;
- An expansion to the compressor building and associated ancillary facilities and piping at the existing Gas City Compressor Station;
- One 8,170 hp gas turbine-driven centrifugal compressor at its existing Glen Karn meter station site in Darke County, Ohio;
- Compressor station buildings and associated ancillary facilities and piping at the existing Glen Karn meter station site;
- A modification at the existing Lebanon Meter Station by adding two 12-inch orifice meters and the associated instrumentation in Warren County, Ohio; and
- A modification at the existing Glen Karn Meter Station by adding one additional 12-inch turbine meter and the associated instrumentation.

The location of the project facilities is shown in appendix 1.[2] If you are interested in obtaining procedural information, please write to the Secretary of the Commission.

Land Requirements for Construction

Construction of the proposed facilities would be within the boundaries of existing station properties.

The EA Process

The National Environmental Policy Act (NEPA) requires the Commission to take into account the environmental impacts that could result from an action whenever it considers the issuance of a Certificate of Public Convenience and Necessity. NEPA also requires us to discover and address concerns the public may have about proposals. We call this ''scoping.'' The main goal of the scoping process is to focus the analysis in the EA on the important environmental issues. By this Notice of Intent, the will address in the EA. All comments received are considered during the preparation of the EA. State and local government representatives are encouraged to notify their constituents of this proposed action and encourage them to comment on their areas of concern.

The EA will discuss impacts that could occur as a result of the construction and operation of the proposed project under these general headings:

- Geology and soils.
- Water resources, fisheries, and wetlands.
- Land use.
- Cultural resources.
- Vegetation and wildlife.
- Endangered and threatened species.
- Public safety.
- Air quality and noise.
- Hazardous waste.

We will also evaluate possible alternatives to the proposed project or portions of the project, and make recommendations on how to lessen or avoid impacts on the various resource areas.

Our independent analysis of the issues will be in the EA. Depending on the comments received during the scoping process, the EA may be published and mailed to Federal, state, and local agencies, public interest groups, interested individuals, affected landowners, newspapers, libraries, and the Commission's official service list for this proceeding. A comment period will be allotted for review if the EA is published. We will consider all comments on the EA before we make our recommendations to the Commission.

Currently Identified Environmental Issues

We have already identified one issue that we think deserves attention based on a preliminary review of the proposed facilities and the environmental information provided by Texas Eastern. Addition issues may be included based on your comments and our analysis.

- Potential impacts to noise-sensitive areas that are near the Gas City Compressor Station and Glen Karn Meter Station.

Public Participation

You can make a difference by sending a letter addressing your specific comments or concerns about the project. You should focus on the potential environmental effects of the proposal, alternatives to the proposal, and

[1] Texas Eastern Transmission Corporation's application was filed with the Commission under Section 7 of the Natural Gas Act and Part 157 of the Commission's regulations.

[2] The appendices referenced in this notice are not being printed in the **Federal Register**. Copies are available from the Commission's Public Reference and Files Maintenance Branch, 888 First Street, N.E., Washington, D.C. 20426, or call (202) 208–1371. Copies of the appendices were sent to all those receiving this notice in the mail.

measures to avoid or lessen environmental impact. The more specific your comments, the more useful they will be. Please carefully follow these instructions to ensure that your comments are received in time and properly recorded:

- Send two copies of your letter to: Lois Cashell, Secretary, Federal Energy Regulatory Commission, 888 First St., N.E., Room 1A, Washington, DC 20426;
- Label one copy of the comments for the attention of the Environmental Review and Compliance Branch II, PR–11.2;
- Reference Docket No. CP97–626–000; and
- Mail your comments so that they will be received in Washington, DC on or before November 28, 1997.

Becoming an Intervenor

Besides involvement in the EA scoping process, you may want to become an official party to the proceeding or become an ''intervenor.'' Among other things, intervenors have the right to receive copies of case-related Commission documents and filings by other intervenors. Likewise, each intervenor must provide copies of its filings to all other parties. If you want to become an intervenor you must file a motion to intervene according to Rule 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.214) (see appendix 2).

The date for filing timely motions to intervene in this proceeding has passed. Therefore, parties now seeking to file late interventions must show good cause, as required by section 385.214(b)(3), why this time limitation should be waived. Environmental issues have been viewed as good cause for late intervention. You do not need intervenor status to have your comments considered.

Lois D. Cashell,

Secretary.

[FR Doc. 97–28974 Filed 10–31–97; 8:45 am]

BILLING CODE 6717–01–M

ENVIRONMENTAL PROTECTION AGENCY

[OPPTS–62151B; FRL–5741–6]

Dialogue Group on Identification of Lead-Based Paint Hazards; Notice of Open Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA will be holding a meeting of the Dialogue Process to support the forthcoming rulemaking under section 403 of the Toxic Substances Control Act (TSCA). Section 403 directs the Agency to promulgate regulations which shall identify lead-based paint hazards, lead-contaminated dust, and lead-contaminated soil. The purpose of this meeting of the Dialogue Process is to obtain comment on regulatory options that will be presented to senior EPA management the following week.

DATES: The Dialogue Process will meet on November 12, 1997, from 10 a.m. to 4 p.m.

ADDRESSES: The meeting will be held at the Metro Center Marriott Hotel, 775 12th St., NW., Washington, DC. All written comments should be submitted in triplicate to: TSCA Document Receipts (7407), Office of Pollution Prevention and Toxics, Environmental Protection Agency, Rm. E–G99, 401 M St., SW., Washington, DC 20460. All comments should be identified by the docket control number OPPTS–62151B.

Comments and data may also be submitted electronically by following the instructions under Unit IV. of this document. No Confidential Business Information (CBI) should be submitted through e-mail.

FOR FURTHER INFORMATION CONTACT: For specific or technical information contact: Karen Lannon, National Program Chemicals Division (7404), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, Telephone: 202–260–2797, Fax: 202–260–0770, e-mail: lannon.karen@epamail.epa.gov.

For general information contact: National Lead Information Clearinghouse (NLIC), 1025 Connecticut Ave., NW., Suite 1200, Washington, DC 20036–5405 or Toll free at 1–800–424–5323, Fax: 202–659–1192, e-mail: leadctr@nsc.org, Internet site: http://www.nsc.org/ehc/lead.htm.

SUPPLEMENTARY INFORMATION:

I. Background

Section 403 of TSCA, 15 U.S.C. 2683, directs EPA to promulgate regulations that identify lead hazards in paint, household dust, and bare residential soil. Title IV of TSCA, titled ''Lead Exposure Reduction,'' which includes section 403, was added to TSCA by the Residential Lead-Based Paint Hazard Reduction Act of 1992. To support the rulemaking, EPA established a Dialogue Process in 1995 to obtain input from interested parties early in the rulemaking process. Establishment of the Dialogue Process was announced in the **Federal Register** of July 18, 1995 (60 FR 36806) (FRL–4964–8).

EPA held four meetings of the Dialogue Process in 1995 and 1996 to obtain input from interested parties on a range of regulatory and policy issues and options. Since that time, the Agency has conducted risk, economic, and policy analyses and has developed options to present to senior EPA managers. Following selection of the preferred options, the proposed rule will undergo final Agency review and Office of Management and Budget review. EPA will then publish the proposed regulation in the **Federal Register** for public comment.

II. Dialogue Meeting

The purpose of the meeting being announced today is to obtain input and comment on the regulatory options that will be presented to EPA management. Agency staff plan to include a synopsis of these comments in their presentation to management.

This meeting is open to the public and will provide 30 minutes for public comment on a first-come, first-served basis. Due to the need to accommodate as many interested parties as possible during the public comment period, EPA will limit comments to 5 minutes for representatives of organizations and 3 minutes for individuals. Members of the public interested in offering comment at the meeting should sign-up at the registration desk.

Individuals wishing to provide comments to EPA, but who cannot be accommodated during the comment period or cannot attend the Dialogue meeting may submit written comments to EPA at the address listed in the ADDRESSES unit of this notice. In order to be included in the synopsis of comments to be presented to EPA management, written comments must be received by close of business on November 14, 1997.

III. Confidential Business Information

A person may assert a claim of confidentiality for any information, including all or portions of written comments, submitted to EPA in connection with the Dialogue Process. Any person who submits a comment subject to a claim of confidentiality must also submit a nonconfidential version. Any claim of confidentiality must accompany the information when it is submitted to EPA. Persons must mark information claimed as confidential by circling, bracketing, or underlining it, and marking it with ''CONFIDENTIAL'' or some other appropriate designation. EPA will disclose information subject to a claim

of confidentiality only to the extent permitted by section 14 of TSCA and 40 CFR part 2, subpart B. If a person does not assert a claim of confidentiality for information at the time it is submitted to EPA, EPA may make the information public without further notice to that person.

IV. Public Docket

A record has been established for this action under docket control number ''OPPTS–62151B'' (including comments submitted electronically as described below). A public version of this record, including printed, paper versions of the electronic comments, which does not include any information claimed as CBI, is available for inspection from noon to 4 p.m., Monday through Friday, excluding legal holidays. The public record is located in the TSCA Nonconfidential Information Center, Rm. NE–B607, 401 M St., SW., Washington, DC 20460.

Electronic comments can be sent directly to EPA at:

oppt.ncic@epamail.epa.gov

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

The official record for this action as well as the public version, as described above will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into printed, paper form as they are received and will place the paper copies in the official record which will also include all comments submitted directly in writing. The official record is the paper record maintained at the address in ADDRESSES at the beginning of this document.

List of Subjects

Environmental protection and Lead.

Dated: October 28, 1997.

William H. Sanders III,

Director, Office of Pollution Prevention and Toxics.

[FR Doc. 97–29054 Filed 10–31–97; 8:45 am]

BILLING CODE 6560–50–F

FEDERAL COMMUNICATIONS COMMISSION

[CC Docket No. 92–237; DA 97–2295]

FCC Announces the Next Meeting of the North American Numbering Council

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: On October 30, 1997, the Commission released a public notice announcing the November 18, 1997, meeting and agenda of the North American Numbering Council (NANC). The intended effect of this action is to make the public aware of the NANC's next meeting and its Agenda.

FOR FURTHER INFORMATION CONTACT: Jeannie Grimes, Paralegal Specialist, assisting the NANC at (202) 418–2313 or via the Internet at jgrimes@fcc.gov. The address is: Network Services Division, Common Carrier Bureau, Federal Communications Commission, 2000 M Street, NW, Suite 235, Washington, DC 20054. The fax number is: (202) 418–7314. The TTY number is: (202)418–0484.

SUPPLEMENTARY INFORMATION: The next meeting of the North American Numbering Council (NANC) will be held on Tuesday, November 18, 1997, from 8:30 a.m until 4:30 p.m., EST at the Federal Communications Commission, 1919 M Street, NW, Room 856, Washington, DC 20054.

Proposed Agenda

The planned agenda for the November 18, 1997, meeting is as follows:

1. Industry Numbering Committee (INC) Monthly Report to the NANC.
2. Number Pooling Management Group (NPMG) Status Report.
3. North American Numbering Plan Administration (NANPA) Working Group Report: Transition Planning to the new NANPA, Central Office Code Administration Transition Task Force, and Cost Recovery Task Force updates.
4. Network Interconnection Interoperability Forum (NIIF) Report: Central Office Code and NPA Code Activation Issue.
5. Telecommunications Industry Association (TIA) and Committee T–1 Discussion: Workplan Coordination with the NANC on LNP Standards, *i.e.*, NPAC SMS Change Management Process.
6. Local Number Portability Administration (LNPA) Working Group Status Report: Followup Activities for FCC 97–289 *Second Report and Order*, Local Number Portability, Docket 95–116.
7. Wireline/Wireless Task Force Work Plan Report.
8. Consideration of NANC Responsibilities under the *Further Notice of Proposed Rulemaking and Order*, In the Matter of Administration of the North American Numbering Plan Carrier Identification Codes (CICs), CC Docket 92–237, FCC 97–364.
9. Other Business.
10. Review of Decisions Reached and Action Items.

Federal Communications Commission.

Geraldine A. Matise,

Chief, Network Services Division, Common Carrier Bureau.

[FR Doc. 97–29136 Filed 10–31–97; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL EMERGENCY MANAGEMENT AGENCY

[FEMA–1189–DR]

New Jersey; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of a major disaster for the State of New Jersey (FEMA–1189–DR), dated September 23, 1997, and related determinations.

EFFECTIVE DATE: September 23, 1997.

FOR FURTHER INFORMATION CONTACT: Madge Dale, Response and Recovery Directorate, Federal Emergency Management Agency, Washington, DC 20472, (202) 646–3260.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated September 23, 1997, the President declared a major disaster under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 *et seq.*), as follows:

I have determined that the damage in certain areas of the State of New Jersey, resulting from severe storms and flooding on August 20–21, 1997, is of sufficient severity and magnitude to warrant a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (''the Stafford Act''). I, therefore, declare that such a major disaster exists in the State of New Jersey.

In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes, such amounts as you find necessary for Federal disaster assistance and administrative expenses.

You are authorized to provide Individual Assistance, Public Assistance, and Hazard Mitigation in the designated areas. Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance or Hazard Mitigation will be limited to 75 percent of the total eligible costs.

The time period prescribed for the implementation of section 310(a), Priority to Certain Applications for Public Facility and Public Housing Assistance, 42 U.S.C. 5153, shall be for a period not to exceed six months after the date of this declaration.

Notice is hereby given that pursuant to the authority vested in the Director of

the Federal Emergency Management Agency under Executive Order 12148, I hereby appoint Marianne C. Jackson of the Federal Emergency Management Agency to act as the Federal Coordinating Officer for this declared disaster.

I do hereby determine the following areas of the State of New Jersey to have been affected adversely by this declared major disaster:

Atlantic County for Individual Assistance and Public Assistance.

All counties within the State of New Jersey are eligible to apply for assistance under the Hazard Mitigation Grant Program.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance)

James L. Witt,

Director.

[FR Doc. 97–28999 Filed 10–31–97; 8:45 am]

BILLING CODE 6718–02–P

FEDERAL EMERGENCY MANAGEMENT AGENCY

[FEMA–1173–DR]

South Dakota; Amendment to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency (FEMA).

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of South Dakota, (FEMA–1173–DR), dated April 7, 1997, and related determinations.

EFFECTIVE DATE: October 20, 1997.

FOR FURTHER INFORMATION CONTACT: Madge Dale, Response and Recovery Directorate, Federal Emergency Management Agency, Washington, DC 20472, (202) 646–3260.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated October 20, 1997 the President amended the cost sharing arrangements concerning Federal funds provided under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 51521 *et seq.*), in a letter to James L. Witt, Director of the Federal Emergency Management Agency, as follows:

I have determined that the damage in certain areas of the State of South Dakota, resulting from severe flooding, severe winter storms, heavy spring rain, rapid snowmelt, high winds, and ice jams beginning on February 3, 1997, and continuing through May 24, 1997, is of sufficient severity and magnitude to warrant special cost sharing arrangements concerning Federal funds provided under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (''the Stafford Act'').

Therefore, I amend my previous declaration to authorize Federal funds for Public Assistance, Categories C through G, at 90 percent of total eligible costs, except for direct Federal assistance costs and debris removal and emergency protective measures (Categories A and B) under the Public Assistance program which were previously authorized at 100 percent Federal funding.

This adjustment to State and local cost sharing applies only to Public Assistance costs (Categories C through G) eligible for such adjustment under the law. The law specifically prohibits a similar adjustment for funds provided to the State for the Individual and Family Grant program and Hazard Mitigation Assistance. These funds will continue to be reimbursed at 75 percent of total eligible costs.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance)

Lacy E. Suiter,

Executive Associate Director, Response and Recovery Directorate.

[FR Doc. 97–28998 Filed 10–31–97; 8:45 am]

BILLING CODE 6718–02–P

GENERAL ACCOUNTING OFFICE

Termination of the Prospective Payment Assessment Commission and the Physician Payment Review Commission.

AGENCY: General Accounting Office.

ACTION: Notice of termination of Commissions.

SUMMARY: The Balanced Budget Act of 1997 requires the Comptroller General, after the Medicare Payment Advisory Commission has been established, to provide for the termination of the Prospective Payment Assessment Commission and the Physician Payment Review Commission. This notice announces the termination of the two commissions.

DATES: Termination of Commissions effective November 1, 1997.

ADDRESSES: The General Accounting Office is at 441 G St. NW., Washington, DC, 20548. The Office of the Chairman of the Medicare Payment Advisory Commission is at 2120 L St. NW., Washington, DC, 20037–1527.

FOR FURTHER INFORMATION CONTACT: General Accounting Office: Walter S. Ochinko, 202–512–7157. Medicare Payment Advisory Commission: Lauren LeRoy, 202–653–7220.

SUPPLEMENTARY INFORMATION: Section 1805 of the Social Security Act, as added by section 4022 of the Balanced Budget Act of 1997 (Pub. L. 105–33, 111 Stat. 251, 350), requires the Comptroller General, in consultation with the Prospective Payment Assessment Commission (PPRC) and the Physician Payment Review Commission (ProPAC), to provide for their termination as quickly as possible after a majority of members of the new Medicare Payment Advisory Commission (MedPAC) are appointed. All of the members of MedPAC were appointed effective October 1, 1997. As determined in consultation with them, both PPRC and ProPAC will terminate as of November 1, 1997. MedPAC will then assume outstanding obligations of PPRC and ProPAC.

James F. Hinchman,

Acting Comptroller General of the United States.

[FR Doc. 97–29038 Filed 10–31–97; 8:45 am]

BILLING CODE 1610–02–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Proposed Information collection Activity; Comment Request

Proposed Projects

Title: Emergency TANF Data Report.

OMB No.: 0970–0164.

Description: This information is being collected to meet the statutory requirements of section 411 of the Social Security Act and section 116 of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. It consists of desaggregated demographic and program information that will be used to determine participation rates and other statutorily required indicators for the Temporary Assistance for Needy Families (TANF) program.

Respondents: State, Local or Tribal Govt.

ANNUAL BURDEN ESTIMATES

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Total burden hours
TANF Data Report	54	4	451	97,416

Estimated Total Annual Burden Hours: 97,416

In compliance with the requirements of Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995, the Administration for Children and Families is soliciting public comment on the specific aspects of the information collection described above. Copies of the proposed collection of information can be obtained and comments may be forwarded by writing to the Administration for Children and Families, Office of Information Services, Division of Information Resource Management Services, 370 L'Enfant Promenade, S.W., Washington, D.C. 20447, Attn: ACF Reports Clearance Officer. All requests should be identified by the title of the information collection.

The Department specifically requests comments on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted within 60 days of this publication.

Dated: October 27, 1997.

Bob Sargis,

Acting Reports Clearance Officer.

[FR Doc. 97–28964 Filed 10–31–97; 8:45 am]

BILLING CODE 4184–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Submission for OMB Review; Comment Request

Title: 45 CFR part 303.72—Request for collection of past-due support by Federal tax refund offset and administrative offset.

OMB No.: 0970–0161.

Description: The Office of Child Support Enforcement (OCSE) operates the Tax refund offset TROP. The TROP was enacted by Congress on August 13, 1981 (Pub. L. 97–35, section 2331). This is a computerized system operated by the Office of Child Support Enforcement (OCSE) within the Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services (HHS) and State child support agencies. The TROP was established to recover delinquent AFDC child support debts with ongoing cooperation of states and local child support agencies.

The Omnibus Budget Reconciliation Act of 1990 (Pub. L. 101–508) signed by the President in November 1990, expanded the Program to include a provision for non-AFDC cases.

In 1996 the Debt Collection Improvement Act (Pub. L. 104–134) further expanded the program to increase the collection of nontax debts owned to the Federal Government and to assist families in collecting past-due child support. It required the development and implementation of procedures necessary to collect past-due support by administrative offset by agencies. As a result, this program is now known as the Tax Refund and Administrative Offset Program TROP/ADOP).

Purpose: Pursuant to Public Law 97–35 enacted by Congress on August 13, 1981, Pub. L. 101–508 signed by the President in November 1990 and Pub. L. 104–134 enacted into law on April 26, 1996, the Debt Collection Improvement Act of 1996, and pursuant to the Executive Order 13019 dated September 28, 1996, the OSCE will match the tax refund records against Federal payment certification records and Federal financial assistance records. The purpose is to facilitate the collection of delinquent child support obligations *from* persons who may be entitled or eligible to receive certain Federal payments or Federal assistance. State child support agencies submit cases of delinquent child support claims to the OSCE for submission to the Financial Management Service (FMS). These cases are sent by on-line dial-up access via personal computer, tape and cartridge via mail, Mitron tape, file transfer, or electronic data transmission. The Office of Child Support Enforcement serves as a conduit between state child support enforcement agencies and the FMS by processing weekly updates of collection data and distributing the information back to the appropriate State child support agency. The information will be disclosed by OCSE to state child support agencies for use in the collection of child support debts, through locate action wage withholding or other enforcement actions.

Respondents: State District of Columbia, Guam, Puerto Rico, and Virgin Islands Governments

Respondents: State and local governments.

ANNUAL BURDEN ESTIMATES

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Total burden hours
Sub/test tape and Data Spec	1,744	52	5 minutes	7,557.3 hours.
Sub/test tape and Data Spec	54	52	5 minutes	234 hours.
Withdrawal notice	1,744	5	2 minutes	291 hours.
Pre-offset notice	54	87,075	2 minutes	15,673.5 hours.
Case Cert	54	52	3 minutes	140.4 hours.
Payment Infor	26	1	10 minutes	4.3 hours.
Local office contact phone address	1,744	1	30 minutes	872 hours.
Request for update	54	52	5 minutes	234 hours.

ANNUAL BURDEN ESTIMATES—Continued

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Total burden hours
Federal Tax Offset contact	54	1	2 minutes	1.8 hours.
Update Spec	54	1	2 minutes	1.8 hours.
Issuance of pre-offset notice	54	1	2 minutes	1.8 hours.
Contact point for OCSE Pre-offset notice	30	1	1 minute	0.9 hours.
Non-TANF Tax Refund Offset Information	1,744	40,735	10 minutes	6,789.2 hours.
Offset notice address/phone number change	54	1	10 minutes	9.0 hours.
Personal computer data	54	1	5 minutes	4.5 hours.
Notice of intention	25	1	2 minutes	0.8 hours.

Estimated Total Annual Burden Hours: 31,816.3.

Additional Information: Copies of the proposed collection may be obtained by writing to The Administration for Children and Families, Office of Information Services, Division of Information Resource Management Services, 370 L'Enfant Promenade, SW., Washington, DC 20447, Attn: ACF Reports Clearance Officer.

OMB Comment: OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication. Written comments and recommendations for the proposed information collection should be sent directly to the following: Office of Management and Budget, Paperwork Reduction Project, 725 17th Street, NW., Washington, DC 20503, Attn: Ms. Wendy Taylor.

Dated: October 28, 1997.

Bob Sargis,

Acting Reports Clearance Officer.

[FR Doc. 97–28965 Filed 10–31–97; 8:45 am]

BILLING CODE 4184–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

Current Topics in Immunohematologic Testing; Public Workshop

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

The Food and Drug Administration (FDA) is announcing a public workshop entitled ''Current Topics in Immunohematologic Testing.'' The topics to be discussed include specificity and sensitivity of Anti-D Blood Grouping Reagents; the development of performance standards for antiglobulin control cells and blood bank saline; user interpretation of labeling information; and the validation and use of blood grouping instrumentation.

Date and Time: The workshop will be held on December 10, 1997, 8 a.m. to 5 p.m.

Location: The workshop will be held at Natcher Auditorium, National Institutes of Health, 9000 Rockville Pike, Bldg. 45, Bethesda, MD.

Contact Person: Joseph Wilczek, Center for Biologics Evaluation and Research (HFM–350), Food and Drug Administration, 1401 Rockville Pike, Rockville, MD 20852–1448, 301–827–3514, FAX 301–827–2843.

SUPPLEMENTARY INFORMATION: The goals of the workshop are specific to each topic and include the following: (1) Distinguish between those issues that are medically important and those issues that are primarily of scientific interest with respect to Anti-D specificity and sensitivity; (2) present examples of significant problems attributable to the variability seen within two types of product, antiglobulin control cells and blood bank saline, due to the lack of standards; (3) identify areas of immunohematologic product labeling which need to be modified to provide the user with a better understanding of its uses and limitations; and (4) discuss user validation of complete systems as well as partial or site-assembled systems regarding blood grouping instrumentation. The information obtained from these presentations and discussions will assist FDA in taking the necessary steps for assuring the safety and effectiveness of these medical devices.

Registration and Requests for Oral Presentations: Send or fax registration information (including name, title, firm name, address, telephone, and fax number), written material, and requests to make oral presentations by November 28, 1997, to Cody Bridges, 14504 Greenview Dr., suite 500, Laurel, MD 20708, 301–490–5500, FAX 301–490–7260, e-mail CBRIDGES@lcgnet.com. Registration at the site will be done on a space available basis on the day of the workshop beginning at 7:30 a.m. There is no registration fee for the workshop.

If you need special accommodations due to a disability, please contact Cody Bridges at least 7 days in advance.

Transcripts: Transcripts of the workshop may be requested in writing from the Freedom of Information Office (HFI–35), Food and Drug Administration, 5600 Fishers Lane, rm. 12A–16, Rockville, MD 20857, approximately 15 working days after the workshop at a cost of 10 cents per page.

Dated: October 24, 1997.

William K. Hubbard.

Associate Commissioner for Policy Coordination.

[FR Doc. 97–29049 Filed 10–31–97; 8:45 am]

BILLING CODE 4160–01–F

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[BPO–150–N]

Medicare and Medicaid Programs; Quarterly Listing of Program Issuances—First Quarter 1997

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice.

SUMMARY: This notice lists HCFA manual instructions, substantive and interpretive regulations, and other **Federal Register** notices that were published during January, February, and March of 1997 that relate to the Medicare and Medicaid programs. It also identifies certain devices with investigational device exemption numbers approved by the Food and Drug Administration that may be potentially covered under Medicare.

Section 1871(c) of the Social Security Act requires that we publish a list of Medicare issuances in the **Federal Register** at least every 3 months. Although we are not mandated to do so

by statute, for the sake of completeness of the listing, we are including all Medicaid issuances and Medicare and Medicaid substantive and interpretive regulations (proposed and final) published during this time frame.

FOR FURTHER INFORMATION CONTACT:

Bridget Wilhite, (410) 786–5248 (For Medicare instruction information).
Betty Stanton, (410) 786–3247 (For Medicaid instruction information).
Sharon Hippler, (410) 786–4633 (For Food and Drug Administration-approved investigational device exemption information).
Cathy Johnson, (410) 786–5241 (For all other information).

SUPPLEMENTARY INFORMATION:

I. Program Issuances

The Health Care Financing Administration (HCFA) is responsible for administering the Medicare and Medicaid programs, which pay for health care and related services for 38 million Medicare beneficiaries and 36 million Medicaid recipients. Administration of these programs involves (1) providing information to Medicare beneficiaries and Medicaid recipients, health care providers, and the public, and (2) effective communications with regional offices, State governments, State Medicaid Agencies, State Survey Agencies, various providers of health care, fiscal intermediaries and carriers that process claims and pay bills, and others. To implement the various statutes on which the programs are based, we issue regulations under the authority granted the Secretary under sections 1102, 1871, and 1902 and related provisions of the Social Security Act (the Act) and also issue various manuals, memoranda, and statements necessary to administer the programs efficiently.

Section 1871(c)(1) of the Act requires that we publish in the **Federal Register** at least every 3 months a list of all Medicare manual instructions, interpretive rules, and guidelines of general applicability not issued as regulations. We published our first notice June 9, 1988 (53 FR 21730). Although we are not mandated to do so by statute, for the sake of completeness of the listing of operational and policy statements, we are continuing our practice of including Medicare substantive and interpretive regulations (proposed and final) published during the 3-month time frame. Since the publication of our quarterly listing on June 12, 1992 (57 FR 24797), we decided to add Medicaid issuances to our quarterly listings. Accordingly, we list in this notice Medicaid issuances and Medicaid substantive and interpretive regulations published during January through March 1997.

II. How to Use the Addenda

This notice is organized so that a reader may review the subjects of all manual issuances, memoranda, substantive and interpretive regulations, or Food and Drug Administration-approved investigational device exemptions published during the time frame to determine whether any are of particular interest. We expect it to be used in concert with previously published notices. Most notably, those unfamiliar with a description of our Medicare manuals may wish to review Table I of our first three notices (53 FR 21730, 53 FR 36891, and 53 FR 50577) and the notice published March 31, 1993 (58 FR 16837), and those desiring information on the Medicare Coverage Issues Manual may wish to review the August 21, 1989 publication (54 FR 34555).

To aid the reader, we have organized and divided this current listing into five addenda. Addendum I lists the publication dates of the most recent quarterly listings of program issuances.

Addendum II identifies previous **Federal Register** documents that contain a description of all previously published HCFA Medicare and Medicaid manuals and memoranda.

Addendum III of this notice lists, for each of our manuals or Program Memoranda, a HCFA transmittal number unique to that instruction and its subject matter. A transmittal may consist of a single instruction or many. Often it is necessary to use information in a transmittal in conjunction with information currently in the manuals.

Addendum IV lists all substantive and interpretive Medicare and Medicaid regulations and general notices published in the **Federal Register** during the quarter covered by this notice. For each item, we list the date published, the **Federal Register** citation, the parts of the Code of Federal Regulations (CFR) that have changed (if applicable), the agency file code number, the title of the regulation, the ending date of the comment period (if applicable), and the effective date (if applicable).

On September 19, 1995, we published a final rule (60 FR 48417) establishing in regulations at 42 CFR 405.201 *et seq.* that certain devices with an investigational device exemption approved by the Food and Drug Administration and certain services related to those devices may be covered under Medicare. That final rule states that we will announce in this quarterly notice all investigational device exemption categorizations, using the investigational device exemption numbers the Food and Drug Administration assigns. Addendum V includes listings of the Food and Drug Administration-approved investigational device exemption numbers that have been approved or revised during the quarter covered by this notice. The listings are organized according to the categories to which the device numbers are assigned (that is, Category A or Category B) and identified by the investigational device exemption number.

III. How To Obtain Listed Material

A. Manuals

An individual or organization interested in routinely receiving any manual and revisions to it may purchase a subscription to that manual. Those wishing to subscribe should contact either the Government Printing Office (GPO) or the National Technical Information Service (NTIS) at the following addresses:

Superintendent of Documents, Government Printing Office, ATTN: New Orders, PO Box 371954, Pittsburgh, PA 15250–7954, Telephone (202) 512–1800, Fax number (202) 512–2250 (for credit card orders).
National Technical Information Service, Department of Commerce, 5825 Port Royal Road, Springfield, VA 22161, Telephone (703) 487–4630.

In addition, individual manual transmittals and Program Memoranda listed in this notice can be purchased from NTIS. Interested parties should identify the transmittal(s) they want. GPO or NTIS can give complete details on how to obtain the publications they sell. Additionally, all manuals are available at the following Internet address: http//www.hcfa.gov/pubforms/progman.htm.

B. Regulations and Notices

Regulations and notices are published in the daily **Federal Register**. Interested individuals may purchase individual copies or subscribe to the **Federal Register** by contacting the GPO at the address given above. When ordering individual copies, it is necessary to cite either the date of publication or the volume number and page number.

The **Federal Register** is also available on 24x microfiche and as an online database through GPO Access. The online database is updated by 6 a.m. each day the **Federal Register** is published. The database includes both

text and graphics from Volume 59, Number 1 (January 2, 1994) forward. Free public access is available on a Wide Area Information Server (WAIS) through the Internet and via asynchronous dial-in. Internet users can access the database by using the World Wide Web; the Superintendent of Documents home page address is http://www.access.gpo.gov/su_docs/, by using local WAIS client software, or by telnet to swais.access.gpo.gov, then log in as guest (no password required). Dial-in users should use communications software and modem to call (202) 512–1661; type swais, then log in as guest (no password required).

C. Rulings

We publish Rulings on an infrequent basis. Interested individuals can obtain copies from the nearest HCFA Regional Office or review them at the nearest regional depository library. We have, on occasion, published Rulings in the **Federal Register**. In addition, Rulings, beginning with those released in 1995, are available online, through the HCFA Home Page. The Internet address is http://www.hcfa.gov/regs/rulings.htm.

D. HCFA's Compact Disk–Read Only Memory (CD–ROM)

Our laws, regulations, and manuals are also available on CD-ROM, which may be purchased from GPO or NTIS on a subscription or single copy basis. The Superintendent of Documents list ID is HCLRM, and the stock number is 717–139–00000–3. The following material is on the CD-ROM disk:

- Titles XI, XVIII, and XIX of the Social Security Act.
- HCFA-related regulations.
- HCFA manuals and monthly revisions.
- HCFA program memoranda.

The titles of the Compilation of the Social Security Act are current as of January 1, 1995. The remaining portions of CD–ROM are updated on a monthly basis.

Because of complaints about the unreadability of the Appendices (Interpretive Guidelines) in the State Operations Manual (SOM), as of March 1995, we deleted these appendices from CD–ROM. We intend to re-visit this issue in the near future, and, with the aid of newer technology, we may again be able to include the appendices on CD–ROM.

Any cost report forms incorporated in the manuals are included on the CD–ROM disk as LOTUS files. LOTUS software is needed to view the reports once the files have been copied to a personal computer disk.

IV. How to Review Listed Material

Transmittals or Program Memoranda can be reviewed at a local Federal Depository Library (FDL). Under the FDL program, government publications are sent to approximately 1400 designated libraries throughout the United States. Interested parties may examine the documents at any one of the FDLs. Some may have arrangements to transfer material to a local library not designated as an FDL. To locate the nearest FDL, contact any library.

In addition, individuals may contact regional depository libraries, which receive and retain at least one copy of most Federal government publications, either in printed or microfilm form, for use by the general public. These libraries provide reference services and interlibrary loans; however, they are not sales outlets. Individuals may obtain information about the location of the nearest regional depository library from any library. Superintendent of Documents numbers for each HCFA publication are shown in Addendum III, along with the HCFA publication and transmittal numbers. To help FDLs locate the instruction, use the Superintendent of Documents number, plus the HCFA transmittal number. For example, to find the Intermediary Manual, Part 3—Claims Process (HCFA Pub 13–3) transmittal entitled ''Oral Cancer Drugs,'' use the Superintendent of Documents No. HE 22.8/6 and the HCFA transmittal number 1700.

V. General Information

It is possible that an interested party may have a specific information need and not be able to determine from the listed information whether the issuance or regulation would fulfill that need. Consequently, we are providing information contact persons to answer general questions concerning these items. Copies are not available through the contact persons. Copies can be purchased or reviewed as noted above.

Questions concerning Medicare items in Addendum III may be addressed to Bridget Wilhite, Office of Communications and Operations Support, Division of Regulations and Issuances, Health Care Financing Administration, Telephone (410) 786–5248.

Questions concerning Medicaid items in Addendum III may be addressed to Betty Stanton, Center for Medicaid State Operations, Policy Coordination and Planning Group, Health Care Financing Administration, C4–25–02, 7500 Security Boulevard, Baltimore, MD 21244–1850, Telephone (410) 786–3247.

Questions concerning Food and Drug Administration-approved investigational device exemptions may be addressed to Sharon Hippler, Office of Clinical Standards and Quality, Coverage Analysis Group, Health Care Financing Administration, C4–11–04, 7500 Security Boulevard, Baltimore, MD 21244–1850, Telephone (410) 786–4633.

Questions concerning all other information may be addressed to Cathy Johnson, Office of Communications and Operations Support, Division of Regulations and Issuances, Health Care Financing Administration, C5–12–16, 7500 Security Boulevard, Baltimore, MD 21244–1850, Telephone (410) 786–5241.

(Catalog of Federal Domestic Assistance Program No. 93.773, Medicare—Hospital Insurance, Program No. 93.774, Medicare—Supplementary Medical Insurance Program, and Program No. 93.714, Medical Assistance Program)

Dated: October 10, 1997.

Pamela J. Gentry,

Director, Office of Communications and Operations Support.

Addendum I

This addendum lists the publication dates of the most recent quarterly listings of program issuances.

June 26, 1996 (61 FR 33119)
December 18, 1996 (61 FR 66676)
April 21, 1997 (62 FR 19328)
May 12, 1997 (62 FR 25957)

Addendum II—Description of Manuals, Memoranda, and HCFA Rulings

An extensive descriptive listing of Medicare manuals and memoranda was published on June 9, 1988, at 53 FR 21730 and supplemented on September 22, 1988, at 53 FR 36891 and December 16, 1988, at 53 FR 50577. Also, a complete description of the Medicare Coverage Issues Manual was published on August 21, 1989, at 54 FR 34555. A brief description of the various Medicaid manuals and memoranda that we maintain was published on October 16, 1992, at 57 FR 47468.

ADDENDUM III.—MEDICARE AND MEDICAID MANUAL INSTRUCTIONS

[January 1997 through March 1997]

Trans. No.		Manual/Subject/Publication No.
		Intermediary Manual Part 3—Claims Process (HCFA Pub. 13–3) (Superintendent of Documents No. HE 22.8/6)
1696	○	Review of Form HCFA–1450 for Inpatient and Outpatient Bills. Bill Review for Partial Hospitalization Services Provided in Community Mental Health Centers. Pneumoccocal Pneumonia Influenza Virus and Hepatitis B Vaccines.
1697	○	Laboratory Tests for Hemodialysis, Intermittent Peritoneal Dialysis and Continuous Cycling Peritoneal Dialysis Included in Composite Rate. Laboratory Tests for CAPD Covered Routinely and Separately Billable.
1698	○	Review of Form HCFA–1450 for Inpatient and Outpatient Bills. Review of Hospice Bills.
1699	○	Medical—Subject to Waiver.
1700	○	Oral Cancer Drugs. Self-Administered Antiemetic Drugs Mammography Quality Standards Act.
1701	○	Hospital Outpatient Partial Hospitalization Services.
1702	○	Billing for Durable Medical Equipment Orthotic/Prosthetic Devices and Surgical Dressings.
1703	○	Applicability of Limitation on Liability to Items or Services Furnished by Providers of Services Payable Under Part A When to Make Limitation on Liability Decisions.
1704	○	Contractor Data Security and Confidentiality Requirements. File Specifications, Records Specifications, and Data Element Definitions for EMC Bills. Electronic Media Claims. Requirements for Submission of EMC Data. Claims Processing Timeliness.
1705	○	Federal BL Program Address.
1706	○	Ambulance Services.
1707	○	Review of Form HCFA–1450 for Inpatient and Outpatient Bills. EMC Flat File Record for ESRD Medical Documentation—Record Type (RT) 76. Flat File Requirements for RT 76, ESRD Medical Documentation. Provider Electronic Billing File and Record Format. Alphabetic Listing of Data Elements. Medical Review Attachment Data Definitions and Codes.
1708	○	Routine Services and Appliances.
		Carriers Manual Part 2—Program Administration (HCFA Pub. 14–2) (Superintendent of Documents No. HE 22.8/7–3)
13	○	Claims Processing Timeliness. Functional Standards for Claims Processing Operations.
		Carriers Manual Part 3—Claims Process (HCFA Pub. 14–3) (Superintendent of Documents No. HE 22.8/7)
1555	○	Reasonableness and Necessity.
1556	○	Beneficiary Address Change.
1557	○	Laboratory Tests. Separately Billable Tests Furnished to Patients of Independent Dialysis Facilities.
1558	○	Type of Service.
1559	○	Reasonableness and Necessity.
1560	○	Contractor Data Security and Confidentiality Requirements. EMC Testing and Verification. Data Sets and Formats for EMC and Electronic Remittance Advice. Requirements for Processing EMC. Technical Requirements. Requirements for Processing EMC.
1561	○	Federal Black Lung Program Address. Charges by Relative or Member of Immediate Household. Duplicate and/or Overlapping Bills With Discrepant Charges. Evidence of Medical Necessity for Parenteral and Enteral Nutrition. TPP Pays Primary Benefits When Not Required. Federal Government's Right to Sue and Collect Double Damages. Documentation of Conformance. When Medicare Secondary Benefits are Payable. When Medicare Secondary Benefits are Not Payable. Calculating Medicare Secondary Payments for Services Reimbursed on Reasonable Charge or Other Basis Under Part B. Effect of Failure to File Proper Claim. Effect of Primary Payments on Deductibles and Coinsurance. Right of Physician or Supplier to Charge Beneficiary. Charging Expenses Against Annual Limit on Incurred Expenses for Services of Independently Practicing Physical Therapist. Nondiscrimination. Medicare Secondary Payment for Managed Care Organization Copayments. Individuals Receiving Delayed Compensation Payments Subject to FICA Taxes. Referral to Internal Revenue Services. Primary Payer is Bankrupt or Insolvent.

ADDENDUM III.—MEDICARE AND MEDICAID MANUAL INSTRUCTIONS—Continued

[January 1997 through March 1997]

Trans. No.		Manual/Subject/Publication No.
		Determining Size of Employers.
		Current Employment Status.
		Limitation on Payment for Services to Individuals Entitled to Benefits on the Basis of ESRD Who are Covered by GHPs.
		Prohibition Against Taking into Account, Medicare Eligibility or Entitlement and Benefit Differentiation During Coordination Period.
		Determining Period During Which Medicare May Be Secondary Payer.
		Dual Eligibility/Entitlement Situations.
		Effect of ESRD MSP on Consolidated Omnibus Budget Reconciliation Act Continuation Coverage.
		Medicare Secondary Payer Provision for Disabled Beneficiaries
		Items and Services Furnished on or After August 10, 1993 and Before October 1, 1998.
		Individuals Not Subject to MSP Provision.
		The 100-or-More Employees Requirement.
		Disabled Individuals Who Return to Work.
		Dually-Entitled Individuals.
		Items and Services Furnished on or After January 1, 1987 and Before August 10, 1993.
		Prohibition Against Financial and Other Incentives.
		Federal Government's Right to Sue and Collect Double Damages.
		Excise Tax Penalties for Contributors to Nonconforming Group Health Plans.
1563	○	Paper Remittance Notice Requirements.
		Program Memorandum Intermediaries (HCFA Pub. 60A) (Superintendent of Documents No. HE 22.8/6–5)
A–97–1	○	Extension of Due Date for Filing Provider 2552–96 Cost Reports.
A–97–2	○	Hospital Outpatient Procedures: Medicare Changes for Radiology and Other Diagnostic Coding Due to the 1997 HCPCS Update and New Dermatology HCPCS Codes.
A–97–3	○	Cost Report Filing Requirements for Hospitals with Multiple Skilled Nursing Facilities.
		Program Memorandum Intermediaries/Carriers (HCFA Pub. 60A/B) (Superintendent of Documents No. HE 22.8/6–5)
AB–96–12	○	Sterile Intravitreal Implant with Cytovene (Trade Name: Vitrasert).
AB–96–13	○	Revaccination of Beneficiaries Who Received Recalled Influenza Virus Vaccine.
AB–97–1	○	New Interest Rate Payable on Clean Claims Not Paid Timely.
AB–97–2	○	Calculation Methodology for Hematocrit Levels Used to Determine the Applicability of Payment for EPO Provided to ESRD Patients.
AB–97–3	○	Binding Contractor Hearing Officers to L/RMRP.
AB–97–4	○	Common Working File (CWF) Crossover Edits in Release 97.1.
AB–97–5	○	New Panels Approved by CPT.
		State Operations Manual Provider Certification (HCFA Pub. 7) (Superintendent of Documents No. HE 22.8/12)
279	○	Model Letter to Provider (Send with Form HCFA–2567) (Immediate Jeopardy Does Not Exist) Model Letter Notifying Provider Acceptance of Allegation of Compliance.
		Model Letter Notifying Provider of Results of Revisit.
		Notice Requirements.
		Timing of CMPs.
		Procedures for Recommending Enforcement Remedies When Immediate Jeopardy Does Not Exist.
		Response to Allegation of Compliance.
		Basis for Imposing CMPs.
280	○	Updates of Interpretive Guidelines and Survey Procedures for Hospitals.
		Hospital Manual (HCFA Pub. 10) (Superintendent of Documents No. HE 22.8/2)
704	○	Outpatient Therapeutic Services.
705	○	Pneumococcal Pneumonia Influenza Virus and Hepatitis B Vaccines.
706	○	Laboratory Tests for Hemodialysis, Intermittent Peritoneal Dialysis (IPD) and Continuous Cycling Peritoneal Dialysis (CCPD) Included in Composite Rate.
		Laboratory Tests for CAPD Covered Routinely and Separately Billable.
707	○	Oral Cancer Drugs.
		Self-Administered Antiemetic Drugs.
708	○	Billing for Hospital Outpatient Partial Hospitalization Services.
709	○	Billing for DME, Orthotic/Prosthetic Devices and Surgical Dressings.
710	○	Ambulance Service Claims.
711	○	Outpatient Therapeutic Services.

ADDENDUM III.—MEDICARE AND MEDICAID MANUAL INSTRUCTIONS—Continued

[January 1997 through March 1997]

Trans. No.		Manual/Subject/Publication No.
		Home Health Agency Manual (HCFA Pub. 11) (Superintendent of Documents No. HE 22.8/5)
282	○	Billing for Oral Cancer Drugs. Self-Administered Antiemetic Drugs.
		Medicare Renal Dialysis Facility Manual (Non-Hospital Operated) (HCFA Pub. 29) (Superintendent of Documents No. HE 22.8/13)
77	○	Laboratory Tests for Hemodialysis, IPD and CCPD.
		Medicare Outpatient Physical Therapy and Comprehensive Outpatient Rehabilitation Facility Manual (HCFA Pub. 9) (Superintendent of Documents No. HE 22.8/9)
129	○	Billing Instructions for Partial Hospitalization Services Provided in Community Mental Health Centers.
		Medicare Coverage Issues Manual (HCFA Pub. 6) (Superintendent of Documents No. HE 22.8/14)
91	○	Laboratory Tests—CRD Patients.
92	○	Osteogenic Stimulation.
93	○	Treatment of Motor Function Disorders with Electric Nerve Stimulation. Transmyocardial Revascularization With Laser—Not Covered. Intraocular Lenses (IOL). Partial Ventriculectomy (Also known as Ventricular Reduction, Ventricular Remodeling or Heart Volume Reduction Surgery). Cryosurgery of Prostate. Vertebral Axial Decompression (VAX-D). Infusion Pumps.
		Medicare Provider Reimbursement Manual Part 1—(HCFA Pub.15–1) (Superintendent of Documents No. HE 22.8/4)
398	○	Regional Medicare Swing-Bed SNF Rates.
		Provider Reimbursement Manual Part II—Provider Cost Reporting Forms and Instructions (HCFA Pub. 15–II–AF) (Superintendent of Documents No. HE 22.8/4)
3	○	Home Health Agency Complex Identification Data. Adjustments to Expenses. Cost Allocation—General Service Costs, and Cost Allocation—Statistical Basis.
4	○	Home Health Agency Cost Report. Home Health Agency Complex Identification Data. Cost Allocation—General Service Costs, and Cost Allocation—Statistical Basis. Cost Center Coding.
		State Medicaid Manual—Part 3—Eligibility (HCFA Pub. 45–3) (Superintendent of Documents No. HE 22.8/10)
67	○	Changes Due to Welfare Reform. Changes in SSI Definition of Disability Due to Welfare Reform. Citizenship and Alienage. Aliens.
		State Medicaid Manual—Part 4—Services (HCFA Pub. 45–4) (Superintendent of Documents No. HE 22.8/10)
70	○	Home Respiratory Care for Ventilator-Dependent Individuals. Home and Community-Based Services—Basis, Scope, and Purpose. Description of Waiver Participants. Definition of Services. Safeguards—Assurances and Documentation. Evaluations—Assurances and Documentation. Cost Effectiveness—Assurances and Documentation. Annual Report—Assurances and Documentations. Independent Assessment of the Waiver. Home and Community-Based Services—Model Waiver Request. Home and Community-Based Services—Procedures to Request Renewal of Approved Waivers. Home and Community-Based Services—Amendments.
		State Medicaid Manual—Part 6 Payment for Services (HCFA Pub. 45–6) (Superintendent of Documents No. HE 22.8/10)
33	○	Physician Services to Children Under 21. Physician Services to Pregnant Women.
		Medicare/Medicaid Sanction—Reinstatement Report (HCFA Pub. 69)
97–1	○	Report of Physicians/Practitioners, Providers and/or Other Health Care Suppliers Excluded/Reinstated—December 1996.

ADDENDUM III.—MEDICARE AND MEDICAID MANUAL INSTRUCTIONS—Continued

[January 1997 through March 1997]

Trans. No.		Manual/Subject/Publication No.
97–2	○	Cumulative Report of Physicians/Practitioners, Providers and/or Other Health Care Suppliers Sanctioned/Reinstated.
97–3	○	Report of Physicians/Practitioners, Providers and/or Other Health Care Suppliers Excluded/Reinstated—January 1997.
97–4	○	Report of Physicians/Practitioners, Providers and/or Other Health Care Suppliers Excluded/Reinstated—February 1997.

ADDENDUM IV.—REGULATION DOCUMENTS PUBLISHED IN THE FEDERAL REGISTER

Publication date	FR vol. 61 page	CFR part(s)	File code*	Regulation title	End of comment period	Effective date
01/02/97	26–31	413	BPD–788–F	Medicare Program; Electronic Cost Reporting for Skilled Nursing Facilities and Home Health Agencies.		02/01/97
01/13/97	1682–1685	435	MB–105–FC	Medicaid Program; Redeterminations of Medicaid Eligibility Due to Welfare Reform.	03/14/97	01/13/97
01/13/97	1768–1776		BPD–882–N	Notification Procedures for States Implementing ''Alternative Mechanisms'' in the Individual Health Insurance Market.		
01/16/97	2373–2374		ORD–095–N	New and Pending Demonstration Project Proposals Submitted Pursuant to Section 1115(a) of the Social Security Act: November 1996.		
01/23/97	3563		BPD–886–N	Department of Health and Human Services, Health Care Financing Administration; Department of Labor, Pension and Welfare Benefits Administration; and Department of the Treasury, Office of Tax Policy and Internal Revenue Service (the Agencies); Health Insurance Portability; Correction.		
01/29/97	4305–4311		ORD–089–N	Medicare and Medicaid Programs; Small Business Innovation Research Grants for Fiscal Year 1997.		
01/31/97	4772–4776		MB–104–N	Medicaid Program; Preliminary Limitations on Aggregate Payments to Disproportionate Share Hospitals: Federal Fiscal Year 1997.		
02/05/97	5433–5442		HSQ–244–N	CLIA Program; Clinical Laboratory Improvement Amendments of 1988—Denial of Exemption of Laboratories in the Commonwealth of Puerto Rico.		10/28/96
02/21/97	7945–7946	410 415	BPD–852–CN	Medicare Program; Revisions to Payment Policies and Five-Year Review of and Adjustments to the Relative Value Units Under the Physician Fee Schedule for Calendar Year 1997; Correction.		01/01/97
02/25/97	8451–8452		ORD–096–N	New and Pending Demonstration Project Proposals Submitted Pursuant to Section 1115(a) of the Social Security Act: December 1996.		
03/06/97	10286		OPL–014–N	Medicare Program; March 24, 1997 Meeting of the Practicing Physicians Advisory Council.		
03/10/97	11035–11064	484	HSQ–238–P	Medicare and Medicaid Programs; Use of the OASIS as Part of the Conditions of Participation for Home Health Agencies.	06/09/97	
03/10/97	11005–11035	484	BPD–819–P	Medicare and Medicaid Programs; Conditions of Participation for Home Health Agencies.	06/09/97	
03/28/97	14851–14878	413	BPD–808–P	Medicare and Medicaid Programs; Salary Equivalency Guidelines for Physical Therapy, Respiratory Therapy, Speech Language Pathology, and Occupational Therapy Services.	05/27/97	
03/31/97	15187–15191		ORD–097–N	New and Pending Demonstration Project Proposals Submitted Pursuant to Section 1115(a) of the Social Security Act: January 1997 and Supplement to December 1996 Listing.		

Addendum V—Categorization of Food and Drug Administration-Approved Investigational Device Exemptions

Under the Food, Drug, and Cosmetic Act (21 U.S.C. 360c), devices fall into one of three classes. Also, under the new categorization process to assist HCFA, the Food and Drug Administration assigns each device with a Food and Drug Administration-approved investigational device exemption to one of two categories. To obtain more information about the classes or categories, please refer to the **Federal Register** notice published on April 21, 1997 (62 FR 19328).

The following information presents the device number, category (in this case, A), and criterion code.

G960213 A2
G960218 A1
G960258 A1
G960266 A1
G970004 A1
G970007 A1
G970015 A2
G970016 A2
G970018 A2
G970022 A2
G970035 A2
G970051 A2
G970053 A2

The following information presents the device number category (in this case, B), and criterion code.

G950115 B1
G956391 B2
G960193 B4
G960199 B2
G960208 B1
G960229 B1
G960230 B2
G960231 B3
G960234 B4
G960235 B3
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G970001 B3
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G970037 B4
G970038 B4
G970039 B4
G970040 B3
G970041 B4
G970046 B1
G970047 B3
G970052 B1
G970054 B4
G970059 B3

[FR Doc. 97–28972 Filed 10–31–97; 8:45 am]
BILLING CODE 4120–03–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[OACT–057–N]

RIN 0938–AI12

Medicare Program; Inpatient Hospital Deductible and Hospital and Extended Care Services Coinsurance Amounts for 1998

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice.

SUMMARY: This notice announces the inpatient hospital deductible and the hospital and extended care services coinsurance amounts for services furnished in calendar year 1998 under Medicare's hospital insurance program (Medicare Part A). The Medicare statute specifies the formulae to be used to determine these amounts.

The inpatient hospital deductible will be $764. The daily coinsurance amounts will be: (a) $191 for the 61st through 90th days of hospitalization in a benefit period; (b) $382 for lifetime reserve days; and (c) $95.50 for the 21st through 100th days of extended care services in a skilled nursing facility in a benefit period.

EFFECTIVE DATE: This notice is effective on January 1, 1998.

FOR FURTHER INFORMATION CONTACT: John Wandishin, (410) 786–6389. For case-mix analysis only: Gregory J. Savord, (410) 786–1521.

SUPPLEMENTARY INFORMATION:

I. Background

Section 1813 of the Social Security Act (the Act) provides for an inpatient hospital deductible to be subtracted from the amount payable by Medicare for inpatient hospital services furnished to a beneficiary. It also provides for certain coinsurance amounts to be subtracted from the amounts payable by Medicare for inpatient hospital and extended care services. Section 1813(b)(2) of the Act requires us to determine and publish between September 1 and September 15 of each year the amount of the inpatient hospital deductible and the hospital and extended care services coinsurance amounts applicable for services furnished in the following calendar year.

II. Computing the Inpatient Hospital Deductible for 1998

Section 1813(b) of the Act prescribes the method for computing the amount of the inpatient hospital deductible. The inpatient hospital deductible is an amount equal to the inpatient hospital deductible for the preceding calendar year, changed by our best estimate of the payment-weighted average of the applicable percentage increases (as defined in section 1886(b)(3)(B) of the Act). This estimate is used for updating the payment rates to hospitals for discharges in the fiscal year that begins on October 1 of the same preceding calendar year and adjusted to reflect real case mix. The adjustment to reflect real case mix is determined on the basis of the most recent case mix data available. The amount determined under this formula is rounded to the nearest multiple of $4 (or, if midway between two multiples of $4, to the next higher multiple of $4).

Section 4401(a) of the Balanced Budget Act of 1997 (Public Law 105–33, enacted on August 5, 1997) amended section 1886(b)(3)(B)(i) of the Act by making the percentage increase for hospitals paid under the prospective payment system 0 percent for fiscal year 1998. Section 4411(a) of the Balanced Budget Act of 1997 similarly amended section 1886(b)(3)(B)(ii) of the Act by making the percentage increase for hospitals excluded from the prospective payment system 0 percent for fiscal year 1998. Therefore, our best estimate of the payment-weighted average of the increase in the payment rates for fiscal year 1998 is 0 percent.

To develop the adjustment for real case mix, an average case mix was first calculated for each hospital that reflects the relative costliness of that hospital's

mix of cases compared to that of other hospitals. We then computed the increase in average case mix for hospitals paid under the Medicare prospective payment system in fiscal year 1997 compared to fiscal year 1996. (Hospitals excluded from the prospective payment system were excluded from this calculation since their payments are based on reasonable costs and are affected only by real increases in case mix.) We used bills from prospective payment hospitals received in HCFA as of July 1997. These bills represent a total of about 8.3 million discharges for fiscal year 1997 and provide the most recent case mix data available at this time. Based on these bills, the increase in average case mix in fiscal year 1997 is 0.12 percent. Based on past experience, we expect overall case mix to increase to 0.5 percent as the year progresses and more fiscal year 1997 data become available.

Section 1813 of the Act requires that the inpatient hospital deductible be increased only by that portion of the case mix increase that is determined to be real. We estimate that the increase in real case mix is about 0.5 percent. We believe that any case mix increased up to 1 percent is real case mix increase. Therefore, for fiscal year 1997, all of the case mix increase, 0.5 percent, is real case mix increase.

Thus, the estimate of the payment-weighted average of the applicable percentage increases used for updating the payment rates is 0 percent, and the real case mix adjustment factor for the deductible is 0.5 percent. Therefore, under the statutory formula, the inpatient hospital deductible for services furnished in calendar year 1998 is $764. This deductible amount is determined by multiplying $760 (the inpatient hospital deductible for 1997) by the payment rate increase of 1.00 multiplied by the increase in real case mix of 1.005 which equals $763.8 and is rounded to $764.

III. Computing the Inpatient Hospital and Extended Care Services Coinsurance Amounts for 1998

The coinsurance amounts provided for in section 1813 of the Act are defined as fixed percentages of the inpatient hospital deductible for services furnished in the same calendar year. Thus, the increase in the deductible generates increases in the coinsurance amounts. For inpatient hospital and extended care services furnished in 1998, in accordance with the fixed percentages defined in the law, the daily coinsurance for the 61st through 90th days of hospitalization in a benefit period will be $191 (¼ of the inpatient hospital deductible); the daily coinsurance for lifetime reserve days will be $382 (½ of the inpatient hospital deductible); and the daily coinsurance for the 21st through 100th days of extended care services in a skilled nursing facility in a benefit period will be $95.50 (⅛ of the inpatient hospital deductible).

IV. Cost to Beneficiaries

We estimate that in 1998 there will be about 9.1 million deductibles paid at $764 each, about 2.8 million days subject to coinsurance at $191 per day (for hospital days 61 through 90), about 1.3 million lifetime reserve days subject to coinsurance at $382 per day, and about 25.0 million extended care days subject to coinsurance at $95.50 per day. Similarly, we estimate that in 1997 there will be about 8.9 deductibles paid at $760 each, about 2.7 million days subject to coinsurance at $190 per day (for hospital days 61 through 90), about 1.3 million lifetime reserve days subject to coinsurance at $380 per day, and about 24.6 million extended care days subject to coinsurance at $95.00 per day. Therefore, the estimated total increase in cost to beneficiaries is about $260 million (rounded to the nearest $10 million), due to (1) the increase in the deductible and coinsurance amounts and (2) the change in the number of deductibles and daily coinsurance amounts paid.

V. Waiver of Proposed Notice and Comment Period

The Medicare statute, as discussed previously, requires publication of the Medicare Part A inpatient hospital deductible and the hospital and extended care services coinsurance amounts for services for each calendar year. The amounts are determined according to the statute. As has been our custom, we use general notices, rather than formal notice and comment rulemaking procedures, to make such announcements. In doing so, we acknowledge that, under the Administrative Procedure Act, interpretive rule, general statements of policy, and rules of agency organization, procedure, or practice are excepted from the requirements of notice and comment rulemaking.

We considered publishing a proposed notice to provide a period for public comment. However, we may waive that procedure if we find good cause that prior notice and comment are impracticable, unnecessary, or contrary to the public interest. We find that the procedure for notice and comment is unnecessary because the formula used to calculate the inpatient hospital deductible and hospital and extended care services coinsurance amounts is statutorily directed, and we can exercise no discretion in following that formula. Moreover, the statute establishes the time period for which the deductible and coinsurance amounts will apply and delaying publication would be contrary to the public interest. Therefore, we find good cause to waive publication of a proposed notice and solicitation of public comments.

VI. Impact Statement

This notice merely announces amounts required by legislation. This notice is not a proposed rule or a final rule issued after a proposal and does not alter any regulation or policy. Therefore, we have determined, and certify, that no analyses are required under Executive Order 12866, the Regulatory Flexibility Act (5 U.S.C. 601 through 612), or section 1102(b) of the Act.

In accordance with the provisions of Executive Order 12866, this notice was reviewed by the Office of Management and Budget.

Authority: Section 1813(b)(2) of the Social Security Act (42 U.S.C. 1395e(b)(2)).

(Catalog of Federal Domestic Assistance Program No. 93.773, Medicare—Hospital Insurance)

Dated: September 19, 1997.

Nancy-Ann Min DeParle,

Deputy Administrator, Health Care Financing Administration.

Dated: October 7, 1997.

Donna E. Shalala,

Secretary.

[FR Doc. 97–29032 Filed 10–31–97; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[OACT–056–N]

RIN 0938–AI10

Medicare Program; Part A Premium for 1998 for the Uninsured Aged and for Certain Disabled Individuals Who Have Exhausted Other Entitlement

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice.

SUMMARY: This notice announces the hospital insurance premium for calendar year 1998 under Medicare's hospital insurance program (Part A) for the uninsured aged and for certain disabled individuals who have exhausted other entitlement. The monthly Medicare Part A premium for

the 12 months beginning January 1, 1998 for these individuals is $309. The reduced premium for certain other individuals as described in this notice is $170. Section 1818(d) of the Social Security Act specifies the method to be used to determine these amounts.

EFFECTIVE DATE: This notice is effective on January 1, 1998.

FOR FURTHER INFORMATION CONTACT: John Wandishin, (410) 786–6389.

SUPPLEMENTARY INFORMATION:

I. Background

Section 1818 of the Social Security Act (the Act) provides for voluntary enrollment in the Medicare hospital insurance program (Medicare Part A), subject to payment of a monthly premium, of certain persons who are age 65 and older, uninsured for social security or railroad retirement benefits and do not otherwise meet the requirements for entitlement to Medicare Part A. (Persons insured under the Social Security or Railroad Retirement Acts need not pay premiums for hospital insurance.)

Section 1818(d) of the Act requires us to estimate, on an average per capita basis, the amount to be paid from the Federal Hospital Insurance Trust Fund for services performed and for related administrative costs incurred in the following year with respect to individuals age 65 and over who will be entitled to benefits under Medicare Part A. We must then, during September of each year, determine the monthly actuarial rate (the per capita amount estimated above divided by 12) and publish the dollar amount to be applicable for the monthly premium in the succeeding year. If the premium is not a multiple of $1, the premium is rounded to the nearest multiple of $1 (or, if it is a multiple of 50 cents but not of $1, it is rounded to the next highest $1). The 1997 premium under this method was $311 and was effective January 1, 1997. (See 61 FR 56691, November 4, 1996.)

Section 1818(d)(2) of the Act requires us to determine and publish, during September of each calendar year, the amount of the monthly premium for the following calendar year for persons who voluntarily enroll in Medicare Part A.

Section 1818A of the Act provides for voluntary enrollment in Medicare Part A, subject to payment of a monthly premium, of certain disabled individuals who have exhausted other entitlement. These individuals are those not now entitled but who have been entitled under section 226(b) of the Act, who continue to have the disabling impairment upon which their entitlement was based, and whose entitlement ended solely because they had earnings that exceeded the substantial gainful activity amount (as defined in section 223(d)(4) of the Act).

Section 1818A(d)(2) of the Act specifies that the premium determined under section 1818(d)(2) of the Act for the aged will also apply to certain disabled individuals as described above.

Section 13508 of the Omnibus Budget Reconciliation Act of 1993 (Public Law 103–66, enacted on August 10, 1993) amended section 1818(d) of the Act to provide for a reduction in the monthly premium amount for certain voluntary enrollees. The reduction applies for individuals who are not eligible for social security or railroad retirement benefits but who:

- Had at least 30 quarters of coverage under title II of the Act;
- Were married and had been married for the previous 1-year period to an individual who had at least 30 quarters of coverage;
- Had been married to an individual for at least 1 year at the time of the individual's death and the individual had at least 30 quarters of coverage; or
- Are divorced from an individual who at the time of divorce had at least 30 quarters of coverage and the marriage lasted at least 10 years.

For calendar year 1998, section 1818(d)(4)(A) of the Act specifies that the monthly premium that these individuals will pay for calendar year 1998 will be equal to the monthly premium for aged voluntary enrollees reduced by 45 percent.

II. Premium Amount for 1998

Under the authority of sections 1818(d)(2) and 1818A(d)(2) of the Act, the Secretary has determined that the monthly Medicare Part A hospital insurance premium for the uninsured aged and for certain disabled individuals who have exhausted other entitlement for the 12 months beginning January 1, 1998, is $309.

The monthly premium for those individuals entitled to a 45-percent reduction in the monthly premium for the 12-month period beginning January 1, 1998 is $170.

III. Statement of Actuarial Assumptions and Bases Employed in Determining the Monthly Premium Rate

As discussed in section I of this notice, the monthly Medicare Part A premium for 1998 is equal to the estimated monthly actuarial rate for 1998 rounded to the nearest multiple of $1. The monthly actuarial rate is defined to be one-twelfth of the average per capita amount that the Secretary estimates will be paid from the Federal Hospital Insurance Trust Fund for services performed and related administrative costs incurred in 1998 for individuals age 65 and over who will be entitled to benefits under the hospital insurance program. Thus, the number of individuals age 65 and over who will be entitled to hospital insurance benefits and the costs incurred on behalf of these beneficiaries must be projected to determine the premium rate.

The principal steps involved in projecting the future costs of the hospital insurance program are (a) establishing the present cost of services furnished to beneficiaries, by type of service, to serve as a projection base; (b) projecting increases in payment amounts for each of the various service types; and (c) projecting increases in administrative costs. Establishing historical Medicare Part A enrollment and projecting future enrollment, by type of beneficiary, is part of this process.

We have completed all of the above steps, basing our projections for 1998 on (a) current historical data and (b) projection assumptions under current law from the Midsession Review of the President's Fiscal Year 1998 Budget, incorporating the provisions of Public Law 103–66. It is estimated that in calendar year 1998, 33.032 million people age 65 and over will be entitled to Medicare Part A benefits (without premium payment), and that these individuals will, in 1998, incur $122.357 billion of benefits for services performed and related administrative costs. Thus, the estimated monthly average per capita amount is $308.68 and the monthly premium is $309. The monthly premium for those individuals eligible to pay this premium reduced by 45 percent is $170.

IV. Costs to Beneficiaries

The 1998 Medicare Part A premium is less than 1 percent lower than the $311 monthly premium amount for the 12-month period beginning January 1, 1997.

We estimate that there will be, in calendar year 1998, approximately 344,000 enrollees who will voluntarily enroll in Medicare Part A by paying the full premium and who do not otherwise meet the requirements for entitlement. An additional 9,000 enrollees will be paying the reduced premium. The estimated overall effect of the changes in the premium will be a savings to these voluntary enrollees of about $10 million.

V. Waiver of Notice of Proposed Rulemaking

The Medicare statute, as discussed previously, requires publication of the Medicare Part A hospital insurance premium for the upcoming calendar year during September of each year. The amounts are determined according to the statute. As has been our custom, we use general notices, rather than formal notice and comment rulemaking procedures, to make such announcements. In doing so, we acknowledge that, under the Administrative Procedure Act, interpretive rules, general statements of policy, and rules of agency organization, procedure, or practice are excepted from the requirements of notice and comment rulemaking.

We considered publishing a proposed notice to provide a period for public comment. However, we may waive that procedure if we find good cause that prior notice and comment are impracticable, unnecessary, or contrary to the public interest. We find that the procedure for notice and comment is unnecessary because the formula used to calculate the Part A hospital insurance premium is statutorily directed, and we can exercise no discretion in following that formula. Moreover, the statute established the time period for which the premium will apply and delaying publication of the premium amount would be contrary to the public interest. Therefore, we find good cause to waive publication of a proposed notice and solicitation of public comments.

VI. Impact Statement

This notice merely announces amounts required by legislation. This notice is not a proposed rule or a final rule issued after a proposal, and it does not alter any regulation or policy. Therefore, we have determined and certify that no analyses are required under Executive Order 12866, the Regulatory Flexibility Act (5 U.S.C. 601 through 612), or section 1102(b) of the Act.

In accordance with the provisions of Executive Order 12866, this notice was reviewed by the Office of Management and Budget.

Authority: Sections 1818(d)(2) and 1818A(d)(2) of the Social Security Act (42 U.S.C. 1395i–2(d)(2) and 1395i–2a(d)(2)).

(Catalog of Federal Domestic Assistance Program No. 93.773, Medicare—Hospital Insurance)

Dated: September 19, 1997.

Nancy-Ann Min DeParle,

Deputy Administrator, Health Care Financing Administration.

Dated: October 7, 1997.

Donna E. Shalala,

Secretary.

[FR Doc. 97–29030 Filed 10–31–97; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Substance Abuse and Mental Health Services Administration (SAMHSA)

Notice of Meeting

Pursuant to Public Law 92–463, notice is hereby given of the meeting of the Substance Abuse and Mental Health Services Administration (SAMHSA) National Advisory Council in November 1997.

The meeting will include the review, discussion and evaluation of individual contract proposals, as well as a presentation and discussion of information about the Agency's procurement plans. Therefore, a portion of the meeting will be closed to the public as determined by the Administrator, SAMHSA, in accordance with Title 5 U.S.C. 552b(c) (3), (4), and (6) and 5 U.S.C. App. 2, Section 10(d).

In addition, a portion of the SAMHSA National Advisory Council meeting will be open and include a presentation of certificates of appreciation to those members whose terms will end on November 30. Attendance by the public will be limited to space available. Public comments are welcome during the open session. Please communicate with the individual listed as contact below to make arrangements to comment or to request special accommodations for persons with disabilities.

Substantive program information, summary of the meeting and a roster of Council members may also be obtained from the contact whose name and telephone number is listed below.

Committee Name: SAMHSA National Advisory Council.

Meeting Date: November 13, 1997.

Place: Phoenix Park Hotel, 520 North Capitol Street, N.W., Washington, D.C. 20001.

Closed: November 13, 1997, 1:00 p.m. to 4:20 p.m.

Open: November 13, 1997, 4:30 p.m. to 5:30 p.m.

Contact: Toian Vaughn, Executive Secretary, Room 12C–15, Parklawn Building, Telephone: (301) 443–4640 and FAX: (301) 443–1450.

Dated: October 28, 1997.

Jeri Lipov,

Committee Management Officer, Substance Abuse and Mental Health Services Administration.

[FR Doc. 97–28991 Filed 10–31–97; 8:45 am]

BILLING CODE 4162–20–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Substance Abuse and Mental Health Services Administration (SAMHSA) Notice of Meeting

Pursuant to Pub. L. 92–463, notice is hereby given of the following meeting of the SAMHSA Special Emphasis Panel II in November, 1997.

A summary of the meeting may be obtained from: Ms. Dee Herman, Committee Management Liaison, SAMHSA, Office of Program Planning and Coordination (OPPC), Division of Extramural Activities Policy and Review, 5600 Fishers Lane, Room 17–89, Rockville, Maryland 20857. Telephone: (301) 443–7390.

Substantive program information may be obtained from the individual named as Contact for the meeting listed below.

The meeting will include the review, discussion and evaluation of individual contract proposals. These discussions could reveal personal information concerning individuals associated with the proposals and confidential and financial information about an individual's proposal. The discussion may also reveal information about procurement activities exempt from disclosure by statute and trade secrets and commercial or financial information obtained from a person and privileged and confidential. Accordingly, the meeting is concerned with matters exempt from mandatory disclosure in Title 5 U.S.C. 552b(c) (3), (4), and (6) and 5 U.S.C. App. 2, § 10(d).

Committee Name: SAMHSA Special Emphasis Panel II.

Meeting Date: November 13, 1997.

Place: Residence Inn, Gate House Board Room, 335 Wisconsin Avenue, Bethesda, MD 20814.

Closed: November 13, 1997, 9:00 a.m.—Adjournment.

Contact: Ferdinand W. Hui, Ph.D., Room 17–89, Parklawn Building, Telephone: (301) 443–2437 and FAX: (301) 443–3437.

Dated: October 28, 1997.

Jeri Lipov,

Committee Management Officer, Substance Abuse and Mental Health Services Administration.

[FR Doc. 97–28994 Filed 10–31–97; 8:45 am]

BILLING CODE 4162–20–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[OR–080–08–5420–00–H011; GP8–0025; OR–53981]

Recordable Disclaimer of Interest; Oregon

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed issuance of recordable disclaimer of interest, Oregon.

SUMMARY: An application has been filed by John Hancock Mutual Life Insurance Company for a recordable disclaimer of interest involving 200 acres of land in Columbia County, Oregon, to remove a cloud on the title. The cloud is a result of an exclusion contained in the patent conveying title from the United States. The patent excluded ''the timber thereon.'' Subsequently, the United States interest in the said timber was extinguished when a timber sale contract was issued; however, no instrument was recorded to show that the interest was extinguished. The applicant desires to have clear title. The United States of America hereby gives notice of its intention to disclaim and release all interest in the timber to the owner of record.

EFFECTIVE DATE: Until February 2, 1998, all persons who wish to submit comments may do so in writing to the Salem District Manager, Bureau of Land Management, 1717 Fabry Road SE, Salem, Oregon 97306.

FOR FURTHER INFORMATION CONTACT: John Radosta, Realty Specialist, Salem District Office, (503) 375–5664.

SUPPLEMENTARY INFORMATION: Pursuant to Section 315 of the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. 1745, an application has been filed by John Hancock Mutual Life Insurance Company for issuance of a recordable disclaimer of interest by the United States, affecting the following described land:

Willamette Meridian

T. 3 N., R. 2 W.,
Sec. 9, NE¼ and the SE¼NW¼.

The subject land (and other land) was conveyed by the United States by Coal Patent No. 646950, dated August 18, 1918. The patent conveyed the land ''exclusive of the timber thereon.'' On January 10, 1941, the United States (General Land Office) issued Timber Contract I6g–428, in which the reserved timber was sold. When the timber contract was terminated in 1946, the landowner requested that a release or relinquishment of the timber interest be recorded so as to provide him with clear title. The response was that the General Land Office had no authority to do so.

Section 315 of FLPMA authorizes the Secretary of the Interior to issue a recordable disclaimer of interest in land where the disclaimer will help to remove a cloud on the title under certain criteria. One criterion is where a record interest of the United States in the land has terminated by operation of law or is otherwise invalid. The Bureau of Land Management has reviewed the official records and has determined that the United States has no claim to or interest in the above described land and that the issuance of a recordable disclaimer of interest will help to remove a cloud on the title to the land. Accordingly, a recordable disclaimer of interest will be issued shortly after the 90-day comment period.

Dated: October 23, 1997.

Robert D. DeViney, Jr.,

Chief, Branch of Realty and Records Services.

[FR Doc. 97–28979 Filed 10–31–97; 8:45 am]

BILLING CODE 4310–33–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[NV–030–98–1020–00–24–1 A]

Sierra Front/Northwest Great Basin Resource Advisory Council—Notice of Meeting Locations and Times

AGENCY: Bureau of Land Management, Interior.

ACTION: Resource Advisory Council Meeting Locations and Times.

SUMMARY: In accordance with the Federal Land Policy and Management Act and the Federal Advisory Committee Act of 1972 (FACA) the Department of the Interior, Bureau of Land Management (BLM) Council meetings will be held as indicated below. The agenda includes a business meeting, public comment period and a tour of the Walker River Basin.

All meetings are open to the public. The public may present written comments to the council. Each formal council meeting will have a time allocated for hearing public comments. The public comment period for the council meeting is listed below. Depending on the number of persons wishing to comment, and time available, the time for individual oral comments may be limited. Individuals who plan to attend and need further information about the meetings, or need special assistance such as sign language interpretation or other reasonable accommodations, should contact Joan Sweetland, Carson City District Office, 5665 Morgan Mill Road, Carson City, NV 89701 (702) 885–6107.

DATE, TIMES: The dates are November 20 and 21, 1997. Depart BLM Carson City Office, 5665 Morgan Mill Road, Carson City at 7:00 a.m. November 20, and begin tour of Walker River Basin. Arrive Hawthorne, Nevada, 5:00 p.m. At 6:00 p.m. the Council will have dinner at the El Capitan, Hawthorne, followed by the meeting at 6:30 p.m. The Agenda will include a business meeting, approval of the Minutes of the previous meeting, remarks by State Director Robert Abbey, discussion of the proposed Black Rock Desert Management Plan. The public comment period will be at 8:30 p.m., with adjournment for the evening at 9:00 p.m. At 8:00 a.m. the council will depart Hawthorne to continue tour of Walker River Basin and will return to Carson City at 5:00 p.m.

All council meetings and tours are open to the public, but the public is responsible for their own transportation, food and lodgings.

FOR FURTHER INFORMATION CONTACT: John Singlaub, Carson City District Manager, 5665 Morgan Mill Road, Carson City, Nevada 89701 (702) 885–6000.

Dated: October 22, 1997.

John O. Singlaub,

District Manager.

[FR Doc. 97–28978 Filed 10–31–97; 8:45 am]

BILLING CODE 4310–HC–M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[AZ–910–0777–61–241A]

State of Arizona Resource Advisory Council Meeting

AGENCY: Bureau of Land Management, Interior.

ACTION: Arizona Resource Advisory Council Meeting, notice of meeting.

SUMMARY: This notice announces a meeting of the Arizona Resource Advisory Council. The meeting will be held December 2, 1997, beginning at 9:00 a.m. in the Montana Room at the Bureau of Land Management National Training Center, 9828 N. 31st Avenue, Phoenix, Arizona. The agenda items to be covered at the one-day meeting include: Review of previous meeting minutes; BLM State Director's Update on legislation, regulations and statewide planning efforts; Grazing Issues and Update on FWS Biological Opinion;

Update on Impacts of the Lawsuit on State Grazing Leases on BLM Permits; Report on S&G Technical Review and Rangeland Resource Teams; Reports by the S&G, Recreation and Public Relations Working Groups; Reports from RAC members; RAC Discussion on future meeting dates and locations. A public comment period will take place at 11:30 a.m. for any interested publics who wish to address the Council.

FOR FURTHER INFORMATION CONTACT: Deborah Stevens Bureau of Land Management, Arizona State Office, 222 North Central Avenue, Phoenix, Arizona 85004–2203, (602) 417–9215.

Michael A. Ferguson,

Deputy State Director, Resources Division.

[FR Doc. 97–28982 Filed 10–31–97; 8:45 am]

BILLING CODE 4310–32–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[ID–990–1020–00]

Resourece Advisory Councils; Notice of a Meeting

AGENCY: Bureau of Land Management, Upper Columbia—Salmon Clearwater Districts, Idaho.

ACTION: Notice of Resource Advisory Council Meeting.

SUMMARY: In accordance with the Federal land Policy and Management Act and the Federal Advisory Committee Act of 1972 (FACA), 5 U.S.C. Appendix, the Bureau of Land Management (BLM) announces the meeting of the Upper Columbia—Salmon Clearwater Districts Resource Advisory Council (RAC) on Wednesday, December 3, 1997 and Thursday, December 4, 1997 in Missoula, MT.

Agenda items include: a briefing on the status of implementation of the approved Idaho rangeland standards and guidelines; discussion of potential issues for future meetings; the status of the Interior Columbia Basin Ecosystem Management Project; and range improvement/contributed funds. The meeting will begin at 1:00 p.m. (MST), December 3, 1997 and be held at the Grant Creek Inn, 5280 Grant Creek Road, Missoula, MT. The public may address the Council during the public comment period from 2:00 p.m.–2:30 p.m. on December 3, 1997.

SUPPLEMENTARY INFORMATION: All Resource Advisory Council meetings are open to the public. Interested persons may make oral statements to the Council, or written statements may be submitted for the Council's consideration. Depending on the number of persons wishing to make oral statements, a per-person time limit may be established by the District Manager.

The Council's responsibilities include providing long-range planning and establishing resource management priorities.

FOR FURTHER INFORMATION CONTACT: Ted Graf (208) 769–5004.

Dated: October 22, 1997.

Fritz U. Rennebaum,

District Manager.

[FR Doc. 97–29013 Filed 10–31–97; 8:45 am]

BILLING CODE 4310–66–M

DEPARTMENT OF THE INTERIOR

National Park Service

Notice of Inventory Completion for Native American Human Remains and Associated Funerary Objects from Lake and Harney Counties, OR in the Control of the Oregon State Office, Bureau of Land Management, Portland, OR

AGENCY: National Park Service.

ACTION: Notice.

Notice is hereby given in accordance with provisions of the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3003 (d), of the completion of an inventory of human remains and associated funerary objects from Lake and Harney Counties, OR in the control of the Oregon State Office, Bureau of Land Management, Portland, OR.

A detailed assessment of the human remains was made by Bureau of Land Management and Oregon State Museum of Anthropology professional staff in consultation with representatives of the Burns Paiute Tribe of Burns Paiute Indian Colony of Oregon, the Confederated Tribes of the Warm Springs Reservation, and the Klamath Tribe.

Between 1935-1937, human remains representing one individual were recovered from Catlow Cave, Harney County, OR during legally authorized excavations on BLM lands by the University of Oregon Museum of Natural History. No known individuals were identified. No associated funerary objects are present.

In 1957, human remains representing five individuals were recovered from the vicinity of Table Rock, Lake County, OR during excavations without permit by Joan Oswalt. In 1960, Ms. Oswalt donated these human remains and associated funerary objects to the Oregon State Museum. No known individuals were identified. The five associated funerary objects include a shell necklace and chipped stone tools.

Between 1967-1969, human remains representing five individuals were recovered from Table Rock caves, Lake County, OR during legally authorized excavations by the University of Oregon Museum of Natural History. No known individuals were identified. The eleven associated funerary objects include woven matting, a winnowing tray, an obsidian tool, and a basketry fragment.

In 1968, human remains representing two individuals were recovered from the vicinity of Table Rock, Lake County, OR during legally authorized excavations by Bureau of Land Management staff. No known individuals were identified. No associated funerary objects are present.

Morphological evidence indicates these human remains are Native American based on dental wear and bone condition. Based on the contexts, manner of internment, and associated funerary objects, the sites listed above have been determined to be precontact habitation sites. Archeological and ethnographic evidence indicates these sites are precontact Northern Paiute sites and burials based on continuities of tool and basketry styles. Oral history evidence presented by representatives of the Burns Paiute Tribe of Burns Paiute Indian Colony of Oregon during consultation supports this affiliation. Northern Paiute people are represented by the present day tribes of the Burns Paiute Tribe of Burns Paiute Indian Colony of Oregon, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Klamath Indian Tribe of Oregon.

Based on the above mentioned information, officials of the Bureau of Land Management have determined that, pursuant to 43 CFR 10.2 (d)(1), the human remains listed above represent the physical remains of thirteen individuals of Native American ancestry. Officials of the Bureau of Land Management have also determined that, pursuant to 25 U.S.C. 3001 (3)(A), the sixteen objects listed above are reasonably believed to have been placed with or near individual human remains at the time of death or later as part of the death rite or ceremony. Lastly, officials of the Bureau of Land Management have determined that, pursuant to 25 U.S.C. 3001 (2), there is a relationship of shared group identity which can be reasonably traced between these Native American human remains and associated funerary objects and the Burns Paiute Tribe of Burns Paiute Indian Colony of Oregon, Confederated Tribes of the Warm Springs Reservation

of Oregon, and the Klamath Indian Tribe of Oregon.

This notice has been sent to officials of the Burns Paiute Tribe of Burns Paiute Indian Colony of Oregon, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Klamath Indian Tribe of Oregon. Representatives of any other Indian tribe that believes itself to be culturally affiliated with these human remains and associated funerary objects should contact Richard Hanes, Cultural Program Lead, Bureau of Land Management, P.O. Box 10226, Eugene, OR 97440; telephone: (541) 683-6669, before December 3, 1997. Repatriation of the human remains and associated funerary objects to the culturally affiliated tribes may begin after that date if no additional claimants come forward.

Dated: October 29, 1997.

Francis P. McManamon,

Departmental Consulting Archeologist, Manager, Archeology and Ethnology Program.

[FR Doc. 97–29017 Filed 10-31-97; 8:45 am]

BILLING CODE 4310–70–F

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decrees Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act

In accordance with Departmental policy, 28 CFR 50.7, and 42 U.S.C. 9622(d), notice is hereby given that on October 16, 1997, the trustees for natural resources at the Tulalip Landfill Superfund Site on Ebey Island in Puget Sound, WA (''the Site'') lodged with the United States District Court for the Western District of Washington a civil natural resource damages complaint against defendants the Boeing Company, Kaiser Cement Corporation, Safeway Inc., Richard Halffman, Washington Iron Works, Seattle Goodwill Industries, Manson Construction Co., Inc. and R.W. Rhine, Inc. in the civil action styled *United States* v. *The Boeing Company, et al.,* Civil Action No. C97–1648–WD. On the same day, the trustees lodged two consent decrees resolving the trustees' claims against all defendants except R.W. Rhine and Seattle Goodwill Industries.

The consent decrees require the defendants to compensate the trustees for natural resource damages resulting from the release of hazardous substances at the Site. The trustees consist of the State of Washington Department of Ecology, the Tulalip Tribes of Washington, the National Oceanic and Atmospheric Administration of the United States Department of Commerce, and the United States Department of Interior. Under the consent decrees, the settling defendants will pay a total of $183,068 for natural resource damages.

The Department of Justice will receive, for a period of thirty (30) days from the date of this publication, comments relating to the proposed consent decrees. Comments should be addressed to the Assistant Attorney General for the Environment and Natural Resources Division, Department of Justice, Washington, D.C. 20530, and should refer to *United States* v. *The Boeing Company, et al.,* DOJ Ref. #90–11–3–1412.

The proposed consent decrees may be examined at the office of the United States Attorney, 1010 Fifth Avenue, Seattle, WA 98104; and at the Consent Decree Library, 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005, (202) 624–0892. A copy of the proposed consent decrees may be obtained in person or by mail from the Consent Decree Library, 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005. In requesting copies please refer to the referenced case, specify which decree or decrees you would like to receive, and enclose a check payable to the Consent Decree Library in the amount of $12.00 for the decree with Boeing, Kaiser, Safeway, Halffman and Washington Iron Works (48 pages), and/or $8.50 for the decree with Manson Construction Co., Inc. (34 pages) (25 cents per page reproduction costs).

Joel M. Gross,

Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 97–29012 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–15–M

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Under the Comprehensive Environmental Response, Compensation and Liability Act

Notice is hereby given that on October 22, 1997, a proposed Consent Decree in *United States* v. *Charles Chrin et al.,* Civil Action No. 39–CV–4244 was lodged with the United States District Court for the Eastern District of Pennsylvania.

In this action the United States sought reimbursement of past response costs pursuant to Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (''CERCLA''), 42 U.S.C. 9607, incurred by the United States Environmental Protection Agency (''EPA'') in connection with the Industrial Lane Superfund Site (also known as the Chrin Landfill Site) located in Williams Township, Northampton County, Pennsylvania. Under the proposed Consent Decree 51 original and third party defendants agree to reimburse the United States $2.5 million in past response costs incurred by EPA at the Site.

The Department of Justice will receive for a period of thirty (30) days from the date of this publication comments relating to the proposed Consent Decree, Comments should be addressed to the Assistant Attorney General of the Environment and Natural Resources Division, Department of Justice, Washington, D.C. 20503, and should refer to *United States* v. *Charles Chrin et al.,*, D.J. Ref. 90–11–2–908. Commenters may request an opportunity for a public meeting in the affected area, in accordance with Section 7003(d) of RCRA, 42 U.S.C. 6973(d).

The Consent Decree may be examined at the Office of the United States Attorney, 615 Chestnut Street, Suite 1250, Philadelphia, PA 19106, at U.S. EPA Region 3, 841 Chestnut Building, Philadelphia, PA 19107, and at the Consent Decree Library, 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005, (202) 624–0892. A copy of the Consent Decree may be obtained in person or by mail from the Consent Decree Library, 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005. In requesting a copy exclusive of exhibits and defendants' signatures, please enclose a check in the amount of $12.50 (25 cents per page reproduction cost) payable to the Consent Decree Library.

Walker Smith,

Deputy Chief, Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 97–29011 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–15–M

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Under the Clean Water Act

Under 28 CFR 50.7, notice is hereby give that on October 21, 1997 a proposed consent decree (''the decree'') in *United States, Commonwealth of Virginia, and District of Columbia* v. *Colonial Pipeline Company*, Civil Action No. *97–1680–A*, was lodged with the United States District Court for the Eastern District of Virginia.

In this action brought pursuant to the Clean Water Act, as amended by the Oil

Pollution Act of 1990, 33 U.S.C. 1251 *et. seq*., the United States, Commonwealth of Virginia and District of Columbia sought civil penalties and natural resource damages regarding a March 1993 oil discharge to Sugarland Run, a tributary of the Potomac River. The proposed decree requires Colonial Pipeline Company to perform comprehensive projects to restore natural resources that were damaged as a result of the oil discharge, reimbursing all assessment costs of the natural resource trustees, and monitoring and oversight costs associated with the projects. In addition, the decree requires Colonial Pipeline Company to pay $253,314 toward the notching of Little Falls Dam on the Potomac River, a joint project of the District of Columbia, State of Maryland and U.S. Army Corps of Engineers, and to pay a $1.5 million civil penalty, $750,000 to the United States, and $750,000 to the Commonwealth of Virginia.

The Department of Justice will receive written comments relating to the decree for thirty (30) days from the date of publication of this notice. Please address comments to the Assistant Attorney General, Environment and Natural Resources Division, Department of Justice, P.O. Box 7611, Ben Franklin Station, Washington, D.C. 20044 and refer to *United States, Commonwealth of Virginia, and District of Columbia* v. *Colonial Pipeline Company,* D.J. Ref. #90–5–1–1–4055.

The decree may be examined at the Office of the United States Attorney, Eastern District of Virginia, 2100 Jamieson Avenue, Alexandria, VA 22314; the Region III Office of the United States Environmental Protection Agency, 841 Chestnut Building, Philadelphia, PA 19107; and at the Consent Decree Library 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005 (202) 624–0892. A copy of the decree may be obtained in person or by mail at the Consent Decree Library, 1120 G Street, N.W., 4th Floor, Washington, D.C. 20005 (202–624–0892). When requesting a copy, please enclose a check in the amount of $16.75 (twenty-five cents per page reproduction costs) payable to the ''Consent Decree Library.''

Joel M. Gross,

Chief, Environmental Enforcement Section, Environment and Natural Resources Division, U.S. Department of Justice.

[FR Doc. 97–29010 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–15–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Request OMB emergency approval; application to register permanent residence or adjust status and supplement A to Form I–485.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted the following information collection request (ICR) utilizing emergency review procedures, to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995. OMB approval has been requested by October 31, 1997. If granted, the emergency approval is only valid for 180 days. All comments and/or questions pertaining to this pending request for emergency approval must be directed to OMB, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Washington, DC 20503. You may also submit comments to Ms. Bond via facsimile at 202–395–6974.

During the first 60 days of this same period a regular review of this information collection is also being undertaken. Comments are encouraged and will be accepted until; January 2, 1997. During the 60-day regular review all comments and suggestions, or questions regarding additional information, to include obtaining a copy of the proposed information collection instrument with instructions, should be directed to Mr. Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, Room 5307, 425 I Street, NW., Washington, DC 20536. Your comments should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved information collection.

(2) *Title of the Form/Collection:* Application to Register Permanent Residence or Adjust Status and Supplement A to Form I–485.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–485/Form I–485 Supplement A. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This form allows an applicant to determine whether he or she must file under section 245 of the INA, and it allows the Service to collect information needed for reports to be made to different government committees.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* I–485 Adult respondents is 160,000 at 5.25 hours per response; I–485 Children respondents is 112,000 at 4.5 hours per response; and I–485 Supplement A respondents is 50,000 at 13 minutes (.216) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* Form I–485 annual burden hours are 1,316,000 and Form I–485 Supplement A annual burden hours are 10,800.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Mr. Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, Room 5307, 425 I Street, NW., Washington, DC 20536.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G. Street, NW., Washington, DC 20530.

Dated: October 29, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29039 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection; application for replacement/initial nonimmigrant arrival-departure document.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an emergency information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This proposed information collection was previously published in the **Federal Register** on July 17, 1997 at 62 FR 38324, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of this Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Application for Replacement/Initial Nonimmigrant Arrival—Departure Document.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–102. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This form is used by an alien temporarily residing in the United States whose evidence of registration has been lost, mutilated or destroyed. This form is used by an alien to request a replacement of his or her arrival evidence; and by the INS to verify status and to determine eligibility of an applicant for said replacement.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 20,000 respondents at 25 minutes (.416) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 8,320 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29041 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of Existing Collection; Application for Issuance or Replacement of Northern Mariana Card.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an emergency information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This information collection was previously published in the **Federal Register** on August 7, 1997 at 62 FR 42600, allowing for an extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202-514-3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Application for Issuance or Replacement of Northern Mariana Card.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I-777. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. Applicants may apply for a Northern Mariana identification card if they received United States citizenship pursuant to Public Law 94-241 (Covenant to Establish a Commonwealth of the Northern Mariana Island).

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 100 respondents at 30 minutes (.5) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 50 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29042 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection; application to file declaration of intention.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This proposed information collection was previously published in the **Federal Register** on July 17, 1997 at 62 FR 38322, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Application to File Declaration of Intention.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form N–300. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This collection is used by the Service to determine eligibility for a declaration of intention to become a citizen of the United States.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 1,015 respondents at 45 minutes (.75) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 761 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29043 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection: Application for travel document.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This information collection was previously published in the **Federal Register** on July 7, 1997 at 62 FR 36308, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instruction, or additional information, pleas contact Mr. Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, Room 5307, 425 I Street, NW., Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the this information collection should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic,mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved information collection.

(2) *Title of the Form/Collection:* Application for Travel Document.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–131. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This form is used by permanent or conditional residents, refugees or asylees and aliens abroad seeking to apply for a travel document to lawfully reenter the United States or be paroled for humanitarian purposes into the United States.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 335,000 respondents at 55 minutes (.90) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 301,500 annual burden hours.

If additional information is required contact Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29044 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection: Application for action on an approved application or petition.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an emergency information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This proposed information collection was previously published in the **Federal Register** on July 17, 1997 at 62 FR 38323, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Application for Action on an Approved Application or Petition.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–824. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This form is used to request a duplicate approval notice, to notify the U.S. Consulate that a person has been adjusted to permanent resident status so a family member can apply for a derivative immigrant visa and to request another U.S. Consulate be notified that a petition has been approved.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 43,772 respondents at 25 minutes (.416) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 18,209 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29045 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection. Request for certification of military or naval service.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an emergency information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This proposed information collection was previously published in the **Federal Register** on July 30, 1997 at 62 FR 40842, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Request for Certification of Military or Naval Service.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form N–426. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. This form is used by the INS to request a verification of the military or naval service claim by an applicant filing for naturalization on the basis of honorable service in the United States Armed Forces.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 45,000 respondents at 10 minutes (.166) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 7,470 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29046 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

Agency Information Collection Activities: Proposed Collection; Comment Request

ACTION: Extension of existing collection, Application for temporary protected status.

The Department of Justice, Immigration and Naturalization Service (INS) has submitted an emergency information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995 to provide for the required final 30 days for public review/comment and ample time for OMB's review and final action.

This proposed information collection was previously published in the **Federal Register** on August 4, 1997 at 62 FR 41978, allowing for an emergency extension with a 60-day public comment period. No comments were received by the Immigration and Naturalization Service. Comments are encouraged and will be accepted for an additional ''thirty days'' until December 3, 1997.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Ms. Debra Bond, 202–395–7316, Department of Justice Desk Officer, Room 10235, Washington, DC 20503. Additionally, comments may be submitted to OMB via facsimile to 202–395–6974.

If you have additional comments, suggestions, or need a copy of the proposed information collection instrument with instructions, or additional information, please contact Richard A. Sloan, 202–514–3291, Director, Policy Directives and Instructions Branch, Immigration and Naturalization Service, U.S. Department of Justice, 425 I Street, NW., Room 5307, Washington, DC 20536.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points.

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of currently approved information collection.

(2) *Title of the Form/Collection:* Application for Temporary Protected Status.

(3) *Agency from number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form I–821. Adjudications Division, Immigration and Naturalization Service.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals or Households. The information provided on this collection will be used by the INS to determine whether an applicant for Temporary Protected Status (TPS) meets the eligibility requirements. Such TPS benefits include employment authorization and relief from the threat of removal or deportation from the U.S. while in such status.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 10,000 respondents at 30 minutes (.5) hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 5,000 annual burden hours.

If additional information is required contact: Mr. Robert B. Briggs, Clearance Officer, United States Department of Justice, Information Management and Security Staff, Justice Management Division, Suite 850, Washington Center, 1001 G Street, NW., Washington, DC 20530.

Dated: October 28, 1997.

Robert B. Briggs,

Department Clearance Officer, United States Department of Justice.

[FR Doc. 97–29047 Filed 10–31–97; 8:45 am]

BILLING CODE 4410–18–M

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (97–160]

National Environmental Policy Act; Earth Observing System Program

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Finding of no significant impact.

SUMMARY: Pursuant to the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. 4321, *et seq.*), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500–1508), and NASA policy and procedures (14 CFR Part 1216 Subpart 1216.3), NASA has made a finding of no significant impact (FONSI) with respect to the proposed Earth Observing System (EOS) Program, which would involve a series of Earth orbiting spacecraft to be launched over the time period of 1998 through 2014 from Vandenberg Air Force Base (VAFB), California.

DATES: Comments on the FONSI must be provided in writing to NASA on or before December 3, 1997.

ADDRESSES: Written comments should be addressed to Mr. Richard T. Beck, Deputy Director (Resources), Mission to Planet Earth Office, Code 170, NASA/Goddard Space Flight Center, Greenbelt, MD 20711. The Programmatic Environmental Assessment (PEA) prepared for the Earth Observing System Program which supports this FONSI may be reviewed at the following locations:

(a) NASA Headquarters, Library, Room 1J20, 300 E Street, SW, Washington, DC 20546.

(b) VAFB, Technical Library, Building 7015, 806 13th Street, Vandenberg AFB, CA 39437.

(c) Jet Propulsion Laboratory, Visitors Lobby, Building 249, 4800 Oak Grove Drive, Pasadena, CA 91109 (818–354–5179).

(d) Spaceport USA, Room 2001, John F. Kennedy Space Center, Florida, 32899. Please call Lisa Fowler beforehand at 407–867–2497 so that arrangements can be made.

The PEA may also be examined at the following NASA locations by contacting the pertinent Freedom of Information Act Office:

(e) NASA, Ames Research Center, Moffett Field, CA 94035 (650–604–4190).

(f) NASA, Dryden Flight Research Center, Edwards, CA 93523 (805–258–3448).

(g) NASA, Goddard Space Flight Center, Greenbelt, MD 20771 (301–286–0730).

(h) NASA, Johnson Space Center, Houston, TX 77058 (281–483–8612).

(i) NASA, Langley Research Center, Hampton, VA 23665 (757–864–2497).

(j) NASA, Lewis Research Center, 21000 Brookpark Rd, Cleveland, OH 44135 (216–433–2222).

(k) NASA, Marshall Space Flight Center, Huntsville, AL 35812 (205–544–0031).

(l) NASA, Stennis Space Center, MS 39529 (601–688–2164).

A limited number of copies of the PEA are available by contacting Mr. Richard T. Beck at the address or telephone number indicated herein.

FOR FURTHER INFORMATION CONTACT: Mr. Richard T. Beck, 301–286–6613.

SUPPLEMENTARY INFORMATION: NASA has reviewed the PEA prepared for the EOS Program and has determined that it represents an accurate and adequate analysis of the scope and level of associated environmental impacts. The PEA is incorporated by reference in this FONSI.

NASA is proposing to develop, build and launch a series of investigative spacecraft designed to provide global science data from a low-altitude, Sun-synchronous orbit over the time period of 1998 through 2014 from VAFB, California. EOS investigations would study the atmosphere, oceans, biosphere, land surface, and solid Earth systems. Spacecraft final assembly, propellant loading and checkout of payload systems would be performed in Payload Processing Facilities at VAFB. The spacecraft would then be transported to a Space Launch Complex at VAFB where it would be integrated with the launch vehicle. Due to varying payload weights and orbital requirements, Earth Observing System (EOS) spacecraft would require different launch vehicles. The launch vehicle selected as an environmental ''bounding case'' is the Delta II 7925.

The EROS Flight and Science projects focus on defining the state of the Earth system, understanding its basic processes, and developing and applying predictive models of these processes. All EROS instrument payloads are designed to measure physical Earth system phenomena from which specific data products can be derived. This effort would consist of both focused, disciplinary research centered around a specific data set and interdisciplinary research geared toward a broader exploration of systemic functions. Collecting data from the vantage point of space would provide information about Earth's land, atmosphere, oceans, ice and biota that is obtainable in no other way. In concert with the global research community, the EOS Program would spearhead the development of scientific knowledge required to support the complex national and international environmental policy decisions that lie ahead.

Alternative to the proposed action that were considered included those that: (1) utilize an alternate launch vehicle, (2) utilize an alternate launch site, or (3) cancel the Earth Observing System Program (the ''no action'' alternative). Failure to undertake the EOS Program would impede scientific progress toward understanding the natural environment and its response to human activity and would cause more U.S. dependence on foreign acquisition of these data. The resultant loss of continuity in Earth observation data acquisition could lead to not meeting national priorities with respect to management of the environmental global commons and may result in ineffective policy decisions with respect to managing the global commons. Of the launch vehicles evaluated, U.S. launch vehicles proposed for launch of EOS spacecraft (specifically the Atlas IIAS, Delta II 7925, Medium-Lite Expendable Launch Vehicles and the Pegasus) are best suited for the EOS Program for the following reasons: (1) the alternative launch vehicles examined are approximately equal in their potential impact to the environment, and these impacts are not substantial; (2) U.S. launch vehicles proposed closely match EOS performance requirements and allow for variations in payload size and weight; and (3) selected launch vehicles cost the same or less than the examined alternatives and are similar in terms of reliability. Of the launch sites evaluated, VAFB is best suited for the EOS Program for the following reasons: (1) the majority of EOS spacecraft would be launched to polar orbits, which require an orbital inclination greater than the maximum allowable inclination for Cape Canaveral Air Station launches; and (2) available information in the detail necessary to make a judgment as to environmental impact and differences in philosophy with regard to overflight of land for acceptable launch trajectory and debris risk is unavailable for foreign launch sites.

Expected impacts to the human environment associated with the program are bounded by and arise almost entirely from the normal launch of the Delta II 7925. Air emissions from the exhaust produced by the solid propellant graphite epoxy motors and liquid first stage primarily include carbon monoxide, hydrochloric acid, aluminum oxide in soluble and insoluble forms, carbon dioxide, and deluge water mixed with propellant by-products. Air impacts would be short-term and not substantial. Short-term water quality and noise impacts, as well as short-term effects on plants, and animals, would occur only in the vicinity of the launch complex. There would be no impact on threatened or endangered species of critical habitat, cultural resources, wetlands or floodplains. The EOS Program would follow the NASA guidelines regarding orbital debris and minimizing the risk of uncontrolled reentry into the Earth's atmosphere. Accident scenarios have also been addressed. None of the EOS Program missions will have radioactive materials aboard the spacecraft, except for the possibility of minute quantities on certain missions for instrumentation purposes. Consequently, no adverse impacts from radioactive substances are anticipated. No other individual or cumulative impacts of environmental concern have been identified.

The level and scope of environmental impacts associated with the launch of EOS spacecraft are well within the envelope of impact that have been addressed in previous FONSI's concerning other launch vehicles and spacecraft. EOS spacecraft would not increase launch rates nor utilize launch systems beyond the scope of approved programs at VAFB. No EOS-specific processing or launch activities have been identified that would require new permits and/or mitigation measures beyond those currently in place or in coordination at VAFB. No significant new circumstances or information relevant to environmental concerns associated with the launch vehicle have been identified which would affect the earlier findings. As specific spacecraft and missions are fully defined, they will be reviewed in light of the PEA. If any fall outside of the scope of the PEA, further NEPA review will be conducted, as necessary.

On the basis of the EOS, PEA, NASA has determined that the environmental impacts associated with the program would not individually or cumulatively have a significant impact on the quality of the human environment. NASA will take no final action prior to the expiration of the 30-day comment period.

William F. Townsend,

Acting Associate Administrator for Mission to Planet Earth.

[FR Doc. 97–28966 Filed 10–31–97; 8:45 am]

BILLING CODE 7510–01–M

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

National Council on the Humanities; Notice of A Meeting

October 28, 1997.

Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. 92–463, as amended), notice is hereby given that a meeting of the National Council on the Humanities will be held in Washington, D.C. on November 20–21, 1997.

The purpose of the meeting is to advise the Chairman of the National Endowment for the Humanities with respect to policies, programs, and procedures for carrying out his functions, to review applications for financial support submitted, and gifts offered to, the Endowment, and to make recommendations thereon to the Chairman.

The meeting will be held in the Old Post Office Building, 1100 Pennsylvania Avenue, N.W., Washington, D.C. A portion of the morning and afternoon sessions on November 20–21, 1997, will not be open to the public pursuant to subsections (c)(4), (6) and (9)(B) of section 552b of Title 5, United States Code because the Council will consider information that may disclose: trade secrets and commercial or financial information obtained from a person and privileged or confidential; information of a personal nature the disclosure of which will constitute a clearly unwarranted invasion of personal privacy; and information the disclosure of which would significantly frustrate implementation of proposed agency action. I have made this determination under the authority granted me by the Chairman's Delegation of Authority dated July 19, 1993.

The agenda for the session on November 20, 1997 will be as follows:

Committee Meetings

(Open to the Public)

9:00–10:30 a.m.

Policy Discussion
Research/Education Programs—Room M–07
Public Programs—Room 420
Challenge Grants and Preservation and Access—Room 415

9:30–12:00 p.m.

Federal/State Partnership—Room 507

(Closed to the Public)

10:30 a.m. until Adjourned

Discussion of specific grant applications before the Council
1:00–3:00 p.m.
Jefferson Lecture Committee—Room 430

The morning session on November 21, 1997 will convene at 10:00 a.m. in the 1st Floor Council Room, M–09. The session will be open to the public as set forth below:

I. Minutes of the Previous Meeting
II. Reports
A. Introductory Remarks
B. Staff Introductions
C. Budget Report
D. Congressional Report
E. Committee Reports on Policy & General Matters
1. Overview
2. Research and Education Programs
3. Public Programs
4. Federal/State Partnership
5. Preservation and Access and Challenge Grants
6. Jefferson Lecture

The remainder of the proposed meeting will be closed to the public for the reasons stated above. Further information about this meeting can be obtained from Ms. Nancy E. Weiss, Advisory Committee Management Officer, Washington, D.C. 20506, or call area code (202) 606–8322, TDD (202) 606–8282. Advance notice of any special needs or accommodations is appreciated.

Nancy E. Weiss,

Advisory Committee Management Officer.

[FR Doc. 97–28968 Filed 10–31–97; 8:45 am]

BILLING CODE 7536–01–M

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

Meeting of Humanities Panel

AGENCY: National Endowment for the Humanities.

ACTION: Notice of meetings.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. 92–463, as amended), notice is hereby given that the following meetings of the Humanities Panel will be held at the Old Post Office, 1100 Pennsylvania, N.W., Washington, D.C. 20506.

FOR FURTHER INFORMATION CONTACT: Nancy E. Weiss, Advisory Committee Management Officer, National Endowment for the Humanities, Washington, D.C. 20506; telephone (202) 606–8322. Hearing-impaired individuals are advised that information on this matter may be obtained by contacting the Endowment's TDD terminal on (202) 606–8282.

SUPPLEMENTARY INFORMATION: The proposed meetings are for the purpose of panel review, discussion, evaluation and recommendation on applications for financial assistance under the National Foundation on the Arts and the Humanities Act of 1965, as amended, including discussion of information given in confidence to the agency by the grant applicants. Because the proposed meetings will consider information that is likely to disclose trade secrets and commercial or financial information obtained from a person and privileged or confidential and/or information of a personal nature the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, pursuant to authority granted me by the Chairman's Delegation of Authority to Close Advisory Committee meetings, dated July 19, 1993, I have determined that this meeting will be closed to the public pursuant to subsections (c)(4), and (6) of section 552b of Title 5, United States Code.

1. *Date:* November 3, 1997.
Time: 9:00 a.m. to 5:00 p.m.
Room: 415.
Program: The purpose of this meeting is to review applications submitted to Preservation and Access for the deadline of July 1, 1997.

2. *Date:* November 13, 1997.
Time: 9:00 a.m. to 5:00 p.m.
Room: 415.
Program: The purpose of this meeting is to review applications submitted to Preservation and Access for the deadline of July 1, 1997.

3. *Date:* November 18, 1997.
Time: 9:00 a.m. to 5:00 p.m.
Room: 415.
Program: The purpose of this meeting is to review applications submitted to Preservation and Access for the deadline of July 1, 1997.

Nancy E. Weiss,

Advisory Committee Management Officer.

[FR Doc. 97–28969 Filed 10–31–97; 8:45 am]

BILLING CODE 7536–01–M

NUCLEAR REGULATORY COMMISSION

Sunshine Act Meeting

AGENCY HOLDING THE MEETING: Nuclear Regulatory Commission.

DATES: Weeks of November 3, 10, 17, and 24, 1997.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

MATTERS TO BE CONSIDERED:

Week of November 3

Tuesday, November 4

10:00 a.m. Briefing by the Executive Branch (Closed—Ex. 1)

11:00 a.m. Briefing on Investigative Matters (Closed—Ex. 5 & 6)
2:00 p.m. Meeting with Commonwealth Edison (Public Meeting) (Contact: Bob Capra—301–415–1395)

Wednesday, November 5

9:30 a.m. Briefing on Proposed Resolution to a Petition for Rulemaking Relating to Use of Potassium Iodide (KI) following Severe Accident at a Nuclear Power Plant (Public Meeting)
11:00 a.m. Affirmation Session (Public Meeting)

(Please Note: These items will be affirmed immediately following the conclusion of the preceding meeting)

a. Final Amendments to 10 CFR Part 73, ''Changes to Nuclear Power Plants Security Requirements''

b. Final rule on Exempt Distribution and Use of a Radioactive Drug Containing One Microcurie of Carbon 14 Urea (Parts 30 and 32)

Week of November 31—Tentative

There are no meetings the week of November 10.

Week of November 17—Tentative

Friday, November 21

11:30 a.m. Affirmation Session (Public Meeting) (if needed)

Week of November 24—Tentative

There are no meetings the week of November 24.

ADDITIONAL INFORMATION: The Commission meeting, ''Briefing on Staff's Plans for 50.59 Regulatory Process Improvements,'' previously scheduled on Wednesday, November 5, has been postponed. The rescheduled date for the meeting has not been set.

The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings call (Recording)—(301) 415–1292.

CONTACT PERSON FOR MORE INFORMATION: Bill Hill (301) 415–1661.

The NRC Commission Meeting Schedule can be found on the Internet at:http://www.nrc.gov/SECY/smj/schedule.htm

This notice is distributed by mail to several hundred subscribers: if you no longer wish to receive it, or would like to be added to it, please contact the Office of the Secretary, Attn: Operations Branch, Washington, D.C. 20555 (301–415–1661).

In addition, distribution of this meeting notice over the Internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to wmh@nrc.gov or dkw@nrc.gov.

Dated: October 29, 1997.

William M. Hill, Jr.,

Secretary Tracking Officer, Office of the Secretary.

[FR Doc. 97–29135 Filed 10–30–97; 12:24 p.m.]

[BILLING CODE 7590–01–M]

NUCLEAR REGULATORY COMMISSION

Workshop Notice To Solicit Public Comments on Draft Regulatory Guide and Standard Review Plan Section for Risk-Informed Inservice Inspection Programs for Piping at Nuclear Power Plants

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of change in date for workshop.

SUMMARY: The **Federal Register** notice, dated October 15, 1997 (Volume 62, Number 199, page 53663) announced the availability and solicited public comment on drafts of a regulatory guide and a Standard Review Plan Section for risk-informed inservice inspection programs for piping. These issuances follow the Commission's August 16, 1995 (60 FR 42622) policy statement on the ''Use of PRA Methods in Nuclear Regulatory Activities.'' In June 1997, the NRC published for public comment (62 FR 34321) four draft guides, three standard review plans and a NUREG series document on the use of PRA in nuclear power reactor licensing. The NRC is developing guidance for power reactor licensees on acceptable methods for using probabilistic risk assessment (PRA) information and insights in support of plant-specific applications to change the current licensing basis (CLB) for inservice inspection of piping, known as risk-informed inservice inspection (RI–ISI) programs. The use of such PRA information and guidance will be voluntary. To facilitate comment, the Commission will conduct a workshop to explain the draft documents and answer questions.

DATES: The workshop will be held on November 20–21, 1997 (not on November 19th, as announced in the October 15, 1997, **Federal Register**).

Registration

There is no registration fee for this workshop. However, we request that interested parties register in writing to Kesselman-Jones, 8912 James Ave., NE., Albuquerque, NM 87111, their intent on participating in the workshop. Please include name, organization, address and phone number with your registration request. Notification of attendance (e.g., pre-registration) is requested so that adequate space, etc., for the workshop can be arranged. Questions regarding meeting registration or fees should be directed to Kesselman-Jones, phone (505) 271–0003, fax (505) 271–0482, e-mail kessjones@aol.com.

Onsite registration begins on November 19 at 3:00 P.M. The comment period expires on January 13, 1997. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date. See the October 15, 1997 Notice for additional details.

Implementation

It is intended that the risk-informed regulatory guide on inservice inspection of piping (DG–1063), and its associated Standard Review Plan Section 3.9.8, be published by early to mid CY 1998.

Dated at Rockville, Maryland, this 29th day of October 1997.

For the Nuclear Regulatory Commission.

Mark A. Cunningham,

Chief, Probabilistic Risk Analysis Branch, Division of Systems Technology, Office of Nuclear Regulatory Research.

[FR Doc. 97–28989 Filed 10–31–97; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

NRC/Nuclear Pharmacy and Radiopharmaceutical Manufacturer Industry—Public Workshop on the Public Comments on Draft Regulatory Guides DG–0006 and DG–0007

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Notice of meeting.

SUMMARY: The U.S. Nuclear Regulatory Commission will be holding a public meeting to discuss the public comments received on two draft regulatory guides: Draft Regulatory Guide DG–0006, ''Guide for the Preparation of Applications for Commercial Nuclear Pharmacy Licenses,'' and Draft Regulatory Guide DG–0007, ''Guide for the Preparation of Applications for Licenses to Authorize Distribution of Various Items to Commercial Nuclear Pharmacies and Medical Use Licensees.'' These documents provide guidance to individuals applying for commercial nuclear pharmacy and radiopharmaceutical manufacturer distribution licenses. Representatives of

these categories of licensees have been invited to discuss the public comments on the draft guides and the staff's proposed resolutions of the comments, as well as alternative solutions presented at the meeting. (Draft Regulatory Guide DG–0007 also includes guidance for sealed source and device manufacturers, but since this guidance was not changed, it will not be discussed at this meeting.) The workshop will be held at NRC Headquarters in Rockville, MD.

DATES: The meeting will begin at 8:30 a.m. and close at 4:30 p.m., on November 21, 1997.

ADDRESSES: U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike (Auditorium), Rockville, MD 20852–2738.

FOR FURTHER INFORMATION CONTACT: Donna-Beth Howe, Ph.D., U.S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards, MS T8F5, Washington, DC 20555, telephone (301) 415–7848, e-mail dbh@nrc.gov.

SUPPLEMENTARY INFORMATION: NRC published three draft regulatory guides, in March 1997, for public comment. Two of the draft guides (Draft Regulatory Guide DG–0006, ''Guide for the Preparation of Applications for Commercial Nuclear Pharmacy Licenses,'' and Draft Regulatory Guide DG–0007, ''Guide for the Preparation of Applications for Licenses to Authorize Distribution of Various Items to Commercial Nuclear Pharmacies and Medical Use Licensees'') provide guidance to individuals applying for commercial nuclear pharmacy and radiopharmaceutical manufacturer distribution licenses issued pursuant to Title 10, *U.S. Code of Federal Regulations* (10 CFR) part 32, ''Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material.'' The third draft guide (Draft Regulatory Guide DG–0009, ''Proposed Supplement to Regulatory Guide 10.8, Revision 2, ''Guide for the Preparation of Applications for Medical Use Programs''') provides guidance for part 35 medical use licensees. The official comment period for all three guides closed July 31, 1997.

On November 21, 1997, NRC will be holding a public meeting, at NRC Headquarters, with invited nuclear pharmacy and radiopharmaceutical manufacturer industry representatives to discuss the public comments received on DG–0006 and DG–0007 and staff's proposed resolutions of these comments, as well as any alternatives presented at the meeting. In addition, the staff will explore, with the meeting participants, the extent to which these regulatory guides allow for flexibility in the licensing process and represent risk-informed and performance-oriented guidance.

The workshop will not address the third draft guide (DG–0009), which is for 10 CFR part 35 medical use licensees, and will not include discussion of the staff's efforts to revise part 35. Separate public meetings are being held to solicit public input on the revision of 10 CFR part 35 (62 FR 53249).

Larry W. Camper, Chief, Medical, Academic, and Commercial Use Safety Branch, will chair the workshop. To ensure participation by the spectrum of interests that may be impacted by the regulatory guides, a panel of nuclear pharmacy and radiopharmaceutical manufacturer industry representatives has been invited and will lead the discussion. Other members of the public are welcome to attend, and the public will have the opportunity to comment at periodic intervals during the workshop. To keep the workshop focused on the public comments and the staff's resolution of those comments, the workshop will have a pre-defined agenda, but the format will be sufficiently flexible to allow for the introduction of alternative resolutions to the comments and related issues that the participants may want to raise. The workshop commentary will be transcribed and made available to the invited participants and the public.

Persons who wish to provide a written statement should submit a reproducible copy to Dr. Howe (address listed previously) by November 15, 1997. Statements must pertain to the specific scope of the workshop. Persons who wish to obtain copies of the draft regulatory guides and public comments received may contact the NRC Public Document Room (PDR) or Dr. Howe.

The transcript and written comments will be available for inspection, and copying, for a fee, at the NRC PDR, 2120 L Street, N.W., Lower Level, Washington, DC 20555, or by writing to the U.S. Nuclear Regulatory Commission, Attention: NRC Public Document Room, Washington, DC 20555–0001, or by phoning (202) 634–3273, on or about December 1, 1997.

Dated at Rockville, MD this 28th day of October 1997.

For the Nuclear Regulatory Commission.

Steven L. Baggett,

Acting Chief, Medical, Academic and Commercial Use Safety Branch, Division of Industrial and Medical Nuclear Safety, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 97–28990 Filed 10–31–97; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Aviation Proceedings, Agreements Filed During the Week of October 24, 1997

The following Agreements were filed with the Department of Transportation under the provisions of 49 U.S.C. Sections 412 and 414. Answers may be filed within 21 days of date of filing.

Docket Number: OST–97–3027.
Date Filed: October 20, 1997.
Parties: Members of the International Air Transport Association.
Subject: PTC31 N/C 0040 dated October 14, 1997 r1–6, PTC31 N/C 0041 dated October 14, 1997 r7–8, PTC31 N/C 0042 dated October 14, 1997 r9, Expedited North & Central Pacific Resos, Intended effective date: as early as November 15, 1997.

Docket Number: OST–97–3028.
Date Filed: October 20, 1997.
Parties: Members of the International Air Transport Association.
Subject: PTC31 N/C 0039 dated October 14, 1997 r1 (015v), PTC31 N/C 0043 dated October 14, 1997 r2 (002p), Expedited North & Central Pacific Reso, Intended effective date: as early as November 15, 1997.

Docket Number: OST–97–3029.
Date Filed: October 20, 1997.
Parties: Members of the International Air Transport Association.
Subject: PTC123 0007 dated October 17, 1997, North/Mid/South Atlantic Expedited Reso 002q, Intended effective date: January 1, 1997.

Docket Number: OST–97–3030.
Date Filed: October 20, 1997.
Parties: Members of the International Air Transport Association.
Subject: PTC23 EUR–WP 0014 dated October 17, 1997, Europe-Southwest Pacific Expedited Resos r1–002j r2–015v, Intended effective date: December 1, 1997.

Docket Number: OST–97–3035.
Date Filed: 10/22/97.
Parties: Members of the International Air Transport Association.
Subject: PTC23 Telex Mail Vote 895, Zimbabwe-South Pacific fare increase,

Intended effective date: November 10, 1997.

Paulette V. Twine,

Documentary Services.

[FR Doc. 97–29008 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–62–P

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 Ending October 24, 1997

The following Applications for Certificate of Public Convenience and Necessity and Foreign Air Carrier Permits were filed under Subpart Q of the Department of Transportation's Procedural Regulations (See 14 CFR 302.1701 et. seq.). The due date for Answers, Conforming Applications, or Motions to Modify Scope are set forth below for each application. Following the Answer period DOT may process the application by expedited procedures. Such procedures may consist of the adoption of a show-cause order, a tentative order, or in appropriate cases a final order without further proceedings.

Docket Number: OST–97–3036.

Date Filed: October 22, 1997.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: November 19, 1997.

Description: Application of Singapore Airlines Limited pursuant to 49 U.S.C., Section 41301, and Subpart Q of the Regulations, applies for an amendment to its foreign air carrier permit authorizing SIA to operate scheduled combination and all-cargo services on the following routing: From points behind Singapore via Singapore and intermediate points to a point or points in the United States and beyond.

Docket Number: OST–97–3040.

Date Filed: October 23, 1997.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: November 20, 1997.

Description: Application of Valujet Airlines, Inc. d/b/a Air Tran Airlines, pursuant to U.S. CFR Part 215, and Subpart Q of the Regulations, requests the Department to register its new corporate name AIRTRAN AIRLINES, INC., reissue its Certificate in the name of AIRTRAN AIRLINES, INC., and grant such other relief that it may find to be in the public interest. It is further requested that the effective date for all such changes be November 18, 1997.

Docket Number: OST–97–3049.

Date Filed: October 24, 1997.

Due Date for Answers, Conforming Applications, or Motion to Modify Scope: November 21, 1997.

Description: Application of AIRPortland, Inc., pursuant to U.S.C. Section 41102 and Subpart Q of the Regulations, applies for a certificate of public convenience and necessity authorizing interstate scheduled air transportation of persons, property and mail: Between any point in any state in the United States or the District of Columbia, or any territory or possession of the United States, and any other point in any state of the United States or the District of Columbia, or any territory or possession of the United States.

Paulette V. Twine,

Documentary Services.

[FR Doc. 97–29009 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–62–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Training and Qualifications Issues—New Task

AGENCY: Federal Aviation Administration, (FAA), DOT.

ACTION: Notice of new task assignments for the Aviation Rulemaking Advisory Committee (ARAC).

SUMMARY: Notice is given of new tasks assigned to and accepted by the Aviation Rulemaking Advisory Committee (ARAC). This notice informs the public of the activities of ARAC.

FOR FURTHER INFORMATION CONTACT: Tom Toula, Federal Aviation Administration, Flight Standards Service, AFS–210, 800 Independence Avenue, SW., Washington, DC 20591; phone (202) 267–3729; fax (202) 267–5229.

SUPPLEMENTARY INFORMATION:

Background

The FAA has established an Aviation Rulemaking Advisory Committee to provide advice and recommendations to the FAA Administrator, through the Associate Administrator for Regulation and Certification, on the full range of the FAA's rulemaking activities with respect to aviation-related issues. This includes obtaining advice and recommendations on the FAA's commitment to harmonize its Federal Aviation Regulations (FAR) and practices with its trading partners in Europe and Canada.

One area ARAC deals with is training and qualifications issues. These issues involve training and qualification of air carrier crewmembers and other air transport employees.

The Tasks

This notice is to inform the public that the FAA has asked ARAC to provide advice and recommendation on the following harmonization tasks:

Task 1. Determine the benefits of licensing harmonization.

Task 2. Define criteria for Federal Aviation Administration (FAA) conversion of Joint Aviation Authorities (JAA) issued licenses, and for JAA conversion of FAA issued licenses. Consider only the Airline Transport Pilot license, except where that license might convert to only a Commercial pilot license. Include a review of type and class ratings and instructor ratings and qualifications, as and if necessary.

Task 3. Develop a recommendation, with justification, on whether the product (i.e., a specific level of license or certificate) should be harmonized, or the process (i.e., the curriculum, prerequisite experience, length of training, etc.) should be harmonized.

(a) If recommending that the product should be harmonized, develop a matrix of essential requirements for the FAA and JAA to impose on license holders of the other in order to convert licenses.

(b) If recommending that the process should be harmonized, develop a matrix of specific differences and how those differences should be equalized.

(c) Make specific recommendations about which FAA regulations or Joint Aviation Requirements should be changed to achieve the recommended actions. Any recommendations requiring changes to Title 14 of the Code of Federal Regulations must be forwarded to the FAA for consideration of rulemaking priority, resource allocation, and additional tasking to ARAC to develop rulemaking, as appropriate.

Task 4. Review the current standards of 14 CFR sections 61.75 and 61.77 as part of the overall task. In light of this review, recommend appropriate guidance material that could later be incorporated into advisory material or an appendix to 14 CFR part 61 that contains the criteria developed in task 3 (a) or (b) above.

The FAA expects ARAC to complete these tasks within 12 months and submit a report through ARAC to the FAA and to the JAA.

ARAC Acceptance of Tasks

ARAC has accepted the tasks and has chosen to establish a new Licensing Harmonization Working Group. The working group will serve as staff to

ARAC to assist ARAC in the analysis of the assigned task. Working group recommendations must be reviewed and approved by ARAC. If ARAC accepts the working group's recommendations, it forwards them to the FAA as ARAC recommendations.

Working Group Activity

As is the case with all harmonization working groups, meetings of the Licensing Harmonization Working Group will be held alternatively between the United States and Europe. Tentatively, the next two meetings will be held in Washington, DC, in January 1998 and in Hoofddorp, The Netherlands, in February 1998.

The Licensing Harmonization Working Group is expected to comply with the procedures adopted by ARAC. As part of the procedures, the working group is expected to:

1. Recommend to ARAC a work plan for completion of the tasks, including the rationale supporting such a plan, for consideration at the meeting of ARAC to consider Training and Qualifications Issues held following publication of this notice.

2. Give a detailed conceptual presentation to ARAC of the proposed recommendations, prior to proceeding with the work stated in item 3 below.

3. Provide a status report at each meeting of ARAC held to consider Training and Qualifications Issues.

Participation in the Working Group

The Licensing Harmonization Working Group is composed of experts having an interest in the assigned task. A working group member need not be a representative of a member of the full committee.

An individual who has expertise in the subject matter and wishes to become a member of the working group should write to the person listed under the caption **FOR FURTHER INFORMATION CONTACT** expressing that desire, describing his or her interest in the tasks, and stating the expertise he or she would bring to the working group. The request will be reviewed by the assistant chair, the assistant executive director, and the working group chair, and the individual will be advised whether or not the request can be accommodated. Requests to participate on the Licensing Harmonization Working Group should be submitted no later than November 28, 1997. To the extent possible, the composition of the working group will be balanced among the aviation interests selected to participate.

The Secretary of Transportation has determined that the formation and use of ARAC are necessary and in the public interest in connection with the performance of duties imposed on the FAA by law.

Meetings of ARAC will be open to the public. Meetings of the Licensing Harmonization Working Group will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on October 29, 1997.

Thomas K. Toula,

Assistant Executive Director for Training and Qualifications Issues, Aviation Rulemaking Advisory Committee.

[FR Doc. 97–29016 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

RTCA, Inc. Special Committee 187; Mode Select Beacon and Data Link System

Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (P.L. 92–463, 5 U.S.C., Appendix 2), notice is hereby given for Special Committee 187 meeting to be held on November 18, 1997, starting at 9:00 a.m. The meeting will be held at RTCA, 1140 Connecticut Avenue, N.W., Suite 1020, Washington, DC, 20036.

The agenda will be as follows: (1) Introductory Remarks; (2) Review and Approval of the Agenda; (3) Review and Approval of the Summary of the Previous Meeting; (4) Review and Approval of Change 3 to RTCA/DO–181A; (5) Review and Approval of Change 2 to RTCA/DO–218; (6) Other Business; (7) Date and Place of Next Meeting.

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the RTCA Secretariat, 1140 Connecticut Avenue, N.W., Suite 1020, Washington, D.C. 20036; (202) 833–9339 (phone); (202) 833–9434 (fax); or http://www.rtca.org (web site). Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on October 27, 1997.

Janice L. Peters,

Designated Official.

[FR Doc. 97–28986 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent To Rule on Application To Impose a Passenger Facility Charge (PFC) at Marquette County Airport, Marquette, MI and to Use the Revenue at Sawyer Airport, Marquette, MI

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of intent to rule on application.

SUMMARY: The FAA proposes to rule and invites public comment on the application to impose and use the revenue from a PFC at Marquette County Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Public Law 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

DATES: Comments must be received on or before December 3, 1997.

ADDRESSES: Comments on this application may be mailed or delivered in triplicate to the FAA at the following address:

Federal Aviation Administration, Detroit Airports District Office, Willow Run Airport, East, 8820 Beck Road, Belleville, Michigan 48111.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Mr. Harold R. Pawley, Airport Manager, of the County of Marquette Airport, at the following address: 198–B Airport Road, Negaunee, Michigan 49866.

Air carriers and foreign air carriers may submit copies of written comments previously provided to the County of Marquette under section 158.23 of part 158.

FOR FURTHER INFORMATION CONTACT: Mr. Jon Gilbert, Program Manager, Federal Aviation Administration, Detroit Airports District Office, Willow Run Airport, East, 8820 Beck Road, Belleville, Michigan 48111 (313) 487–7281). The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invites public comment on the application to impose a PFC at Marquette County Airport and use the revenue at Sawyer Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Public Law 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

On October 15, 1997, the FAA determined that the application to

impose and use a PFC submitted by Marquette County was substantially complete within the requirements of section 158.25 of Part 158. The FAA will approve or disapprove the application, in whole or in part, no later than January 17, 1998.

The following is a brief overview of the application.

PFC Application No.: 97–04–C–00–MQT.

Level of the proposed PFC: $3.00.

Proposed charge effective date: November 1, 1997.

Proposed charge expiration date: December 31, 1999.

Total estimated PFC revenue: $673,968.00.

Brief description of proposed projects at Sawyer Airport: (1) Airport Master Plan, (2) Install MALSR on Runway 01, (3) Construct Terminal Building—Design Only, (4) Install High Intensity Runway Lights (HIRL) on Runway 01/19, including airfield signs and marking, (5) Construct Terminal Building, (6) Install Security Fence (9,700± L.F.), and (7) Update Exhibit ''A'' Property Map. Class or classes of air carriers which the public agency has requested not be required to collect PFC's: FAR Part 135 operators who file Form 1800–31.

Any person may inspect the application in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**.

In addition, any person may, upon request, inspect the application, notice, and other documents germane to the application in person at the Marquette County Airport.

Issued in Des Plaines, Illinois, on October 24, 1997.

Benito De Leon,

Manager, Planning/Programming Branch, Airports Division, Great Lakes Region.

[FR Doc. 97–28987 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Indiana County, PA

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for a proposed highway project in Indiana County, Pennsylvania.

FOR FURTHER INFORMATION CONTACT: David W. Cough, P.E. District Engineer, Federal Highway Administration, Pennsylvania Division Office, 228 Walnut Street, Harrisburg, PA 17101–1720, Telephone: (717) 221–3411 -OR-Raymond Schilling, P.E., Project Manager, Pennsylvania Department of Transportation, District 10–0, Route 286 South, Box 429, Indiana, PA 15701, Telephone: (412) 357–2800.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Pennsylvania Department of Transportation (PennDOT), will prepare an Environmental Impact Statement (EIS) on a proposal to identify and evaluate alternatives for transportation improvements to a 13.4 kilometer (8.3 mile) section of US 119 from US 22 at Blairsville, Pennsylvania to the US 119 intersection with State Route 56 in Homer City, Pennsylvania. Included in the proposed project will be the identification of a range of alternatives that meet the identified project need, and supporting environmental documentation and analysis to recommend a selected alternative for implementation. A complete public involvement program is part of the proposed project. Cooperating agencies for this proposed project are the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and the PA Department of Environmental Protection.

Documentation of the need for the proposed project was completed in 1991. The need for roadway improvements for the proposed project was based on transportation and public/social service demands, economic development, and consistency with regional and local land use planning. A Preliminary Alternative Analysis Report was prepared in 1991 to identify and evaluate potential alternatives which would meet the project need. As a result of the preliminary alternatives analysis and public input, additional alternatives are being studied.

Alternatives under consideration include: No Build; Transportation System Management (TSM); Widen left on existing alignment; Widen right on existing alignment; Widening alternative that combines widening left and right; three eastern off-line alignments; and two western off-line alignments. These alternatives will be the basis for recommendation of alternatives to be carried forward for detailed environmental and engineering studies in the EIS. Incorporated into and studied with the various build alternatives will be design variations of grade and alignment.

Letters describing the proposed actions and soliciting comments will be sent to appropriate federal, state and local agencies and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. Public meetings will be held in the area throughout the study process. Public involvement and agency coordination will be maintained throughout the development of the EIS.

To ensure that the full range of issues related to the proposed action are addressed and all significant issues are identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to FHWA or PennDOT at the addresses provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program)

Issued: October 23, 1997.

J. Stephen Guhin,

FHWA Assistant Division Administrator, Harrisburg, Pennsylvania.

[FR Doc. 97–29015 Filed 10–31–97; 8:45 am]

BILLING CODE 4910–22–M

DEPARTMENT OF THE TREASURY

Office of the Assistant Secretary for Economic Policy

Survey of United States Ownership of Foreign Long-Term Securities as of December 31, 1997

AGENCY: Department Offices, Department of the Treasury.

ACTION: Notice of reporting requirements.

SUMMARY: By this Notice, the Department of the Treasury is informing the public that it is conducting a mandatory survey of the ownership of foreign long-term securities by United States residents as of December 31, 1997. This Notice constitutes legal notification to all United States persons (defined below) who meet the reporting requirements set forth in this Notice that they must respond to, and comply with, this survey. United States persons who meet the reporting requirements but who do not receive a set of the survey forms and instructions should contact the Department of the Treasury at (202) 622–2240 to obtain a copy.

Definition: A U.S. person is any individual, branch, partnership, associated group, association, estate, trust, corporation, or other organization (whether or not organized under the

laws of any State), and any government (including a foreign government, the United States Government, a state, provincial, or local government, and any agency, corporation, financial institution, or other entity or instrumentality thereof, including a government-sponsored agency), who resides in the United States or is subject to the jurisdiction of the United States.

Who Must Report: The following U.S. persons must report on this survey:

—U.S. persons who manage as custodians the safekeeping of foreign long-term securities (as specified below) for United States persons. These U.S. persons, who include the affiliates in the United States of foreign entities, must report on this survey if the total market value of the foreign long-term securities whose safekeeping they manage on behalf of U.S. persons—aggregated over all accounts and for all branches and affiliates of their firm—is $20 million or more as of December 31, 1997.

—U.S. persons who own foreign long-term securities, if the total market value of their securities owned is $20 million or more as of December 31, 1997.

What To Report: The survey will measure U.S. holdings of all foreign equity securities, and all foreign debt securities with an original term-to-maturity in excess of one year.

How To Report: Copies of the survey forms and instructions, which contain complete information on reporting procedures, can be obtained by contacting the survey staff at (202) 622–2240.

When To Report: Data should be submitted to the Department of the Treasury by March 31, 1998.

Dated: October 22, 1997.

Robert Gillingham,

Deputy Assistant Secretary Policy Coordination.

[FR Doc. 97–29021 Filed 10–31–97; 8:45 am]

BILLING CODE 4810–25–M

Corrections

Federal Register

Vol. 62, No. 212

Monday, November 3, 1997

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 600

[Docket No. 970829214–7214–01;I.D. 082097B]

RIN 0648–AJ76

Magnuson-Stevens Act Provisions; Observer Health and Safety

Correction

In proposed rule document 97–28440, beginning on page 55774, in the issue of Tuesday, October 28, 1997, make the following correction:

On page 55775, in the second column, in the last line, ''49464'' should read ''49463''.

BILLING CODE 1505-01-D

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 600 and 606

[Docket No. 97N-0242]

Biological Products; Reporting of Errors and Accidents in Manufacturing

Correction

In proposed rule document 97–25129 beginning on page 49642, in the issue of Tuesday, September 23, 1997, make the following correction:

On page 49642, in the second column, in the **DATES** section, in the last line, ''March 23, 1998.'' should read ''180 days after its date of publication in the **Federal Register**.''

BILLING CODE 1505-01-D

DEPARTMENT OF LABOR

Employment Standards Administration

Proposed Collection; Comment Request

Correction

In notice document 97–28258, beginning on page 55428, in the issue of Friday, October 24, 1997 make the following corrections:

On page 55429, in the first column:

1. Under the heading *OMB Number*, ''15-0037'' should read ''1215-0037''.

2. Above the signature line, ''Dated: October 2, 1997'' should read ''Dated: October 20, 1997''.

BILLING CODE 1505-01-D

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-315 and 50-316]

Indiana Michigan Power Company; Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination and Opportunity for a Hearing

Correction

In notice document 97–28003, beginning on page 54861, in the issue of Wednesday, October 22, 1997 make the following correction:

On page 54863, in the second column, in the second full paragraph, in the third line ''October 8, 1997'' should read ''September 19, 1997''.

BILLING CODE 1505-01-D

federal register

Monday
November 3, 1997

Part II

Environmental Protection Agency

40 CFR Parts 141 and 142
National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts; Notice of Data Availability; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 141 and 142

[WH–FRL–5915–3]

National Primary Drinking Water Regulations: Disinfectants and Disinfection Byproducts Notice of Data Availability

AGENCY: U.S. Environmental Protection Agency (USEPA).

ACTION: Notice of data availability.

SUMMARY: In 1994 USEPA proposed a Stage 1 Disinfectants/Disinfection Byproducts Rule (DBPR) to reduce the level of exposure from disinfectants and disinfection byproducts (DBPs) in drinking water (USEPA, 1994b). This Notice of Data Availability summarizes the 1994 proposal; describes new data and information that the Agency has obtained and analyses that have been developed since the proposal; provides information concerning recommendations of the Microbial-Disinfection/Disinfectants Byproducts (M–DBP) Advisory Committee (chartered in February 1997 under the Federal Advisory Committee Act) on key issues related to the proposal; and requests comment on these recommendations as well as on other regulatory implications that flow from the new data and information. USEPA solicits comment on all aspects of this Notice and the supporting record. The Agency also solicits additional data and information that may be relevant to the issues discussed in the Notice. USEPA is particularly interested in public comment on the Committee's recommendations and whether the Agency should reflect these recommendations in the final rule. USEPA also requests that any information, data or views submitted to the Agency since the close of the comment period on the 1994 proposal that members of the public would like the Agency to consider as part of the final rule development process be resubmitted during this current 90-day comment period unless already in the underlying record in the Docket for this Notice.

The Stage 1 DBPR would apply to community water systems and nontransient noncommunity water systems that treat their water with a chemical disinfectant for either primary or residual treatment. In addition, certain requirements for chlorine dioxide would apply to transient noncommunity water systems because of the short-term health effects from high levels of chlorine dioxide.

Key issues related to the Stage 1 DBPR that are addressed in this Notice include the establishment of Maximum Contaminant Levels for total trihalomethanes, five haloacetic acids, bromate and chlorite; requirements for enhanced coagulation and enhanced softening; disinfection credit; health effects information; and analytical methods.

Today's **Federal Register** also contains a related Notice of Data Availability for the Interim Enhanced Surface Water Treatment Rule (IESWTR). USEPA proposed this rule at the same time as the Stage 1 DBPR and plans to promulgate it along with the Stage 1 DBPR in November 1998.

DATES: Comments should be postmarked or delivered by hand on or before February 3, 1998. Comments must be received or post-marked by midnight February 3, 1998.

ADDRESSES: Send written comments to DBP NODA Docket Clerk, Water Docket (MC–4101); U.S. Environmental Protection Agency; 401 M Street, SW; Washington, DC 20460. Please submit an original and three copies of your comments and enclosures (including references). If you wish to hand-deliver your comments, please call the Docket between 9:00 a.m. and 4 p.m., Monday through Friday, excluding legal holidays, to obtain the room number for the Docket. Comments may be submitted electronically to ow-docket@epamail.epa.gov.

FOR FURTHER INFORMATION CONTACT: The Safe Drinking Water Hotline, Telephone (800) 426–4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding Federal holidays, from 9:00 am to 5:30 pm Eastern Time. For technical inquiries, contact Thomas Grubbs or William Hamele, Office of Ground Water and Drinking Water (MC 4607), U.S. Environmental Protection Agency, 401 M Street SW, Washington DC 20460; telephone (202) 260–7270 (Grubbs) or (202) 260–2584 (Hamele).

Regional Contacts

I. Kevin Reilly, Water Supply Section, JFK Federal Bldg., Room 203, Boston, MA 02203, (617) 565–3616
II. Michael Lowy, Water Supply Section, 290 Broadway, 24th Floor, New York, NY 10007–1866, (212) 637–3830
III. Jason Gambatese, Drinking Water Section (3WM41), 841 Chestnut Building, Philadelphia, PA 19107, (215) 566–5759
IV. David Parker, Water Supply Section, 345 Courtland Street, Atlanta, GA 30365, (404) 562–9460
V. Kimberly Harris (micro), Miguel Del Toral (DBP), Water Supply Section, 77 W. Jackson Blvd., Chicago, IL 60604, (312) 886–4239 (Harris), (312) 886–5253 (Del Toral)
VI. Blake L. Atkins, Team Leader, Water Supply Section, 1445 Ross Avenue, Dallas, TX 75202, (214) 665–2297
VII. Stan Calow, State Programs Section, 726 Minnesota Ave., Kansas City, KS 66101, (913) 551–7410
VIII. Bob Clement, Public Water Supply Section, (8WM–DW), 999 18th Street, Suite 500, Denver, CO 80202–2466, (303) 312–6653
IX. Bruce Macler, Water Supply Section, 75 Hawthorne Street, San Francisco, CA 94105, (415) 744–1884
X. Wendy Marshall, Drinking Water Unit, 1200 Sixth Avenue (OW–136), Seattle, WA 98101, (206) 553–1890

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by the Stage 1 DBPR are public water systems that add a disinfectant or oxidant. Regulated categories and entities include:

Category	Examples of regulated entities
Public Water System.	Community water systems that add disinfectant or oxidant.
State Governments.	State government offices that regulate drinking water.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the Stage 1 DBPR. This table lists the types of entities that EPA is now aware could potentially be regulated by the rule. Other types of entities not listed in this table could also be regulated. To determine whether your facility may be regulated by this action, you should carefully examine the applicability criteria in § 141.130 of the proposed rule published on July 29, 1994 at 59 FR 38668 (USEPA, 1994b). If you have questions regarding the applicability of this action to a particular entity, contact one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Additional Information for Commenters

The Agency requests that commenters follow the following format: type or print comments in ink, and cite, where possible, the paragraph(s) in this Notice to which each comment refers. Commenters should use a separate paragraph for each method or issue discussed. Electronic comments must be submitted as a WP5.1 or WP6.1 file or as an ASCII file avoiding the use of special characters and any form of name

or title of the **Federal Register**. Comments and data will also be accepted on disks in WordPerfect in 5.1 or WP6.1 or ASCII file format. Electronic comments on this Notice may be filed online at many Federal Depository Libraries. Commenters who want EPA to acknowledge receipt of their comments should include a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted.

Availability of Record

The record for this Notice, which includes supporting documentation as well as printed, paper versions of electronic comments, is available for inspection from 9 to 4 p.m., Monday through Friday, excluding legal holidays at the Water Docket, U.S. EPA Headquarters, 401 M. St., S.W. Washington, D.C. 20460. For access to docket materials, please call 202/260–3027 to schedule an appointment and obtain the room number.

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Abbreviations Used in This Notice

AOC: Assimilable organic carbon
ASDWA: Association of State Drinking Water Administrators
AWWA: American Water Works Association
AWWARF: AWWA Research Foundation
AWWSCo: American Water Works Service Company
BAC: Biologically active carbon
BAF: Biologically active filtration
BAT: Best Available Technology
BCAA: Bromochloroacetic acid
BDOC: Biodegradable organic carbon
CT: Contact time
CWS: Community Water System
DBP: Disinfection byproducts
D/DBP: Disinfectants and disinfection byproducts
DBPRAM: DBP Regulatory Analysis Model
DOC: Dissolved Organic Carbon
EPA: United States Environmental Protection Agency
ESWTR: Enhanced Surface Water Treatment Rule
FACA: Federal Advisory Committee Act
FY: Fiscal year
GAC: Granular Activated Carbon
GWDR: Ground Water Disinfection Rule
HAA5: Haloacetic acids (five)
IC: Ion chromotography
ICR: Information Collection Rule
ILSI: International Life Sciences Institute
IOC: Inorganic chemical
LOAEL: Lowest observed adverse effect level
MCL: Maximum Contaminant Level (expressed as mg/l, 1,000 micrograms (µg)=1 milligram (mg))
MCLG: Maximum Contaminant Level Goal
M–DBP: Microbial and Disinfectants/Disinfection Byproducts
MDL: Method Detection Limit
mg/dl: Milligrams per deciliter
mg/L: Milligrams per liter
MGD: Million Gallons per Day
MRDL: Maximum Residual Disinfectant Level (as mg/l)
MRDLG: Maximum Residual Disinfectant Level Goal
MWDSC: Metropolitan Water District of Southern California
NCI: National Cancer Institute
NIPDWR: National Interim Primary Drinking Water Regulation
NOAEL: No observed adverse effect level
NOM: Natural Organic Matter
NPDWR: National Primary Drinking Water Regulation
NTNCWS: Nontransient noncommunity water system
O&M: Operations and maintenance
PE: Performance evaluation
PODR: Point of Diminishing Returns
POE: Point-of-Entry Technologies
POU: Point-of-Use Technologies
ppb: Parts per billion
PQL: Practical Quantitation Level
PWS: Public Water System
RIA: Regulatory Impact Analysis
RMCL: Recommended Maximum Contaminant Level
SAB: Science Advisory board
SDWA: Safe Drinking Water Act, or the ''Act,'' as amended in 1986
SUVA: Specific ultraviolet absorbance at 254 nm
SWTR: Surface Water Treatment Rule
TOC: Total organic carbon
TTHM: Total trihalomethanes
TWG: Technical Working Group
UNC: University of North Carolina
VOC: Volatile Synthetic Organic Chemical
WIDB: Water Industry Data Base
WITAF: Water Industry Technical Action Fund

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I. Introduction and Background

A. Existing Regulations

1. Surface Water Treatment Rule

Under the Surface Water Treatment Rule (SWTR)(USEPA, 1989a), USEPA set maximum contaminant level goals of zero for *Giardia lamblia*, viruses, and *Legionella*; and promulgated national primary drinking water regulations for all public water systems (PWSs) using surface water sources or ground water sources under the direct influence of surface water. The SWTR includes treatment technique requirements for filtered and unfiltered systems that are intended to protect against the adverse health effects of exposure to *Giardia lamblia*, viruses, and *Legionella*, as well as many other pathogenic organisms. Briefly, those requirements include (1) removal or inactivation of 3 logs (99.9%) for *Giardia* and 4 logs (99.99%) for viruses (2) combined filter effluent performance of 5 NTU as a maximum and 0.5 NTU at 95th percentile monthly, based on 4-hour monitoring for treatment plants using conventional treatment or direct filtration (with separate standards for other filtration technologies); and (3) watershed protection and other requirements for unfiltered systems.

2. Total trihalomethane MCL

USEPA set an interim maximum contaminant level (MCL) for total trihalomethanes (TTHMs) of 0.10 mg/l as an annual average in November 1979 (USEPA, 1979). This standard was based on the need to balance the requirement for continued disinfection of water to reduce exposure to pathogenic microorganisms while simultaneously lowering exposure to disinfection byproducts which might be carcinogenic to humans.

The interim TTHM standard only applies to any PWSs (surface water and/or ground water) serving at least 10,000 people that add a disinfectant to the drinking water during any part of the treatment process. At their discretion, States may extend coverage to smaller PWSs. However, most States have not exercised this option. About 80 percent of the PWSs, serving populations of less than 10,000, are served by ground water that is generally low in THM precursor content (USEPA, 1979) and which would be expected to have low TTHM levels even if they disinfect.

3. Total Coliform Rule

The Total Coliform Rule (USEPA, 1989b) was revised in June 1989, and became effective on December 31, 1990. The rule, which applies to all public water systems, sets compliance with the maximum contaminant level (MCL) for total coliforms as follows. For systems that collect 40 or more samples per month, no more than 5.0% of the samples may be total coliform-positives; for those that collect fewer than 40 samples, only one sample may be total coliform-positive. If a system exceeds the MCL for a month, it must notify the public using mandatory language developed by the USEPA. The required monitoring frequency for a system ranges from 480 samples per month for the largest systems to once annually for certain of the smallest systems. All systems must have a written plan identifying where samples are to be collected. In addition, systems are required to conduct repeat sampling after a positive sample.

The Total Coliform Rule also requires each system that collects fewer than five samples per month to have the system inspected every 5 years (10 years for certain types of systems using only protected and disinfected ground water.) This on-site inspection (referred to as a sanitary survey) must be performed by the state or by an agent approved by the state.

4. Information Collection Rule

The Information Collection Rule (ICR) is a monitoring and data reporting rule that was promulgated on May 14, 1996 (USEPA, 1996b). The purpose of the ICR is to collect occurrence and treatment information to evaluate the need for possible changes to the current Surface Water Treatment Rule and existing microbial treatment practices and to evaluate the need for future regulation for disinfectants and DBPs. The ICR will provide USEPA with additional information on the national occurrence in drinking water of (1) chemical byproducts that form when disinfectants used for microbial control react with compounds already present in source water and (2) disease-causing microorganisms, including *Cryptosporidium, Giardia,* and viruses. The ICR will also collect engineering data on how PWSs currently control such contaminants. This information is being collected because the regulatory negotiation on disinfectants and DBPs concluded that additional information was needed to assess the potential health problem created by the presence of DBPs and pathogens in drinking water and to assess the extent and severity of risk in order to make sound regulatory and public health decisions. The ICR will also provide information to support regulatory impact analyses for various regulatory options, and to help develop monitoring strategies for cost effectively implementing regulations.

B. Public Health Concerns To Be Addressed

In 1990, USEPA's Science Advisory Board, an independent panel established by Congress, cited drinking water contamination as one of the highest ranking environmental risks. The Science Advisory board reported that microbiological contaminants (e.g. bacteria, protozoa, viruses) are likely the greatest remaining health risk management challenge for drinking water suppliers. The control of microbiological contaminants is further complicated because commonly-used disinfection processes themselves may pose health risks. Conventional practices require the addition of disinfectant chemicals to the water that, while effective in controlling many harmful microorganisms, combine with organic matter in the water and form compounds known as disinfection byproducts (DBPs). One of the most complex questions facing water supply professionals is how to minimize the risks from these DBPs and still control microbial contaminants.

Chemical disinfectants (e.g., chlorine, chloramines, chlorine dioxide) are

added to drinking water to provide continuous disinfection throughout the distribution system. There is generally little health concern over exposure to the levels of the disinfectant residuals commonly found in finished drinking water. A number of organic DBPs, including some trihalomethanes (chloroform, bromoform, and bromodichloromethane) and some haloacetic acids (e.g., dichloroacetic acid) cause cancer in laboratory animals. Other DBPs cause reproductive or developmental effects in laboratory animals (e.g., chlorite). Bromate, a byproduct of ozonation, causes cancer in laboratory animals.

Several epidemiology studies have evaluated the association of chlorination and chloramination with several adverse outcomes including cancer, cardiovascular disease, and adverse reproductive outcomes. Several studies have reported small increases in bladder, colon, and rectal cancers. In some cases, these effects appeared to be associated with the duration of exposure and volume of water consumed. Data on DBPs and cardiovascular disease are inconclusive. Animal studies in the mid 1980's indicated a potential increase in the serum lipid levels in animals exposed to chlorinated water. However, in a cross-sectional epidemiology study in humans, comparing chlorinated and unchlorinated water supplies with varying water hardness, no adverse effects on serum lipid levels were found. Recent epidemiology studies have reported increased incidence of decreased birth weight, premature births, intrauterine growth retardation, and neural tube defects with chlorinated water. As with the other reported adverse outcomes from the epidemiology studies, there is considerable debate in the scientific community on the significance of these findings (USEPA, 1994a). A discussion of new health effects information that has become available since the 1994 proposal appears in Section VI of this Notice.

In order to accurately assess risk from DBPs, it is important to have information on human exposure to DBPs, information on the toxicity of the DBPs and an understanding of the mode of action of toxicity. The preamble to the 1994 proposed DBP rule presented information on the occurrence and exposure to the Stage 1 DBPs. The information presented in that preamble was summarized from the document ''Occurrence Assessment for Disinfectants and Disinfection By-products (Phase 6a) in Drinking Water'' (USEPA, 1992a) and from information presented as a part of the 1992 and 1993 Regulatory Negotiation process that led to the 1994 Stage 1 DBP proposal (see section D below). Since the proposal, USEPA has updated the document cited above with new occurrence and exposure information. Copies of the revised document, entitled ''Occurrence Assessment for Disinfectants and Disinfection Byproducts in Public Drinking Water Supplies'' (USEPA, 1997a) can be obtained from the Docket for this Notice. The Information Collection Rule (ICR) (USEPA, 1996b) will supply additional information on the occurrence of DBPs for the Stage 2 DBP rule; however, this ICR information will not be available in time for the Stage 1 DBP rule.

C. Statutory Provisions

1. SDWA and 1986 Provisions

The Safe Drinking Water Act (SDWA or the Act), as amended in 1986, requires USEPA to publish a ''maximum contaminant level goal'' (MCLG) for each contaminant which, in the judgement of the USEPA Administrator, ''may have any adverse effect on the health of persons and which are known or anticipated to occur in public water systems'' (Section 1412(b)(3)(A)). MCLGs are to be set at a level at which ''no known or anticipated adverse effect on the health of persons occur and which allows an adequate margin of safety'' (Section 1412(b)(4)).

The Act also requires that at the same time USEPA publishes an MCLG, which is a non-enforceable health goal, it also must publish a National Primary Drinking Water Regulation (NPDWR) that specifies either a maximum contaminant level (MCL) or treatment technique (Sections 1401(1) and 1412(a)(3)). USEPA is authorized to promulgate a NPDWR ''that requires the use of a treatment technique in lieu of establishing a MCL,'' if the Agency finds that ''it is not economically or technologically feasible to ascertain the level of the contaminant''.

Section 1414(c) of the Act requires each owner or operator of a public water system to give notice to the persons served by the system of any failure to comply with an MCL or treatment technique requirement of, or testing procedure prescribed by, a NPDWR and any failure to perform monitoring required by section 1445 of the Act.

Section 1412(b)(7)(C) of the SDWA requires the USEPA Administrator to publish a NPDWR ''specifying criteria under which filtration (including coagulation and sedimentation, as appropriate) is required as a treatment technique for public water systems supplied by surface water sources''. In establishing these criteria, USEPA is required to consider ''the quality of source waters, protection afforded by watershed management, treatment practices (such as disinfection and length of water storage) and other factors relevant to protection of health''. This section of the Act also requires USEPA to promulgate a NPDWR requiring disinfection as a treatment technique for all public water systems and a rule specifying criteria by which variances to this requirement may be granted.

2. Changes to Initial Provisions and New Mandates

In 1996, Congress reauthorized the Safe Drinking Water Act. Several of the 1986 provisions discussed above were renumbered and augmented with additional language, while other sections mandate new drinking water requirements. These modifications, as well as new provisions, are detailed below.

As part of the 1996 amendments to the Safe Drinking Water Act (the Amendments), USEPA's general authority to set a MCLG and NPDWR was modified to apply to contaminants that may ''have an adverse effect on the health of persons'', that are ''known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern'', and for which ''in the sole judgement of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems' (1986 SDWA Section 1412 (b)(3)(A) stricken and amended with 1412(b)(1)(A)).

The Amendments also require that USEPA, when proposing a NPDWR that includes an MCL or treatment technique, publish and seek public comment on health risk reduction and cost analyses. The Amendments also require USEPA to take into consideration the effects of contaminants upon sensitive subpopulations (i.e. infants, children, pregnant women, the elderly, and individuals with a history of serious illness), and other relevant factors. (Section 1412 (b)(3)(C)).

The 1996 Amendments also newly require USEPA to promulgate an Interim Enhanced SWTR and a Stage I Disinfectants and Disinfection Byproducts Rule by November 1998. In addition, the 1996 Amendments require USEPA to promulgate a Final Enhanced SWTR and a Stage 2 Disinfection Byproducts Rule by November 2000 and May 2002, respectively (Section 1412(b)(2)(C)).

Under the Amendments of 1996, recordkeeping requirements were modified to apply to ''every person who is subject to a requirement of this title or who is a grantee'' (Section 1445 (a)(1)(A)). Such persons are required to ''establish and maintain such records, make such reports, conduct such monitoring, and provide such information as the Administrator may reasonably require by regulation * * *''.

D. Regulatory Negotiation Process

In 1992 USEPA initiated a negotiated rulemaking to develop a disinfectants/disinfection byproducts rule. The negotiators included representatives of State and local health and regulatory agencies, public water systems, elected officials, consumer groups and environmental groups. The Committee met from November 1992 through June 1993.

Early in the process, the negotiators agreed that large amounts of information necessary to understand how to optimize the use of disinfectants to concurrently minimize microbial and DBP risk on a plant-specific basis were unavailable. Nevertheless, the Committee agreed that USEPA propose a Disinfectant/Disinfection Byproducts rule to extend coverage to all community and nontransient noncommunity water systems that use disinfectants. This rule proposed to reduce the current TTHM MCL, regulate additional disinfection byproducts, set limits for the use of disinfectants, and reduce the level of organic compounds in the source water that may react with disinfectants to form byproducts.

One of the major goals addressed by the Committee was to develop an approach that would reduce the level of exposure from disinfectants and DBPs without undermining the control of microbial pathogens. The intention was to ensure that drinking water is microbiologically safe at the limits set for disinfectants and DBPs and that these chemicals do not pose an unacceptable risk at these limits.

Following months of intensive discussions and technical analysis, the Committee recommended the development of three sets of rules: a two-staged Disinfectants/Disinfection Byproduct Rule (proposal: 59 FR 38668, July 29, 1994), an ''interim'' ESWTR (proposal: 59 FR 38832, July 29, 1994), and an Information Collection rule (proposal: 59 FR 6332, February 10, 1994). The IESWTR would only apply to systems serving 10,000 people or more. The Committee agreed that a ''long-term'' ESWTR (LTESWTR) would be needed for systems serving fewer than 10,000 people when the results of more research and water quality monitoring became available. The LTESWTR could also include additional refinements for larger systems.

The approach in developing these proposals considered the constraints of simultaneously treating water to control for both microbial contaminants and DBPs. As part of this effort, the Negotiating Committee concluded that the SWTR may need to be revised to address health risk from high densities of pathogens in poorer quality source waters and from the protozoan, *Cryptosporidium*. The Committee also agreed that the schedules for IESWTR and LTESWTR should be ''linked'' to the schedule for the Stage 1 DBP Rule to assure simultaneous compliance and a balanced risk-risk based implementation. The Committee agreed that additional information on health risk, occurrence, treatment technologies, and analytical methods needed to be developed in order to better understand the risk-risk tradeoff, and how to accomplish an overall reduction in risk.

Finally the Negotiating Committee agreed that to develop a reasonable set of rules and to understand more fully the limitations of the current SWTR, additional field data were critical. Thus, a key component of the regulation negotiation agreement was the promulgation of the Information Collection Rule (ICR) noted above and described in more detail below.

E. Information Collection Rule

As stated above, the ICR established monitoring and data reporting requirements for large public water systems serving populations over 100,000. About 350 PWSs operating 500 treatment plants are involved in the data collection effort. Under the ICR, these PWSs monitor their source water for bacteria, viruses, and protozoa (surface water sources only); water quality factors affecting DBP formation; and DBPs within the treatment plant and in the distribution system. In addition, PWSs must provide operating data and a description of their treatment plan design. Finally, a subset of PWSs perform treatment studies, using either granular activated carbon or membrane processes, to evaluate DBP precursor removal. Monitoring for treatment study applicability began in September 1996. The remaining occurrence monitoring began in July 1997.

The initial intent of the ICR was to collect monitoring data and other information for use in developing the Stage 2 DBPR and IESWTR and to estimate national costs for various treatment options. However, because of delays in promulgating the ICR and technical difficulties associated with laboratory approval and review of facility sampling plans, most ICR monitoring did not begin until July 1, 1997. As a result of this delay and the new Stage 1 DBPR and IESWTR deadlines specified in the 1996 SDWA amendments, ICR data will not be available for analysis in connection with these rules. In place of the ICR data, the Agency has worked with stakeholders to identify additional data developed since 1994 that can be used in components of these rules. USEPA intends to continue to work with stakeholders in analyzing and using the comprehensive ICR data and research for developing subsequent revisions to the SWTR and the Stage 2 DBP Rule.

F. Formation of 1997 Federal Advisory Committee

In May 1996, the Agency initiated a series of public informational meetings to exchange information on issues related to microbial and disinfectants/disinfection byproducts regulations. To help meet the deadlines for the IESWTR and Stage 1 DBPR established by Congress in the 1996 SDWA Amendments and to maximize stakeholder participation, the Agency established the Microbial and Disinfectants/Disinfection Byproducts (M–DBP) Advisory Committee under the Federal Advisory Committee Act (FACA) on February 12, 1997, to collect, share, and analyze new information and data, as well as to build consensus on the regulatory implications of this new information. The Committee consists of 17 members representing USEPA, State and local public health and regulatory agencies, local elected officials, drinking water suppliers, chemical and equipment manufacturers, and public interest groups.

The Committee met five times, in March through July 1997, to discuss issues related to the IESWTR and Stage 1 DBPR. Technical support for these discussions was provided by a Technical Work Group (TWG) established by the Committee at its first meeting in March 1997. The Committee's activities resulted in the collection, development, evaluation, and presentation of substantial new data and information related to key elements of both proposed rules. The Committee reached agreement on the following major issues discussed in this Notice and the Notice for the IESWTR published elsewhere in today's **Federal Register**: (1) MCLs for TTHMs, HAA5 and bromate; (2) requirements for enhanced coagulation and enhanced softening (as part of DBP control); (3) microbial benchmarking/profiling to

provide a methodology and process by which a PWS and the State, working together, assure that there will be no significant reduction in microbial protection as the result of modifying disinfection practices in order to meet MCLs for TTHM and HAA5; (4) disinfection credit; (5) turbidity; (6) *Cryptosporidium* MCLG; (7) removal of *Cryptosporidium;* (8) role of *Cryptosporidium* inactivation as part of a multiple barrier concept and (9) sanitary surveys. The Committee's recommendations to USEPA on these issues were set forth in an Agreement In Principle document dated July 15, 1997. This document is included with this Notice as Appendix 1.

G. Overview of 1994 DBP Proposal

The proposed Disinfectants and Disinfection Byproducts Stage I Rule (DBPI) addressed a number of complex and interrelated drinking water issues. The proposal attempted to balance the control of health risks from compounds formed during drinking water disinfection against the risks from microbial organisms (such as *Giardia lamblia*, *Cryptosporidium*, bacteria, and viruses) to be controlled by the IESWTR.

The proposed Stage 1 DBP rule applied to all community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that treat their water with a chemical disinfectant for either primary or residual treatment. In addition, certain requirements for chlorine dioxide would apply to transient noncommunity water systems because of the short-term health effects from high levels of chlorine dioxide. Following is a summary of key components of the 1994 Stage 1 DBPR proposal.

1. MCLGs/MCLs/MRDLGs/MRDLs

EPA proposed MCLGs of zero for chloroform, bromodichloromethane, bromoform, bromate, and dichloroacetic acid and MCLGs of 0.06 mg/L for dibromochloromethane, 0.3 mg/L for trichloroacetic acid, 0.04 mg/L for chloral hydrate, and 0.08 mg/L for chlorite. In addition, EPA proposed to lower the MCL for TTHMs from 0.10 to 0.080 mg/L and added an MCL for five haloacetic acids (i.e., the sum of the concentrations of mono-, di-, and trichloroacetic acids and mono-and dibromoacetic acids) of 0.060 mg/L. EPA also, for the first time, proposed MCLs for two inorganic DBPs: 0.010 mg/L for bromate and 1.0 mg/L for chlorite.

In addition to proposing MCLGs and MCLs for several DBPs, EPA proposed maximum residual disinfectant level goals (MRDLGs) of 4 mg/L for chlorine and chloramines and 0.3 mg/L for chlorine dioxide. The Agency also proposed maximum residual disinfectant levels (MRDLs) for chlorine and chloramines of 4.0 mg/L, and 0.8 mg/L for chlorine dioxide. MRDLs protect public health by setting limits on the level of residual disinfectants in the distribution system. MRDLs are similar in concept to MCLs—MCLs set limits on contaminants and MRDLs set limits on residual disinfectants in the distribution system. MRDLs, like MCLs, are enforceable, while MRDLGs, like MCLGs, are not enforceable.

2. Best Available Technologies

EPA identified the best available (BAT) technology for achieving compliance with the MCLs for both TTHMs and HAA5 as enhanced coagulation or treatment with granular activated carbon with a ten minute empty bed contact time and 180 day reactivation frequency (GAC10), with chlorine as the primary and residual disinfectant. The BAT for achieving compliance with the MCL for bromate was control of ozone treatment process to reduce formation of bromate. The BAT for achieving compliance with the chlorite MCL was control of precursor removal treatment processes to reduce disinfectant demand, and control of chlorine dioxide treatment processes to reduce disinfectant levels. EPA identified BAT for achieving compliance with the MRDL for chlorine, chloramine, and chlorine dioxide as control of precursor removal treatment processes to reduce disinfectant demand, and control of disinfection treatment processes to reduce disinfectant levels.

3. Treatment Technique

EPA proposed a treatment technique that would require surface water systems and groundwater systems under the direct influence of surface water that use conventional treatment or precipitative softening to remove DBP precursors by enhanced coagulation or enhanced softening. A system would have been required to remove a certain percentage of TOC (based on raw water quality) prior to the point of continuous disinfection. EPA also proposed a procedure to be used by a PWS not able to meet the percent reduction, to allow them to comply with an alternative minimum TOC removal level. Compliance for systems required to operate with enhanced coagulation or enhanced softening was based on a running annual average, computed quarterly, of normalized monthly TOC percent reductions. A complete discussion of the proposed requirements is in Section III.A.

4. Preoxidation (Predisinfection) Credit

The proposed rule did not allow PWSs required to use enhanced coagulation or enhanced softening to take credit for compliance with disinfection requirements in the SWTR/IESWTR prior to removing required levels of precursors unless they met specified criteria. These criteria are explained in Section IV.A.

5. Analytical Methods

EPA proposed nine analytical methods (some of which can be used for multiple analytes) to ensure compliance with proposed MRDLs for chlorine, chloramines, and chlorine dioxide. The three disinfectant residuals were measured and reported as: chlorine as free chlorine (four methods) or total chlorine (five methods); chloramines as combined chlorine (three methods) or total chlorine (five methods); and chlorine dioxide as chlorine dioxide (3 methods). EPA proposed methods for the analysis of two classes of organic DBPs: TTHMs (three methods) and HAA5 (2 methods). In addition, EPA proposed one method for measuring both inorganic DBPs (chlorite and bromate) and two methods for total organic carbon (TOC).

6. New Information

Since July, 1994, new information has become available in several key areas related to issues put forth in the DBP Stage 1 proposal. The key issues where new information has become available since the proposal include the following: (1) MCLs; (2) Enhanced Coagulation and Enhanced Softening; (3) Predisinfection Credit; (4) Health Effects Information; (5) Analytical Methods; and (6) the Regulatory Impact Analysis (DBP and TOC occurrence, compliance decision tree). This information and its implications are discussed in more detail below.

II. Health Effects

The preamble to the 1994 proposed rule provided a summary of the health criteria documents for bromate; chloramines; haloacetic acids and chloral hydrate; chlorine; chlorine dioxide, chlorite, and chlorate; and trihalomethanes. The information presented in the proposal was used to establish MCLGs and MRDLGs for the disinfectants and DBPs listed above. Since the 1994 proposal, several epidemiology and toxicology studies have been completed. The study results need to be considered for the final Stage 1 DBPR. The following section briefly

discusses the new epidemiological and laboratory toxicology studies. In addition, USEPA has developed summaries of this new information and included these documents in the Docket for this action as ''Summaries of New Health Effects Data'' (USEPA, 1997b).

A. Cancer Epidemiology Studies

The preamble to the proposed rule discussed several cancer epidemiology studies that had been conducted over the past 20 years on chlorinated drinking water (see USEPA, 1994b). At the time of the proposed rule, there was disagreement among the members of the Negotiating Committee on the conclusions to be drawn from the cancer epidemiology studies. Some members of the Committee felt that the cancer epidemiology data, taken in conjunction with the results from toxicological studies, provide an ample and sufficient weight of evidence to conclude that exposure to DBPs in drinking water could result in an increased cancer risk at levels encountered in some public water supplies. Other members of the Committee concluded that the degree of resolution in cancer epidemiology studies on the consumption of chlorinated drinking water to date was insufficient to provide definitive information for the regulation. USEPA, therefore, agreed to pursue additional research to reduce the uncertainties associated with these epidemiology data and to better characterize and project the potential human cancer risks associated with the consumption of chlorinated drinking water. To implement this commitment, USEPA sponsored two expert panel reviews on the state of cancer epidemiology. Each of these panels recommended short and long-term research for improving the assessment of risks using cancer epidemiology.

1. Expert Panels Recommendations on Cancer Epidemiology

USEPA conducted an expert panel workshop in July 1994 on the scientific considerations for conducting cancer epidemiologic studies for DBPs (USEPA, 1994a). The expert panel presented the following conclusions.

(A)lthough ecological and analytic epidemiologic studies have reported associations between chlorinated water and cancer at various sites, many of the studies have methodologic problems or systematic biases that limit the interpretation of results. Moreover, the studies vary according to the amount of information available on exposure to chlorinated water or DBPs. The panel agrees that existing epidemiologic data are insufficient to conclude that the reported associations are causal or provide an accurate estimate of the magnitude of risk.

This cancer workshop panel also provided several recommendations for conducting additional research. These included: (1) improving exposure assessments; (2) conducting a reanalysis of previously conducted interview-based case control studies using improved exposure estimates and analytical methods to determine the validity of these risks and to address confounding factors and bias not adequately excluded in previous reports such as the meta-analysis completed by Morris, et al. (1992) discussed in the 1994 proposed rule (USEPA, 1994b, page 38689); (3) conducting feasibility studies to identify geographic locations with adequate exposure data and appropriate cohorts for study (including the possibility of using existing cohorts that are being studied for other potential exposures); and (4) consideration of several possible designs for full scale studies (i.e., cohort, case-control, and case-control nested within a cohort).

In October 1995, the International Life Sciences Institute (ILSI) sponsored a workshop on ''Disinfection by-products in Drinking Water: Critical Issues in Health Effects Research'' (ILSI, 1995). One of the panels at the workshop provided a brief summary of the findings from cancer epidemiology studies and made recommendations for further research in this area. The panel concluded that the epidemiological studies of bladder and colorectal cancer have generally shown an increased risk associated with the consumption of chlorinated surface water, although a causal association has not been conclusively established. The panel made several recommendations for future research including the need to conduct hypothesis driven cancer epidemiological studies to examine the risk of classes of DBPs other than THMs and to support these studies with improved exposure assessments.

2. Implementation of Expert Panel Recommendations

a. *Improve Exposure Assessments/ Geographic Identification Studies/ Classes of DBPs Other Than THMs.* USEPA, in conjunction with other parties, has begun research to provide the tools needed to improve exposure assessments for epidemiology studies. USEPA is supporting studies in Colorado, North Carolina, and New Jersey that will provide improved tools for conducting exposure assessments for epidemiology studies. While the results from these studies will not be available for the final Stage 1 DBP rule, they will be very useful in designing future epidemiology studies.

In addition to USEPA's research, the Microbial/DBP Research Council (M/DBP Council) is funding a study on ''Identification of Geographic Areas for Possible Epidemiological Studies'' and is evaluating several proposals for a project on ''Development of Methods for Predicting THM and HAA Concentrations in Exposure Assessment Studies.'' The M/DBP Council was formed as a joint USEPA and American Water Works Association Research Foundation (AWWARF) project to identify and fund critical research. This research, in conjunction with the USEPA research discussed above, will improve the understanding of risks associated with the consumption of chlorinated surface water. However, as with USEPA's work, this research will not be completed in time to impact the Stage 1 DBPR.

b. Meta-analysis of Existing Cancer Epidemiology Data. The 1994 proposal includes results of a meta-analysis that pooled the relative risks from 10 cancer epidemiology studies in which there was a presumed exposure to chlorinated water and its byproducts (Morris et al., 1992). This meta-analysis estimated that approximately 10,000 cancer cases each year could be attributed to the consumption of chlorinated drinking water and its byproducts. As discussed in the preamble to the proposed rule, this study generated considerable debate among the members of the Negotiation Committee. An evaluation of the Morris et al. meta-analysis has been recently completed for USEPA. USEPA is currently evaluating this report and will provide an opportunity to comment on EPA's assessment and implications for the regulatory provisions for the final Stage 1 DBPR.

In addition to the meta-analysis, USEPA has summarized several new cancer epidemiology studies and included them as part of the ''Summaries of New Health Effects Data'' (USEPA, 1997b) that is included in the Docket for this Notice. USEPA will be evaluating the data from the new epidemiology studies and will provide an opportunity to comment on the potential implications of these new studies for the regulatory provisions for the final Stage 1 DBPR.

B. Reproductive and Developmental Epidemiology Studies

The preamble to the 1994 proposal discussed several reproductive epidemiology studies that had been conducted (see USEPA, 1994b, page 38690). It also included a discussion of an USEPA and ILSI expert panel that reviewed the published epidemiologic and experimental data on reproductive

and developmental effects and a strategy developed by the panel for related short-term and long-term research (USEPA, 1993b). The panel concluded that the currently available data on the effects of chlorination byproducts provide an inadequate basis for identifying DBPs as a reproductive or developmental hazard. Recommendations were made for refining studies using existing data bases, strengthening studies designed to collect new data, improving exposure assessments, investigating selected health endpoints, and developing a stronger link between animal research and epidemiology studies.

The results from the ILSI expert panel, and additional information provided since the 1994 proposal, are summarized in Reif et al. (1996). This paper reviewed the available epidemiological data on the reported association between the consumption of chlorinated drinking water and reproductive and developmental effects. The panel reached the following conclusions. ''The currently available human studies on effects of chlorination by-products provide an inadequate basis for identifying DBPs as a reproductive or developmental hazard. Nevertheless, additional laboratory animal and epidemiological research should be conducted, employing a coordinated multi disciplinary approach.'' They also provided recommendations for short- and longer-term research.

1. Improving Exposure Assessments

Many of the exposure assessment projects identified above for cancer epidemiology are also relevant to improving exposure assessments for evaluating reproductive and developmental effects. As discussed in the cancer epidemiology section, while the results from these studies will not be available for the final Stage 1 DBPR, they will be very useful in designing future reproductive epidemiology studies.

2. New Studies Since Proposal

Since the proposal, several new reproductive and developmental epidemiology studies have been published. Additionally, studies in California and Colorado are nearing completion, but results will not be available for this NODA. Savitz et al. (1995) used data from a population-based case-control study to evaluate the potential risk of miscarriage, preterm delivery and low birth weight in North Carolina based on water source, amount of water consumed, and TTHM concentration in water. The authors concluded, ''These data do not indicate a strong association between chlorinated byproducts and adverse pregnancy outcome, but given the limited quality of the exposure assessment and the increased miscarriage risk in the higher exposure group, more refined evaluation is warranted.''

Kanitz et al. (1996) conducted an epidemiology study in Italy on the association between somatic parameters (e.g., birthweight, body length, cranial circumference, and neonatal jaundice) and drinking water disinfection with chlorine dioxide and/or sodium hypochlorite. The authors concluded, ''The study provides some new information on the possible association between some drinking water disinfection treatments and somatic parameters of infants at birth. Further investigations will be needed to verify the results of the present study by rigorous exposure assessments.''

The 1994 proposed rule reported the results of a New Jersey Department of Health report on the results of a cross-sectional study evaluating the association between drinking water contaminants with low birth weight and selected birth defects (Bove et al., 1992a, 1992b). Since the proposal, an article summarizing the cross-sectional study has been published by Bove et al. (1995). The results are consistent with those reported in the proposed Stage 1 DBPR. The authors concluded, ''By itself, this study cannot resolve whether the drinking water contaminants caused the adverse birth outcomes; therefore, these findings should be followed up utilizing available drinking water contamination databases.''

While the new epidemiology studies add to the database on the potential reproductive and developmental effects from DBPs, USEPA believes that the results are inconclusive. A more complete discussion of the new reproductive and development epidemiology studies can be found in the ''Summaries of New Health Effects Data'' (USEPA, 1997b).

C. Significant New Toxicological Information for the Stage 1 Disinfectants and Disinfection Byproducts

Since the proposal, new toxicological information has become available for several of the disinfectants and DBPs. The information presented below is a summary of the significant new information for several disinfectants and DBPs. For a more complete discussion of the new information see the ''Summaries of New Health Effects Data'' (USEPA, 1997b) in the Docket (a summary of the new information for chlorine and chloramines is not included below, but is included in the document cited above.)

1. Chlorite

The 1994 proposal included an MCLG of 0.08 mg/L and an MCL of 1.0 mg/L for chlorite. In order to fill an important data gap, the Chemical Manufacturers Association (CMA) agreed to conduct a two-generation reproductive effects study of chlorite. The Negotiating Committee agreed that if the studies indicated that a level of 1.0 mg/L of chlorite is safe, the MCL would remain at 1.0 mg/L. If the studies indicate that a level of 1.0 mg/L of chlorite is not safe or, if such a study is not conducted, the MCL would be re-evaluated.

After the Negotiating Committee agreed to support a proposed MCL of 1.0 mg/L, USEPA selected developmental neurotoxicity hazard as the critical effect for chlorite (Mobley et al., 1990). Based on this 1990 rat developmental study, an MCLG of 0.08 mg/L was derived for chlorite. USEPA believed that the MCL of 1.0 mg/L agreed to by the Committee was not adequate to protect the public from the acute developmental health effects of chlorite. USEPA decided to propose an MCL of 1.0 mg/L to honor the agreement of the Committee and requested comment on several possible approaches for promulgating the final rule.

Since the proposal, a study on the subchronic toxicity of sodium chlorite in rats (Harrington et al., 1995a) and a developmental toxicity study in rabbits (Harrington, et al., 1995b) have been published. Both of these studies reported no adverse toxicological effects. Other than the two-generation reproductive study cited above, which USEPA recently received, relevant new literature has not been found that would alter the assessment for chlorite from the 1994 proposal. USEPA is conducting an external peer review of the CMA two-generation reproductive study. These peer review comments will be included in the Docket for this NODA when they become available. USEPA will evaluate the data from the CMA study, including the peer review, and will provide an opportunity to comment on the potential implications for the regulatory provisions for chlorite prior to the final Stage 1 DBP rule. The CMA study is included in the Docket for this action (CMA, 1997).

2. Chlorine Dioxide

The proposed Stage 1 DBPR included a MRDLG of 0.3 mg/L and a MRDL of 0.8 mg/L for chlorine dioxide. The proposed MRDLG for chlorine dioxide was based on developmental neurotoxicity as the critical effect (Orme et al., 1985). The Negotiating Committee agreed to the MRDL of 0.8 mg/L for

chlorine dioxide with certain qualifications and reservations. As cited above, the Committee agreed that a two-generation reproductive study on chlorite would be completed for consideration in the final Stage 1 DBPR. Toxicity information on chlorite is considered relevant for characterizing the toxicity of chlorine dioxide. If the chlorite study indicated no concern from reproductive effects at 0.8 mg/L, then the proposed MRDL for chlorine dioxide would remain the same as proposed. If these new data indicate reproductive or developmental effects, then the MRDL will need to be re-examined comparing the tradeoffs and regulatory impacts of a lower chlorine dioxide MRDL and the positive aspects of using chlorine dioxide as a disinfectant.

Other than the two-generation reproductive study conducted by CMA for chlorite, there is no new literature that would alter the assessment for chlorine dioxide from the 1994 proposal. As stated above, USEPA believes that the results from the chlorite study are applicable for addressing the toxicity data gaps for chlorine dioxide. USEPA will evaluate the data from the CMA study, including the peer review, and will provide an opportunity to comment on the potential implications for the regulatory provisions for chlorine dioxide prior to the final Stage 1 DBP rule.

3. Trihalomethanes

The proposed rule includes an MCL for total trihalomethanes (TTHM) of 0.080 mg/L. MCLGs of zero for chloroform, bromodichloromethane (BDCM), and bromoform were based on sufficient evidence of carcinogenicity in animals. The MCLG of 0.060 mg/L for dibromochloromethane (DBCM) was based on observed liver toxicity from a subchronic study and possible carcinogenicity. Since the 1994 proposal, several new studies have been published on the metabolism for BDCM and chloroform (Testai et al., 1995; Gemma et al., 1996a, 1996b; Gao et al., 1996; Nakajima et al., 1995). In addition, several new studies were found concerning the genotoxicity of chloroform, BDCM, and bromoform (Roldan-Arjona and Pueyo, 1993; LeCurieux et al., 1995; Pegram et al., 1997; Larson et al., 1994c; Fujie et al., 1993; Shelby and Witt, 1995; Hayashi et al., 1992; Sofuni et al., 1996; Matsuoka et al., 1996; Miyagawa et al., 1995; Banerji and Fernandes, 1996; and Potter et al., 1996). There are considerable new data on cytotoxicity and regenerative cell proliferation in the liver and kidney of rats and mice under various conditions (Larson et al., 1993, 1994a, 1994b, 1994c, 1995a, 1995b, 1996; Templin et al., 1996a, 1996b). Many other studies also examined the mechanism of chloroform carcinogenicity, including studying the effects on methylation and expression of growth control genes (Fox et al., 1990, Vorce and Goodman, 1991, Dees and Travis, 1994, Testai et al., 1995, Sprankle et al., 1996, Chiu et al., 1996, Gemma et al., 1996a, 1996b). Short-term toxicity studies (Thorton-Manning et al., 1994; Lilly et al., 1994 and 1996) and chronic toxicity studies which included reproductive evaluations (Klinefelter et al., 1995) were found for BDCM.

The new studies on THMs contribute to the weight-of-evidence conclusions reached in the 1994 proposal. Based on the available new studies noted above, the proposed MCLGs for BDCM, DBCM, and bromoform are not anticipated to change.

The International Life Science Institute (ILSI) convened an expert panel in 1996 to explore the application of the USEPA's 1996 Proposed Guidelines for Carcinogen Risk Assessment (USEPA, 1996a) to the available data on the potential carcinogenicity of chloroform and dichloroacetic acid (DCA); these data include chronic bioassay data and information on mutagenicity, metabolism, toxicokinetics and mode of carcinogenic action. USEPA will be evaluating the data from the ILSI expert panel for chloroform and will provide an opportunity to comment on the potential implications for the regulatory provisions for chloroform and the trihalomethanes prior to the final Stage 1 DBP rule.

4. Haloacetic Acids

The proposed rule included an MCL of 0.060 mg/L for the haloacetic acids (five HAAs-monobromoacetic acid, dibromoacetic acid, monochloroacetic acid, dichloroacetic acid, and trichloroacetic acid) with an MCLG of zero for dichloroacetic acid (DCA) based on sufficient evidence of carcinogenicity in animals, and a MCLG of 0.3 mg/L for trichloroacetic acid (TCA) based on developmental toxicity and possible carcinogenicity.

There has been cancer research completed for other HAAs since the 1994 proposal. The 1994 proposal did not include an MCLG for monochloroacetic acid (MCA) because there were inadequate occurrence data for MCA. Since the proposal, a few toxicological studies on MCA have been identified. A recent 2-year carcinogenicity study on MCA and trichloroacetic acid (TCA) (DeAngelo et al., 1997) demonstrated that MCA and TCA were not carcinogenic in male rats. This confirms the results of the NTP (1990) cancer rodent bioassays of MCA. There have been several recent studies examining the mode of carcinogenic action for both DCA and TCA (Pereira and Phelps 1996; and Pereira 1996) including mutagenicity studies (Austin et al., 1996; Mackay et al., 1995; Fox et al., 1996; Fuscoe et al., 1996; Tao et al., 1996; and Parrish et al., 1996). As discussed above USEPA will evaluate the significance of the ILSI panel's report on the risk assessment for DCA and provide an opportunity to comment on the potential implications for the regulatory provisions for DCA and the other haloacetic acids prior to the final Stage 1 DBP rule.

Screening studies have shown the potential of different haloacetic acids, including DCA and brominated haloacetic acids, to produce reproductive and developmental effects (Linder et al., 1997c; Hunter et al., 1996; Richard and Hunter, 1996; Linder et al. 1994, 1995, 1997a, 1997b). At this time, these new studies are not expected to alter the MCLGs for DCA or TCA in the proposed rule. USEPA continues to believe that there are inadequate occurrence data to establish MCLGs for MCA, monobromoacetic acid and dibromoacetic acid.

5. Chloral Hydrate

The proposed rule included an MCLG of 0.04 mg/L for chloral hydrate. USEPA did not set an MCL for chloral hydrate because it believed the MCLs for TTHM and HAA5, and the treatment technique requirements would provide adequate control for chloral hydrate. In the 1994 proposal, chloral hydrate was considered a group C, possible human carcinogen. Since the 1994 proposal, several new studies have been published which contribute to the weight of evidence conclusion for the potential carcinogenicity of chloral hydrate. These include *in vitro* cell transformation and genotoxicity studies (Gibson et al., 1995; Adler, 1996; Allen et al., 1994; Parry et al., 1996; and Ni et al., 1996). Some screening studies were found concerning the potential of chloral hydrate to cause reproductive and developmental toxicity (Klinefelter et al., 1995 and Saillenfait et al., 1995). The available new studies mentioned above do not indicate a change in the MCLG for chloral hydrate.

6. Bromate

The proposed rule included an MCL of 0.010 mg/L and an MCLG of zero for bromate. A major issue in the proposal was that setting an MCL at 0.010 mg/L

would exceed the theoretical 1×10^{-4} lifetime excess cancer risk level for bromate of 5 ug/L. Since the proposal, several toxicology studies have been completed on bromate, including assays for reproductive and developmental effects (Wolfe and Kaiser, 1996).

USEPA has recently completed a chronic cancer study in male rats and male mice for bromate. USEPA is evaluating this data and will provide an opportunity for public comment on the potential implications for the regulatory provisions for bromate prior to the final rule.

D. Summary of Key Observations

Since the proposal, several epidemiology and toxicology studies have been completed on the potential health effects associated with exposure to DBPs. USEPA currently believes the new published data will not impact the MCLGs for BDCM, CDBM, bromoform, chloral hydrate, or trichloroacetic acid. However, USEPA is currently evaluating the results from new toxicology studies for chlorite and bromate and will evaluate the report from the ILSI expert panel on chloroform and DCA when it becomes available. USEPA will provide an opportunity to comment on the potential implications for the regulatory provisions for these DBPs prior to the final rule.

E. Request for Public Comments

USEPA requests comment on all the new information outlined above and its potential impacts on the regulatory provisions for the final Stage 1 DBPR and any additional data on the health effects from DBPs that need to be considered for the final Stage 1 DBPR.

III. Enhanced Coagulation and Enhanced Softening

A. 1994 Enhanced Coagulation and Enhanced Softening Proposal

As discussed above, the 1994 proposed rule for D/DBPs included enhanced coagulation/enhanced softening requirements in addition to maximum contaminant levels (MCLs) for total trihalomethanes (TTHMs) and the sum of five haloacetic acids (HAA5) (USEPA, 1994b). In that proposal, Subpart H systems (utilities treating either surface water or groundwater under the direct influence of surface water) that use conventional treatment (i.e., coagulation, sedimentation, and filtration) or precipitative softening would be required to remove DBP precursors by enhanced coagulation or enhanced softening. The removal of total organic carbon (TOC) would be used as a performance indicator for DBP precursor control. The 1994 proposed rule (in ''Step 1'' of the treatment technique) provided for 20–50 percent TOC removal, depending on influent water quality (Table III–1).

TABLE III–1.—1994 PROPOSED REQUIRED REMOVAL OF TOC BY ENHANCED COAGULATION/ENHANCED SOFTENING FOR SURFACE-WATER SYSTEMS [a] USING CONVENTIONAL TREATMENT [b]

Source-water TOC, mg/L	Source-water alkalinity, mg/L as $CaCO_3$		
	0–60 (percent)	>60–120 (percent)	>120 [c] (percent)
>2.0–4.0	40.0	30.0	20.0
>4.0–8.0	45.0	35.0	25.0
>8.0	50.0	40.0	30.0

[a] Also applies to utilities that treat groundwater under the influence of surface water.
[b] Systems meeting at least one of the conditions in Section 141.135(a)(1)(i)–(iv) of the proposed rule are not required to operate with enhanced coagulation.
[c] Systems practicing precipitative softening must meet the TOC removal requirements in this column.

The 1994 Stage I **Federal Register** notice proposed that systems achieve a percent TOC removal based on their influent TOC concentration and alkalinity. The proposed rule provided for a number of exceptions to the enhanced coagulation and enhanced softening requirements, namely: (a) When the system's treated water TOC concentration, prior to the point of continuous disinfection, is ≤2.0 mg/L (b) when the PWS's source water TOC level, prior to any treatment, is <4.0 mg/L; the alkalinity is >60 mg/L; and these systems are achieving TTHMs <0.040 mg/L and HAA5 <0.030 mg/L, or have made irrevocable financial commitments to technologies that will meet these levels; (c) the PWS's TTHM annual average is no more than 0.040 mg/L and the HAA5 annual average is no more than 0.030 mg/L and the system uses only chlorine for disinfection; and (d) PWSs practicing softening and removing at least 10 mg/L of magnesium hardness (as $CaCO_3$), except those that use ion exchange, are not subject to performance criteria for the removal of TOC.

As part of the enhanced coagulation requirements, the proposed rule indicated that if a PWS could not meet the prescribed TOC removal criteria, it must perform a series of jar or pilot-scale tests (''Step 2'') to determine how much TOC removal they can reasonably and practically achieve. This Step 2 requirement was created to handle the 10 percent of the waters that were not expected to meet the Step 1 criteria, and considerations as to what was practical to achieve involved a consensus-based balancing of policy and scientific perspectives.

The proposed jar-testing protocol involves adding regular-grade alum in 10 mg/L increments (or an equivalent amount of iron coagulant) until specific depressed pH goals are achieved (this was referred to as ''maximum pH'' in the proposal), which depends on influent alkalinity and what is practical to achieve. For the alkalinity ranges 0–60, >60–120, >120–240, and >240 mg/L as calcium carbonate ($CaCO_3$), the maximum pH values are 5.5, 6.3, 7.0, and 7.5, respectively. The maximum pH is a target pH goal for step 2 testing. The maximum pH is the pH value the tested water must be at or below before incremental coagulant addition is discontinued. The protocol was based on alum, as more data were available on the use of this coagulant in a wide variety of waters. However, the proposed rule allows for the use of iron coagulants in the step 2 jar testing.

The TOC of each jar-treated water is measured, and then the residual TOC is plotted versus alum dosage. The ''point of diminishing returns'' (PODR) is determined to be when 10 mg/L of additional alum (or an equivalent amount of iron coagulant) does not decrease residual TOC by 0.3 mg/L (i.e., slope of TOC versus alum dosage curve ≤[0.3 mg/L TOC]/[10 mg/L alum]). These data would be used by a utility

to request alternative TOC removal performance criteria from the primacy agency. However, one of the intents in setting the step 1 TOC removal percentages at the values chosen was to provide that 90 percent of the systems would not need to do step 2 testing. This would minimize transactional costs for the primacy agencies.

If the TOC removal curve never met the slope criterion at any coagulant dose, such a water would be considered unamenable to enhanced coagulation and no TOC removal would be required for such a water. Waters with low TOC and moderate-to-high alkalinity were expected to be some of the more difficult to treat with enhanced coagulation, so systems treating such waters were encouraged to explore alternative technologies (e.g., ozone/chloramines) that could reduce DBP levels significantly below the proposed Stage 1 MCLs (i.e., <50 percent of the proposed Stage 1 MCLs).

EPA solicited comments on all aspects of enhanced coagulation's step 2 protocol in the preamble to the rule, as well as on the step 1 TOC removal percentages including:

(1) Whether the TOC removal levels shown in Table III–1 are representative of what 90 percent of systems required to use enhanced coagulation could be expected to achieve with elevated, but not unreasonable, coagulant addition?

(2) Whether filtration should be required as part of the bench-pilot-scale procedure for determination of Step 2 enhanced coagulation? If so, what type of filter should be specified for bench-scale studies?

(3) Whether a slope of 0.3 mg/L of TOC removed per 10 mg/L of alum should be considered representative of the point of diminishing returns for coagulant addition under Step 2? Comments were also solicited on how the slope should be determined (e.g., point-to-point, curve-fitting); and if the slope varies above and below 0.3/10, where should the Step 2 alternate TOC removal requirement be set—at the first point below 0.3/10?, at some other point?

(4) How often bench- or pilot-scale studies should be performed to determine compliance under step 2? Should such frequency and duration of testing be included in the rule or left to guidance (i.e., allow the State to define what testing would be needed on a case by case basis for each system)? Is quarterly monitoring appropriate for all systems. What is the best method to present the testing data to the primacy agency that reflects changing influent water quality conditions and also keeps transactional costs to a minimum? How should compliance be determined if the system is not initially meeting the percent TOC reduction requirements because of a difficult to treat waters and a desire to demonstrate alternative performance criteria?

EPA also solicited comments on several issues related to the enhanced softening requirements including:

(1) 3×3 matrix: For softening plants, is enhanced softening properly defined by the percent removals in Table III–1 in this Notice, or by 10 mg/L removal of magnesium hardness reported as $CaCO_3$?

(2) Use of ferrous salts: Can ferrous salts be used at softening pH levels to further enhance TOC removals?

(3) Step 2: Whether data are available on the use of ferrous salts in the softening process which can help define a step 2 for softening? What is the definition of Step 2?

B. New Information on Enhanced Coagulation and Enhanced Softening since 1994 Proposal

Since the 1994 proposal, there has been considerable research on a number of enhanced coagulation and enhanced softening issues highlighted above in a wide variety of waters nationwide. A summary of the results of some of the studies and surveys are included below. Studies of enhanced coagulation are covered first, followed by discussion of enhanced softening studies. Note that a number of the softening studies looked at TOC removal in essentially the same framework as is used for enhanced coagulation, with emphasis on the coagulant and lime dose and geared toward finding a similar format for step 2 enhanced softening as was defined for enhanced coagulation. A number of these studies focused on the benefits of increased lime or coagulant doses in removing TOC in softening systems. Results of these studies generally showed that percent TOC removal is dependent on the raw water.

1. New Data on Enhanced Coagulation

a. UNC Enhanced Coagulation Study. To address many of the aforementioned issues, the University of North Carolina (UNC) at Chapel Hill, with funding from the Water Industry Technical Action Fund (WITAF), performed an enhanced coagulation study (Singer et al., 1995). The UNC research team evaluated a wide range of waters nationwide, which included at least three waters in each box of the 3×3 matrix in Table III–1. Each water was jartested in order to determine the feasibility of achieving the proposed step 1 TOC percent removal requirement for each water, as well as to assess the PODR criteria.

In addition, recognizing that coagulation primarily removes the humic fraction of the natural organic matter (NOM) in water (Owen et al., 1993), a determination of the percent humic content was made for each of the waters studied in order to better characterize the treatability of each water. NOM fractionation was performed on samples of each raw water and on select coagulated waters using an XAD–8 resin adsorption procedure (Thurman & Malcolm, 1981). In this procedure, the hydrophobic fraction of the water, which includes humic substances, was determined.

Furthermore, Edzwald and Van Benschoten (1990) have found the specific ultraviolet absorbance (SUVA) of a water to be a good indicator of the humic content of that water, so SUVA was also determined in the UNC study. SUVA is defined as the UV (measured in m^{-1}) divided by the dissolved organic carbon (DOC) concentration (measured as mg/L). Typically, SUVA values <3 L/mg-m are representative of largely nonhumic material, whereas SUVA values in the range of 4–5 L/m-mg represent mainly humic material (Edzwald & Van Benschoten, 1990).

Figures III–1 and III–2 represent a typical set of jar test results from the UNC study. In these tests, water from Raleigh, NC, with a TOC of 7.5 mg/L and alkalinity of 17 mg/L was evaluated (White et al., 1997). At low alum doses (<20 mg/L), an initial TOC (and turbidity) plateau was observed for which no removal of TOC (or turbidity) occurred with the coagulant addition. Following the addition of a ''threshold'' alum dose (20 mg/L), a steep drop in the concentration of TOC (and turbidity) was observed with increases in alum dose. As the alum dose increased further, the drop in TOC (and turbidity) decreased to a final plateau at which little to no additional removal of TOC (or turbidity) was seen with further increases in alum dose (>40 mg/L).

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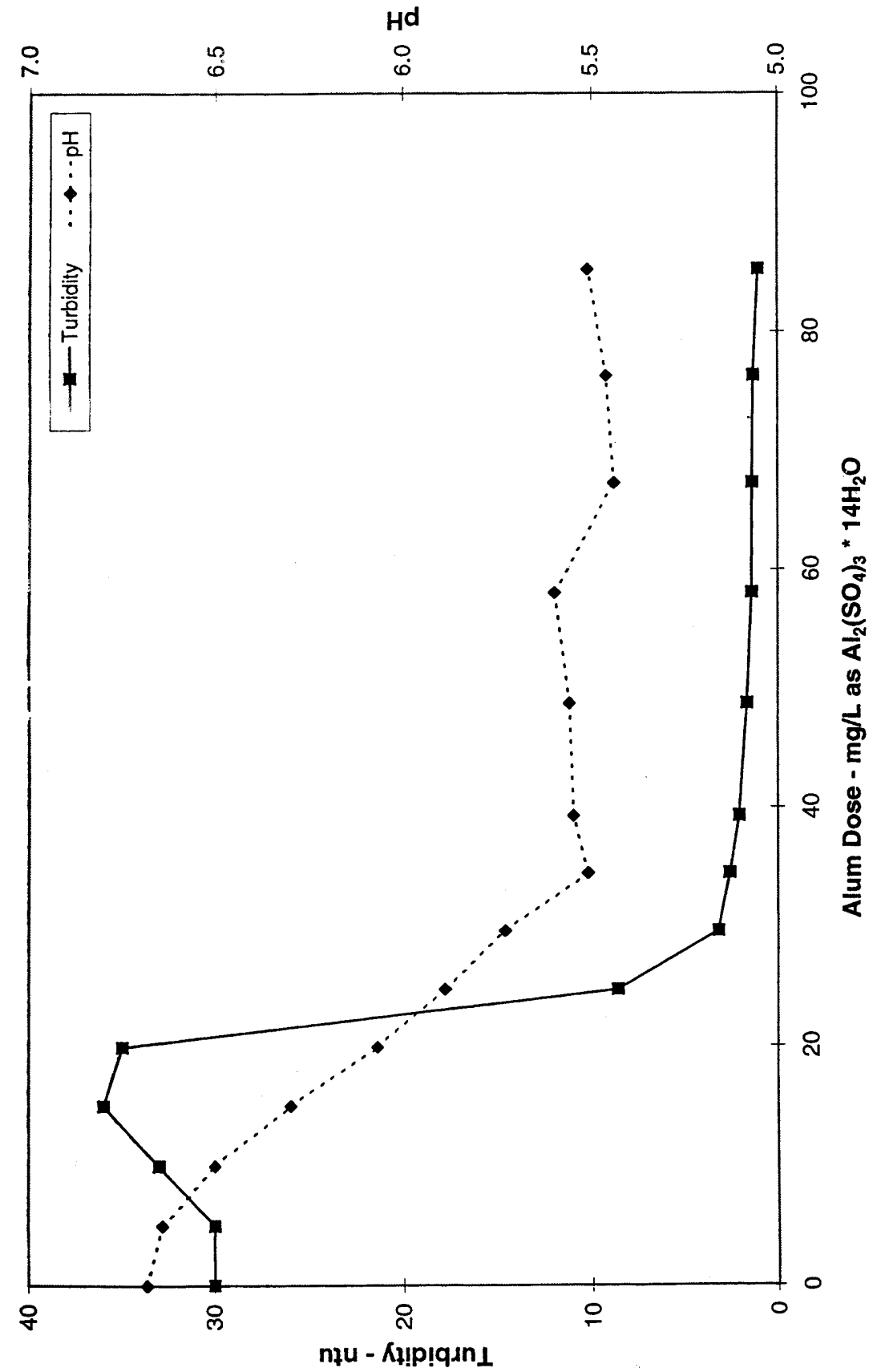

FIGURE III-1: pH and turbidity profiles of alum jar tests for Raleigh, N.C.

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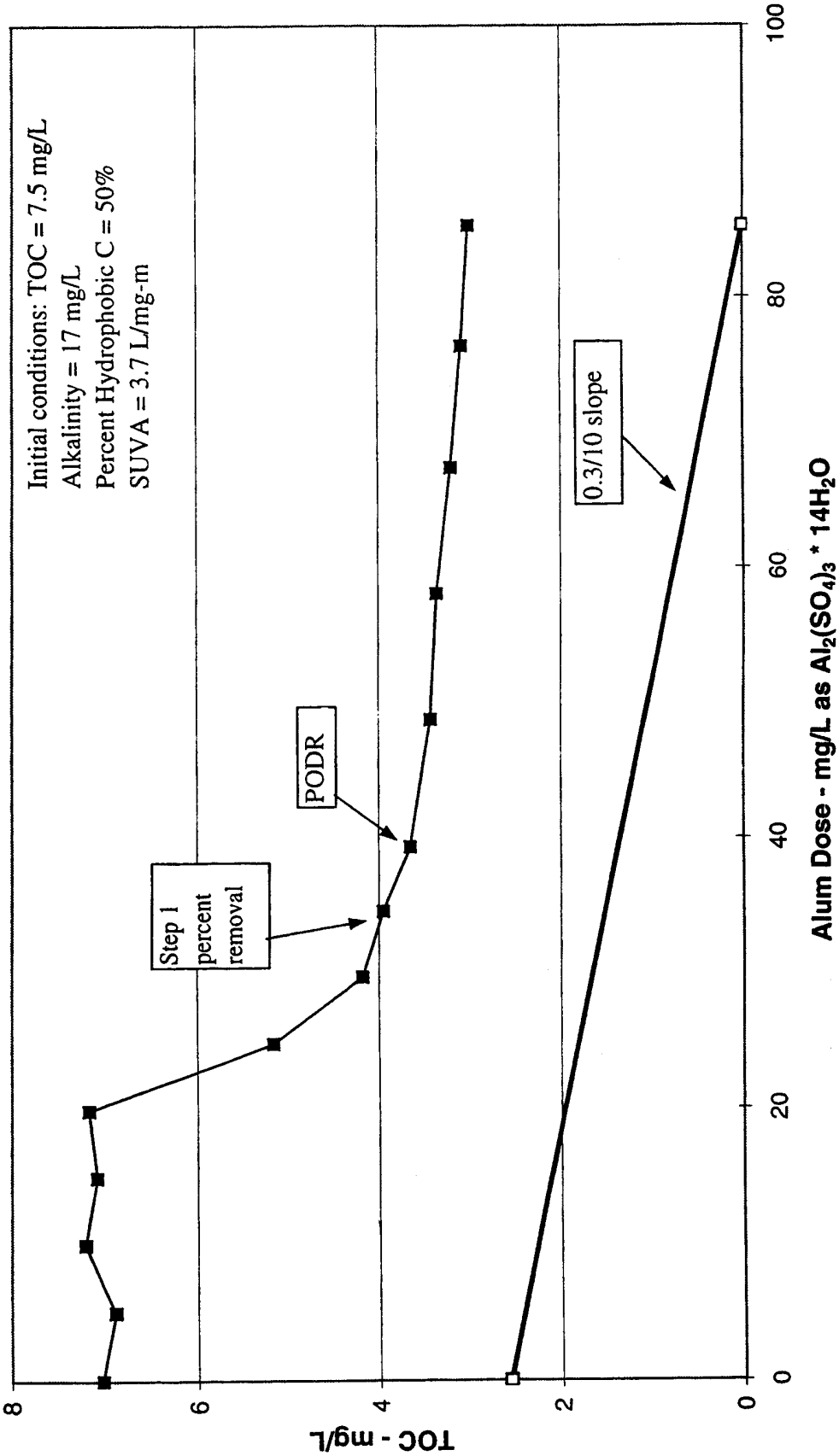
FIGURE III-2: Alum jar-test profile for Raleigh, N.C., showing dosages required to meet Step 1 removal and PODR



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In the jar tests of the Raleigh water, an alum dose of ~35 mg/L resulted in the removal of ~47 percent of the TOC, where the proposed step 1 TOC removal for this water was predicted to be 45 percent. The PODR, based on the slope criterion of 0.3 mg/L TOC/10 mg/L of alum, was realized at a jar-test alum dose of 39 mg/L, in which 51 percent of the TOC was removed. In order to comply with a 45-percent TOC removal requirement with a 15-percent safety factor (Krasner et al, 1996), a system would need to design for a 52-percent TOC removal.

The results using the Raleigh water appear to address several of the outstanding issues: namely, that the step 1 TOC removal requirements for this water is appropriate, the slope criterion did identify the PODR, and evaluation of the PODR required an examination of points beyond the threshold coagulant dose. Figure III–3 shows jar test results for a low-TOC (2.9 mg/L), high-alkalinity (239 mg/L) water from Indianapolis, IN, from the UNC study (White et al., 1997). The TOC removal curve never exceeded the 0.3/10 slope criterion, which means that this water would be exempt from the enhanced coagulation requirements in the 1994 proposed rule. The step 1 TOC removal requirement of 20 percent can be achieved, with an alum dose of ~65 mg/L required in the jar tests. However, the slope of the TOC removal curve shows that this water is not very amenable to enhanced coagulation.

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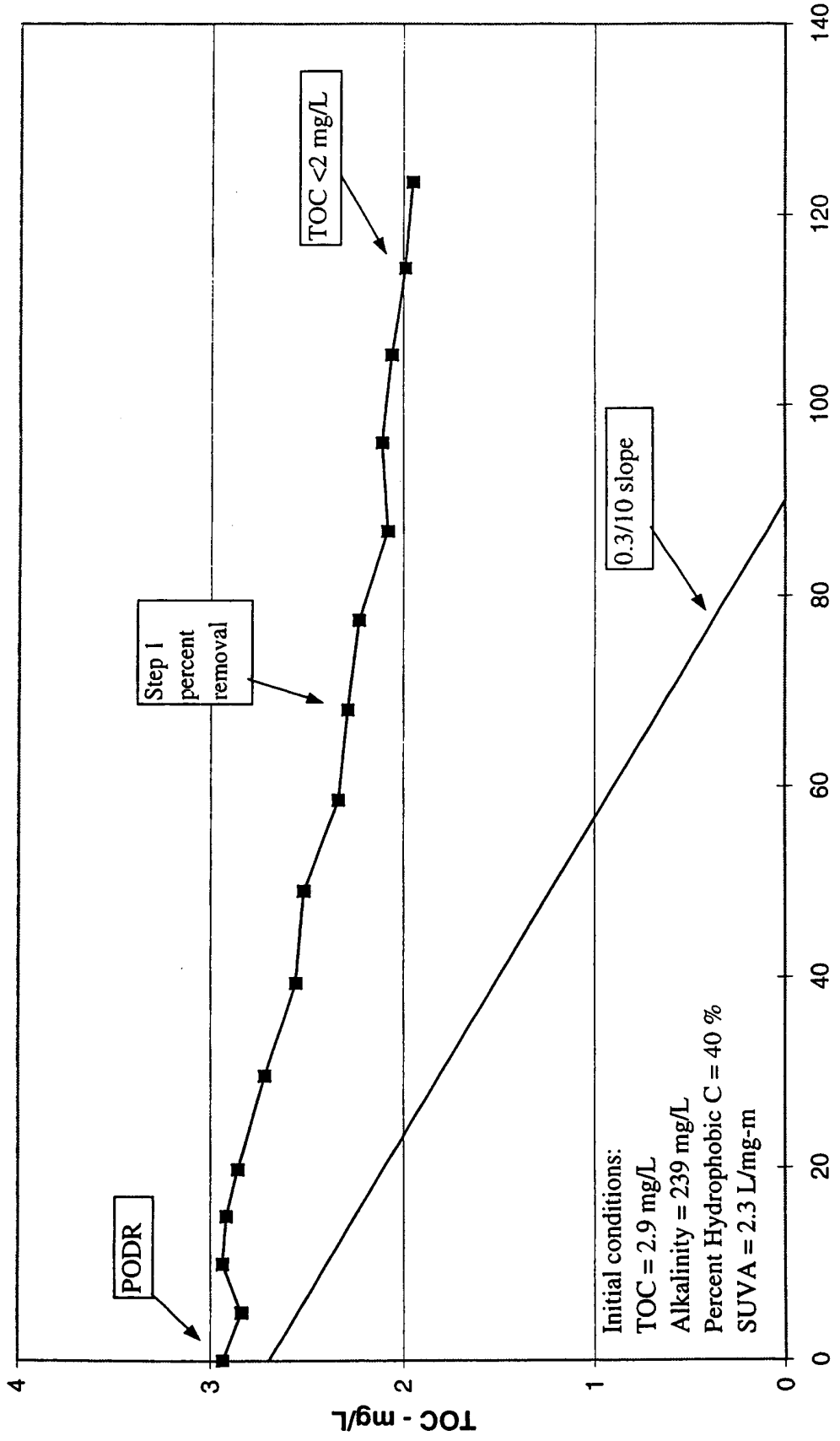
FIGURE III-3: Alum jar-test profile for Indianapolis, Ind.



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A summary of the controlling criterion for each of the 31 waters tested by UNC, based on the 1994 proposed rule criteria, is shown in Table III–2 (adapted from White et al., 1997). Only 14 of the 31 waters met the proposed step 1 percent TOC removal requirements or achieved a settled water TOC concentration <2.0 mg/L at an alum dose less than or equal to that needed to meet the PODR. Those waters that readily met the step 1 TOC removal requirements were mostly moderate-to-high-TOC waters with low alkalinity. The UNC study suggested that a significant number of waters (especially low-TOC, high-alkalinity waters) would probably need to use the step 2 protocol to establish alternative performance criteria.

TABLE III–2.—CONTROLLING CRITERION FOR ENHANCED COAGULATION FOR WATERS EVALUATED IN UNC STUDY, BASED ON 1994 PROPOSED RULE CRITERIA

Source-water TOC, mg/L	Source-water alkalinity, mg/L as $CaCO_3$		
	0–60	>60–120	>120
>2.0–4.0	<2.0 [a]	PODR [b]	N/A [c]
	PODR	PODR	PODR
	PODR	STEP 1 [d]	N/A
	PODR	PODR	
	PODR		
>4.0–8.0	STEP 1	PODR	STEP 1
	STEP 1	PODR	STEP 1
	STEP 1	STEP 1	PODR
		STEP 1	
>8.0	STEP 1	STEP 1	STEP 1
	STEP 1	PODR	PODR
	PDOR	STEP 1	PODR

[a] Settled water TOC less than 2.0 mg/L.
[b] Point of diminishing returns.
[c] Not amenable to enhanced coagulation.
[d] Step 1 required percent removal of TOC.

White and co-workers (1997) examined the relationship between the percent humic (hydrophobic) content of the raw waters in the UNC study and the maximum percent removal of DOC achieved at the high alum doses where little additional TOC removal was observed. Figure III–4 shows that waters with relatively high levels of humic material tended to exhibit higher degrees of DOC removal than those with low humic content. Figure III–5 shows that waters that contained high initial nonhumic (hydrophilic) DOC concentrations tended to have high residual DOC concentrations following coagulation.

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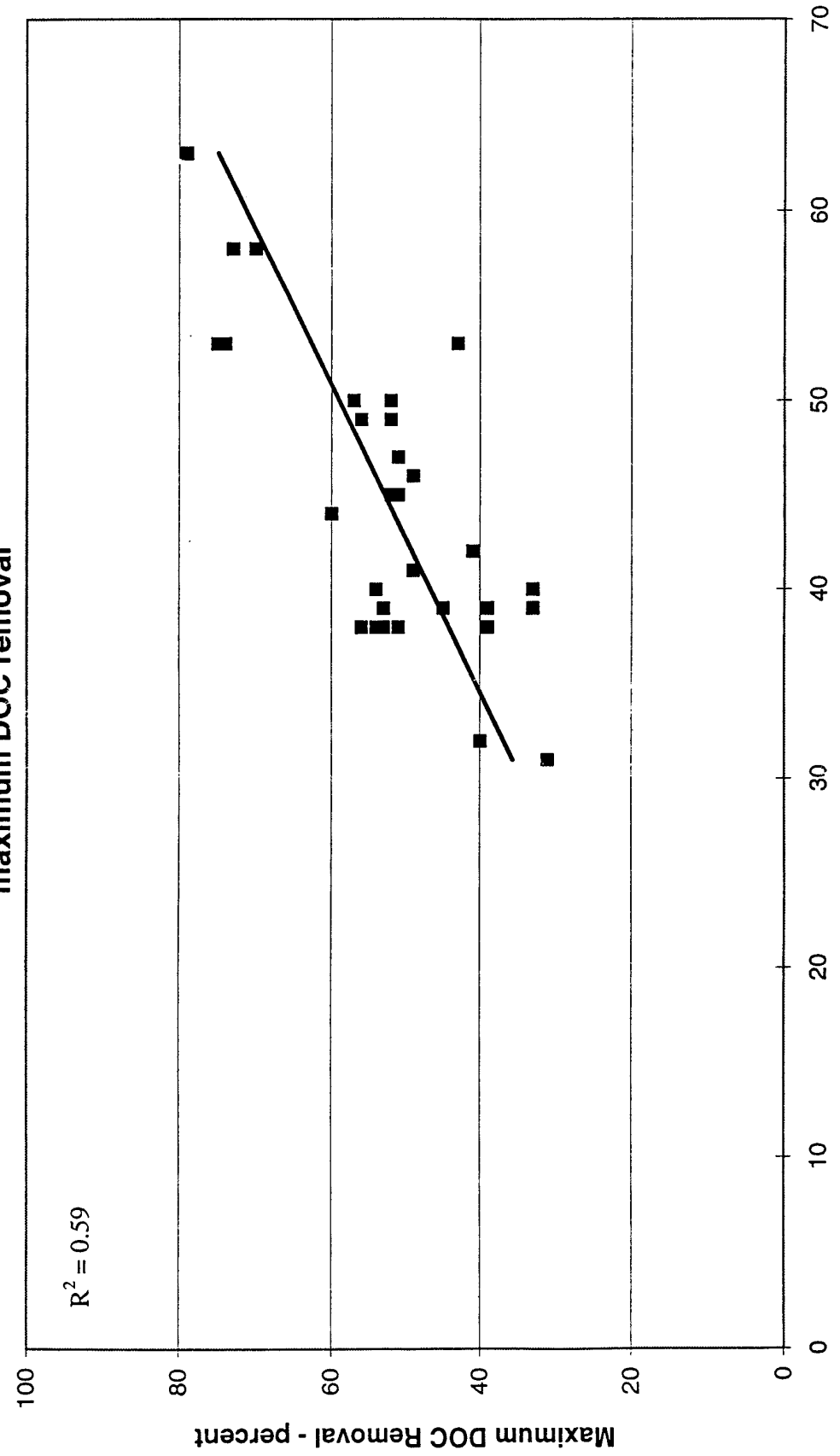

FIGURE III-4: Effect of initial hydrophobic organic content on maximum DOC removal

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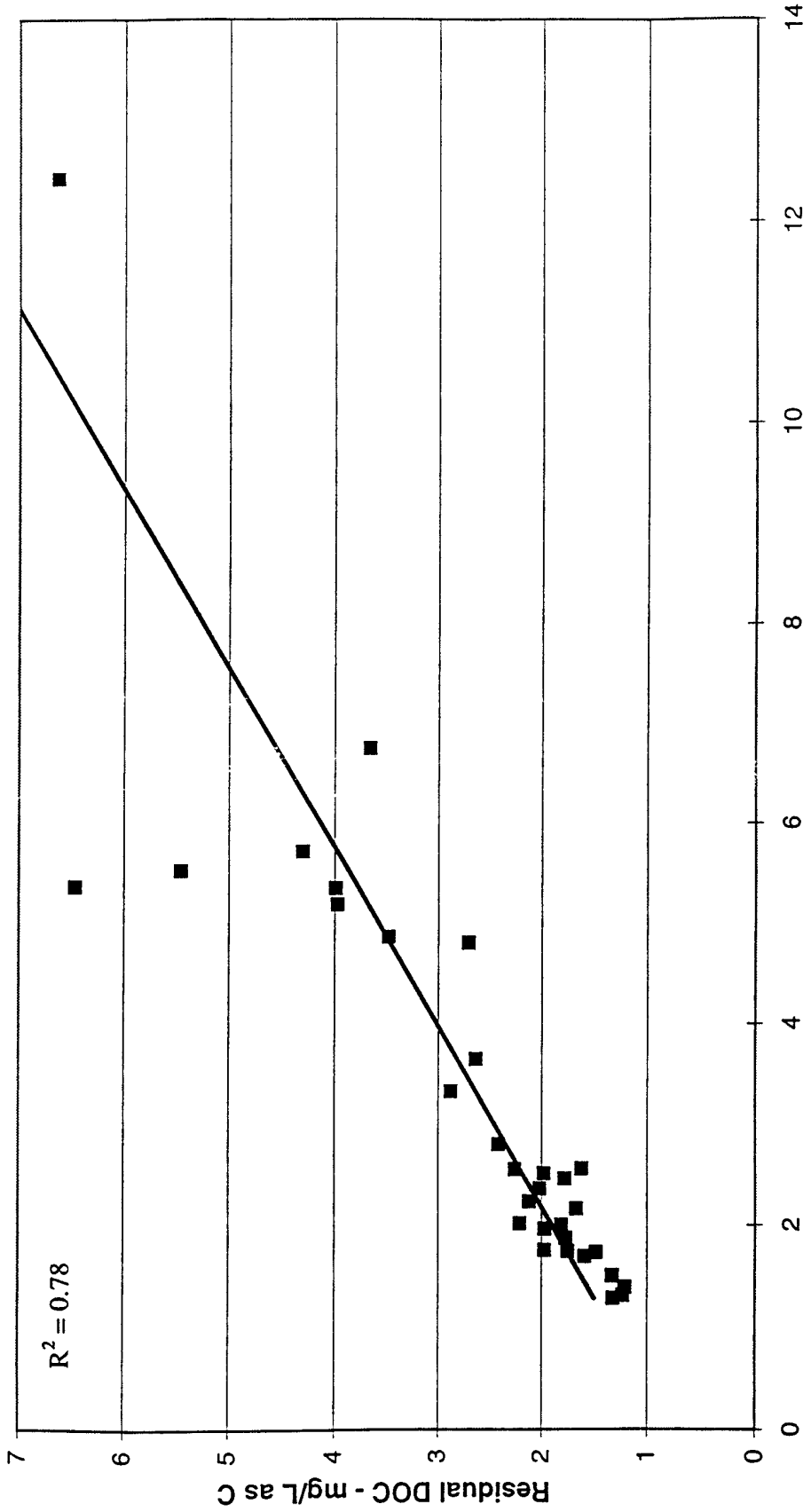

FIGURE III-5: Effect of Hydrophilic DOC concentration on residual DOC concentration after coagulation

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In the UNC study, the humic carbon content of the raw waters was reasonably correlated (r^2=0.74) with their SUVA values (White et al., 1997). Figure III–6 shows that waters with high initial SUVA values (i.e., 3.4–5.7 L/mg-m) exhibited significant reductions in SUVA as a result of coagulation, reflecting substantial removal of the humic (and other UV-absorbing) components of the overall organic matter, whereas waters with low initial SUVA values (i.e., 1.5–2.0 L/mg-m) exhibited relatively low reductions in SUVA. For all of the waters examined, the residual SUVA (i.e., ≤2.4 L/mg-m) tended to plateau at high alum doses, reflecting that the residual DOC was primarily nonhumic organic matter.

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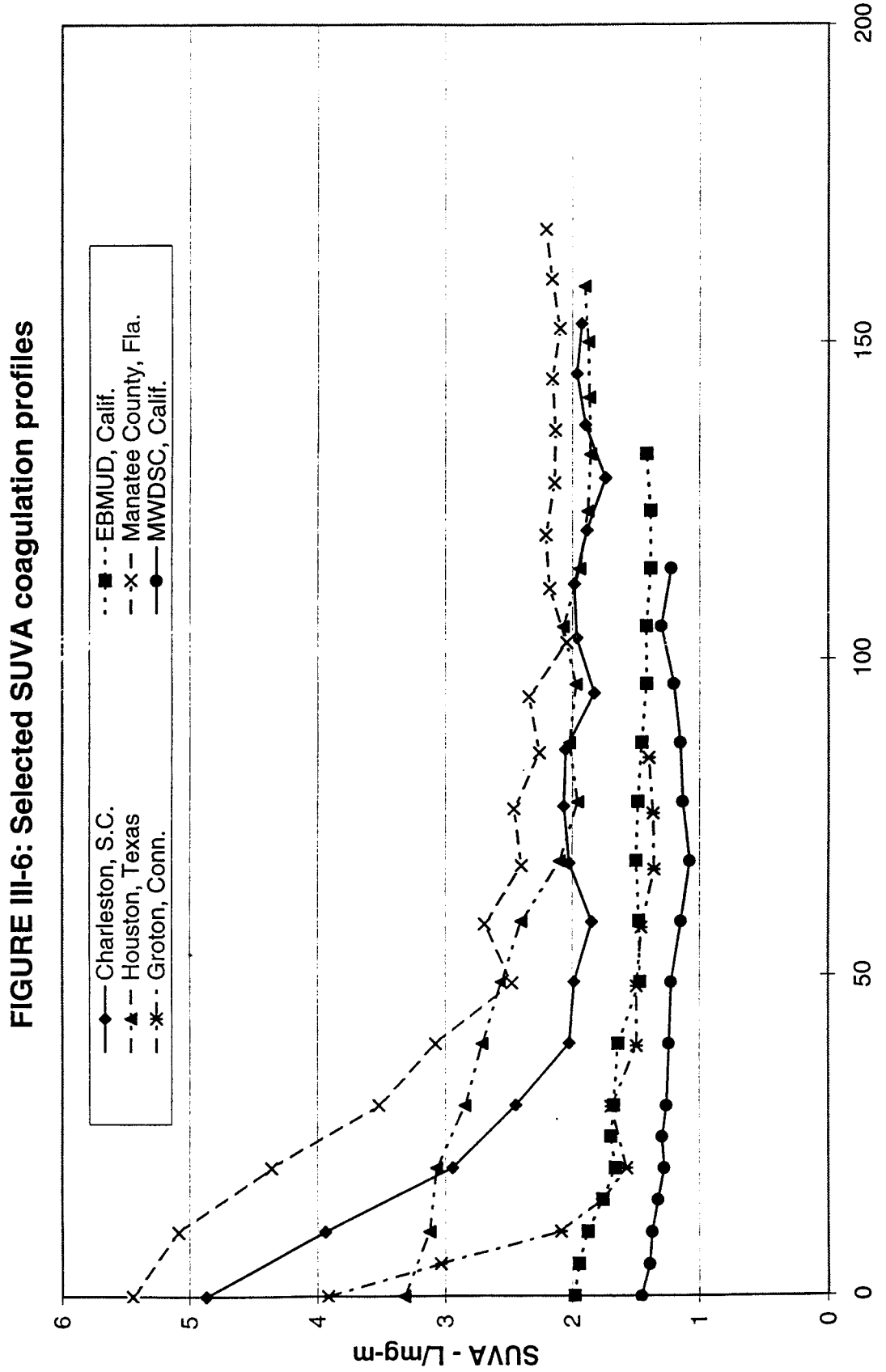

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In the UNC study, for the 14 waters in which the step 1 TOC removal requirements were met before the PODR was reached, the average raw-water SUVA was 3.9 L/mg-m, whereas the average raw-water SUVA of the other 17 waters was 2.6 L/mg-m (White et al., 1997). For most of the 31 waters examined, the PODR was found to occur at alum doses where SUVA had already reached its plateau. These findings suggested that raw-water SUVA values might be utilized in redefining the step 1 TOC removal requirements and that residual SUVA values might be utilized in defining the PODR. Unlike NOM characterizations with XAD resins in a research laboratory, SUVA is an easy parameter that can be determined by laboratories that measure DOC concentrations and UV absorbance.

b. Metropolitan Water District of Southern California/Colorado University Enhanced Coagulation Study. As noted in the UNC study, waters with low TOC and high alkalinity were expected to be the more difficult to treat with enhanced coagulation. Metropolitan Water District of Southern California (MWDSC) and Colorado University at Boulder did detailed studies on two low-TOC waters, one with moderate alkalinity (California State Project Water) and the other with high alkalinity (Colorado River water). In addition to using an XAD–8 resin fractionation to quantify the humic (hydrophobic) versus nonhumic (hydrophilic) content of the NOM, a 1000-dalton (1K) ultrafilter was used to determine what fraction of the bulk or coagulated water was of a lower versus higher molecular weight (Amy et al., 1987).

California State Project Water (with 80 mg/L alkalinity) was jar-treated with incremental alum doses of ~ 622 mg/L (up to a total of 111 mg/L). Figures III–7 and III–8 show that addition of alum at 47 mg/L reduced the raw-water bulk DOC concentration from 4.3 mg/L to 2.6 mg/L (a 39-percent bulk DOC removal); subsequent alum addition resulted in a plateauing of the DOC removal rate (Krasner et al., 1995). Throughout the entire range of alum doses evaluated, little of the low-MW and nonhumic DOC was removed. The high-MW and humic fractions, however, were well removed with increasing alum dosages, demonstrating preferential removal of these fractions. The residual DOC remaining after enhanced coagulation was primarily made up of low-MW and nonhumic material. The latter NOM fractions represent the part of the bulk DOC that is not readily amenable to removal by coagulation.

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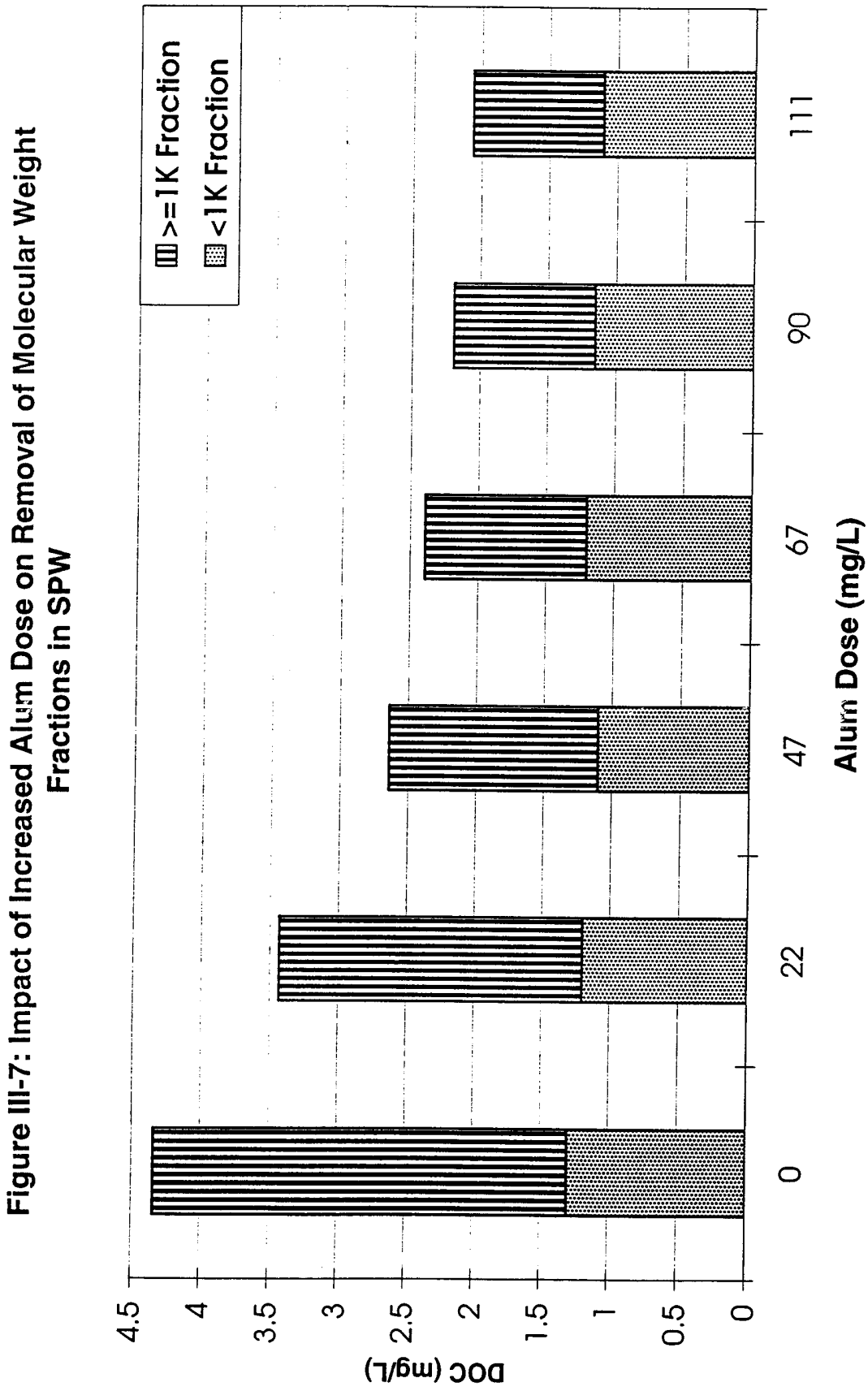

Figure III-7: Impact of Increased Alum Dose on Removal of Molecular Weight Fractions in SPW

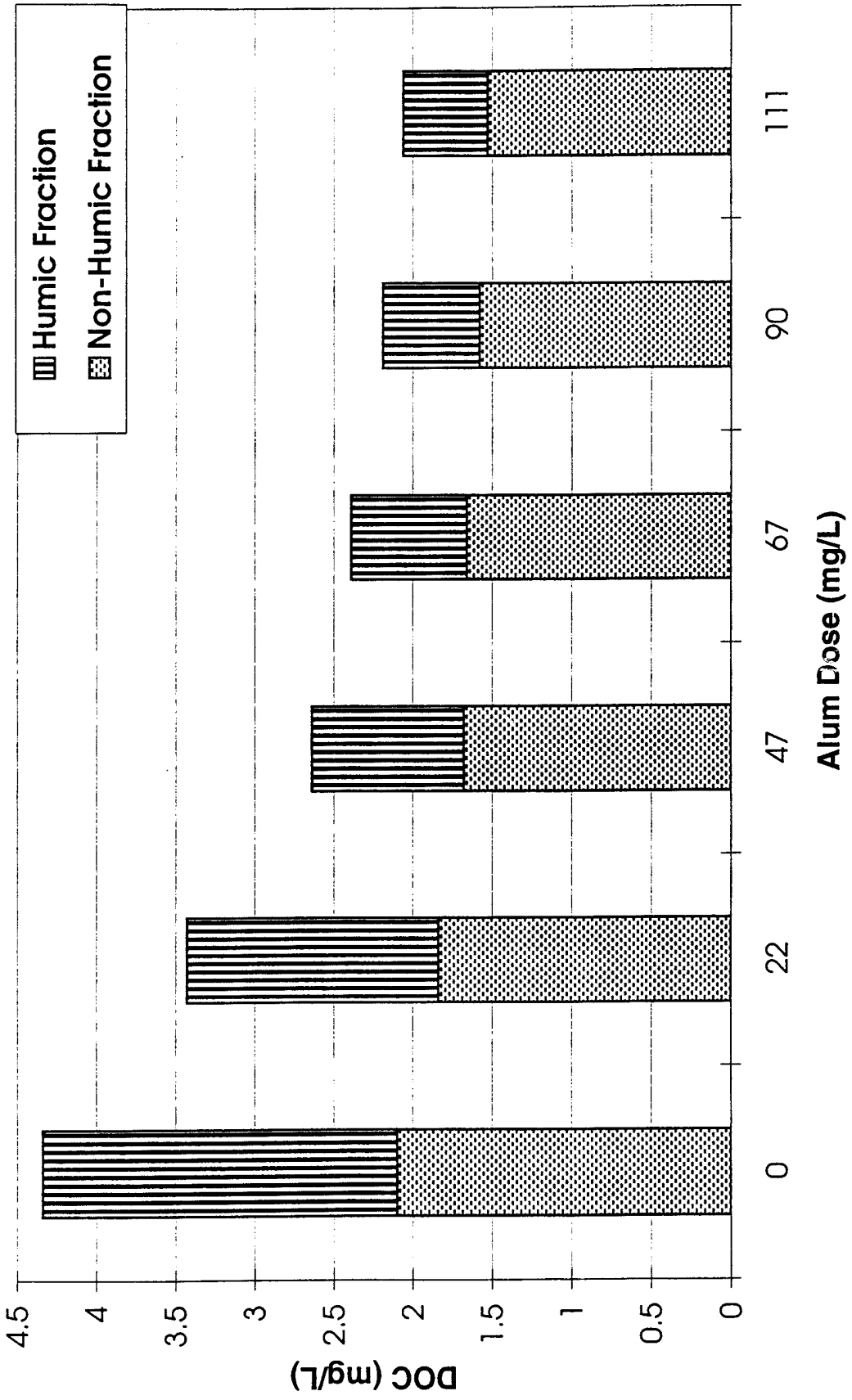

Figure III-8: Impact of increased alum dose on removal of humic/non-humic fractions in SPW

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For this sample of California State Project Water, 52 percent of the DOC was humic NOM and the SUVA value was 2.5 L/mg-m (Krasner et al., 1995). Figure III–9 shows that increasing doses of alum reduced the fraction of humic DOC in the residual DOC to 26 percent. In addition, the reduction in SUVA closely paralleled the reduction in the humic content of the residual DOC. SUVA was reduced to 1.7 L/mg-m with 47 mg/L of alum, whereas the addition of 111 mg/L of alum only reduced the value of SUVA to 1.5 L/mg-m.

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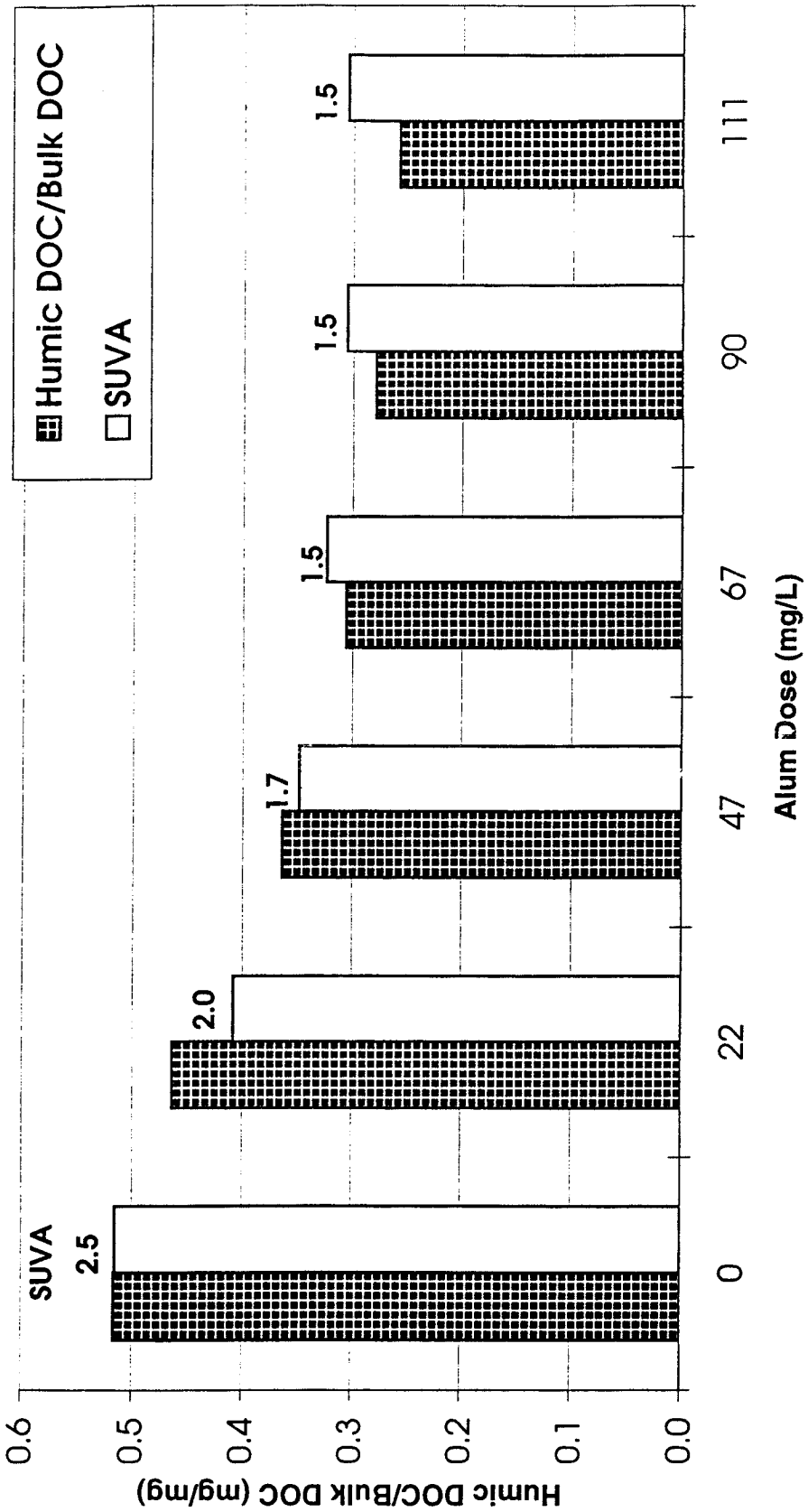

Figure III-9: Impact of Increased Alum Dose on SUVA and Fraction of Humic DOC in SFW

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Colorado River water has a greater amount of low-molecular weight DOC and somewhat more nonhumic DOC than California State Project Water (Krasner et al., 1995). Nonetheless, increased doses of alum did remove DOC in Colorado River water, although not to the same extent as in California State Project Water. Although the alkalinity of Colorado River water (135 mg/L) is higher than that of California State Project Water, the difference in treatability was more likely related to the differences in the NOM characteristics of the two waters. As with California State Project Water, the residual DOC in the coagulated Colorado River water was primarily low-molecular weight and nonhumic NOM (Figures III–10 and III–11). The raw-water Colorado River water had a SUVA value of 1.1 L/mg-m and 44 percent of the DOC was humic NOM. After the addition of 114 mg/L of alum, the humic content of the residual DOC was only reduced to 38 percent and the SUVA value was only reduced to 1.0 L/mg-m (Figure III–12).

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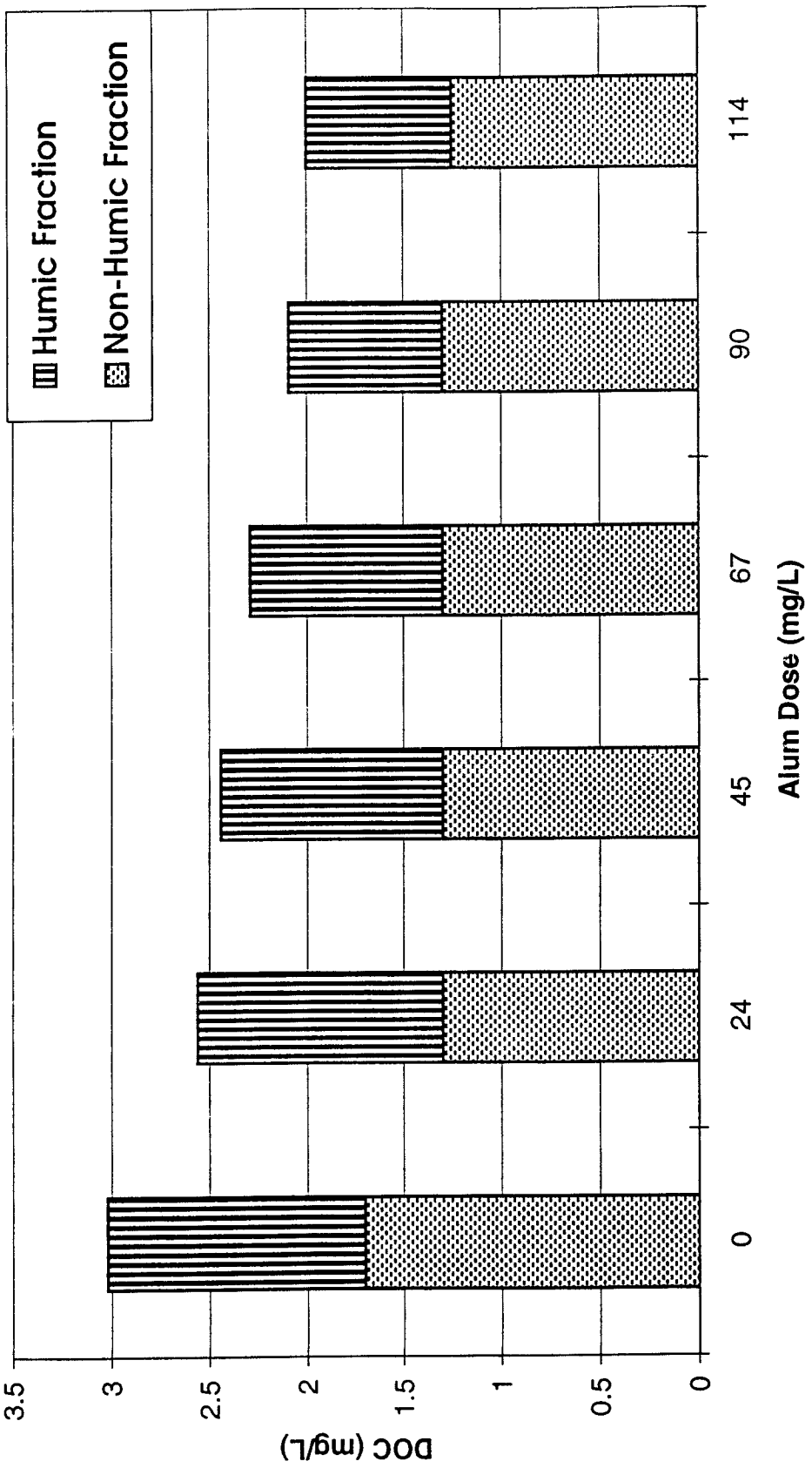

Figure III-10: Effect of Increased Alum Dose on Removal of Humic/Non-Humic Fractions in CRW

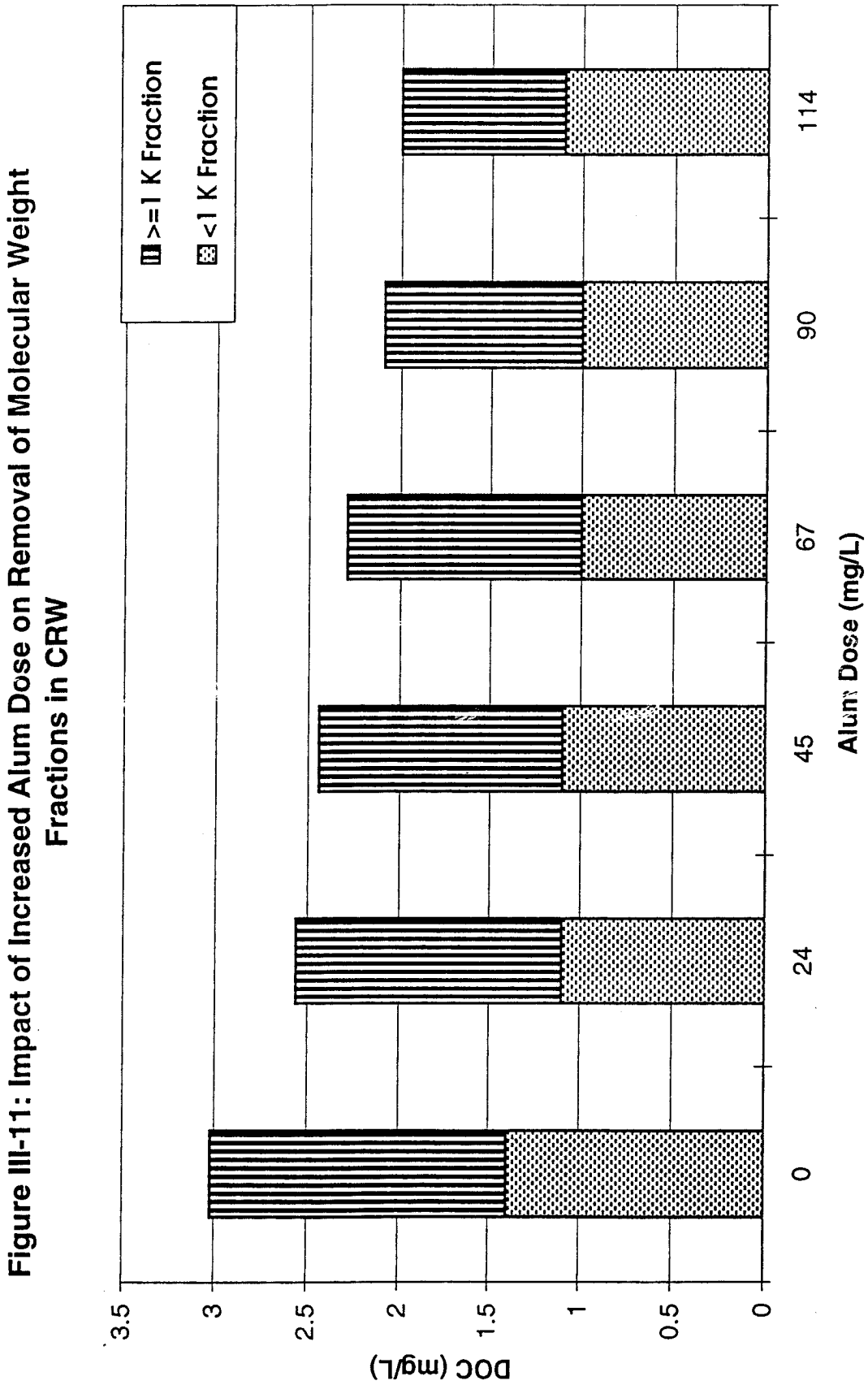

Figure III-11: Impact of Increased Alum Dose on Removal of Molecular Weight Fractions in CRW

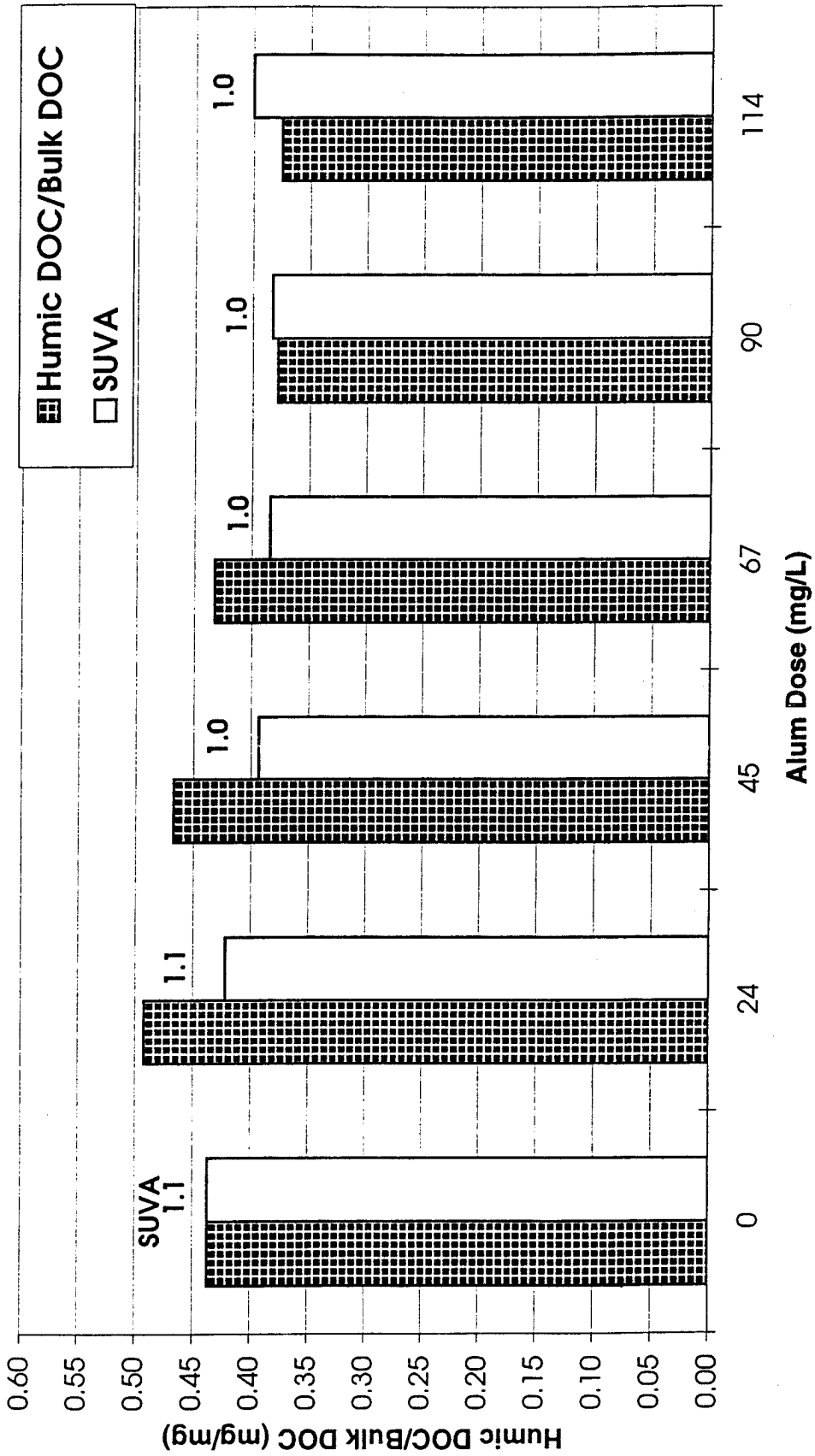

Figure III-12: Impact of Increased Alum Dose on SUVA and Fraction of Humic DOC in CRW

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Cheng and co-workers (1995) studied enhanced coagulation of California State Project Water and Colorado River water, as well as the effects of seasonal changes on TOC removal. Several water blends were tested, including 100-percent California State Project Water and Colorado River water, as well as 90–, 80–, 70–, 60–, and 50-percent Colorado River water blends. These blends represent the range of waters that are treated at MWDSC's plants and may be subject to enhanced coagulation treatment. The SUVA values for California State Project Water during this study ranged from 2.8 to 3.8 L/m-mg, whereas the SUVA values for Colorado River water varied from 1.0 to 1.7 L/m-mg (the blends of California State Project Water and Colorado River water contained SUVA values of <3.0 L/m-mg).

Cheng and co-workers (1995) also addressed the issue of curve fitting to examine the TOC removal curves. All data were analyzed by fitting to either an exponential decay-type equation, a third-order polynomial-fit equation or to an isopleth-type equation. The data fit best when the curve-fitting started after the ''threshold'' coagulant dose, and this is consistent with the finding of the UNC group (discussed in section 1.a. above). When the data are fitted to a 100-percent California State Project Water water during October 1993 (Cheng et al., 1995) the data did not fall into an isopleth or exponential-type curve, but rather a third order equation fit. The third order equation fit the data with a very high correlation coefficient, but it smoothed the curve and masked the actual slope of the removal curve.

The results from Cheng and co-workers indicate that a single model could not adequately fit all the data sets (data below the threshold coagulant dose had to be omitted), nor could it fit all the waters tested during various seasons. MWDSC's data better fit the decay-type or polynomial-fit equation than the isopleth, but the isopleth yielded the PODR TOC removal percentages that best matched those of the point-to-point method for all samples, and better matched the TOC removal curve.

c. *Malcolm Pirnie, Inc./Colorado University data collection and analysis.* The UNC/AWWA enhanced coagulation provided substantial new information and addresses some of the outstanding issues raised above, but also raised concern over the number of systems that might seek alternative performance criteria. In order to evaluate the number of systems that may seek alternative treatment and to develop data to support revisions to the proposed requirements, Malcolm Pirnie, Inc. and Colorado University, with funding from the Water Industry Technical Action Fund (WITAF), performed a data collection and analysis project to collect additional data on enhanced coagulation.

Because the Malcolm Pirnie, Inc./Colorado University team assembled enhanced coagulation data from numerous researchers throughout the country, some source waters were tested more than once. If a source water was studied more than once (e.g., Colorado River water), but had similar water quality over time (e.g., comparable TOC, SUVA, alkalinity), the results of the different experiments were averaged so as to not have the database overly influenced by a few water types. On the other hand, if the same source water was evaluated, but the water quality was different, then each experiment was separately considered. In some cases, a source water moved from one box in the 3×3 matrix to another with variations in TOC and/or alkalinity. If the identical sample of water was evaluated with different coagulants, both sets of data were included as separate entries. It is important to note that a number of systems have started to not only enhance their coagulation process, but have switched the type of coagulant they are using to one that improves TOC removal.

Table III–3 provides a summary of the raw-water characteristics of the 127 waters in the Malcolm Pirnie, Inc./AWWA database. When waters in this nationwide database were examined by raw-water TOC, SUVA, and alkalinity, researchers observed that high-TOC (>8 mg/L)/low alkalinity (<60 mg/L) waters had high SUVA (median = 4.9), whereas low-TOC (2–4 mg/L)/high-alkalinity (>120 mg/L) waters had low-SUVA (median = 1.7). For the entire 3×3 matrix, the cumulative probability distribution (10th, 50th, and 90th percentile) of SUVA values typically increased with either increasing TOC or decreasing alkalinity. Because SUVA is an indication of humic NOM content, and it is the humic fraction that is most amenable to enhanced coagulation, this SUVA distribution supports the earlier observation of the UNC research team that step 1 TOC removals were most readily met in high-TOC waters with low alkalinity.

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Table III-3 Summary Raw-Water Statistics for Enhanced Coagulation Database

TOC	Percentile Rank	Alkalinity = ≤ 60				60 ≤ Alkalinity = ≤ 120				Alkalinity ≥ 120			
		ALK.	TOC	UV-254	SUVA	ALK.	TOC	UV-254	SUVA	ALK	TOC	UV-254	SUVA
> 2.0 - 4.0	10th	11	2.2	0.069	2.84	74	2.4	0.054	2.03	126	2.3	0.039	1.43
	50th	52	2.7	0.090	3.38	83	2.8	0.077	2.73	141	3.0	0.053	1.74
	90th	60	3.6	0.127	3.97	113	3.3	0.103	3.09	214	3.5	0.104	3.68
		n = 20 (149)				n = 30 (283)				n = 22 (197)			
> 4.0 - 8.0	10th	20	5.3	0.142	2.38	70	4.1	0.087	1.93	128	4.1	0.067	1.64
	50th	27	6.0	0.229	3.29	96	5.2	0.130	2.48	146	4.8	0.092	1.90
	90th	45	7.0	0.288	4.79	110	6.4	0.217	3.83	202	6.5	0.142	3.01
		n = 6 (77)				n = 14 (172)				n = 18 (169)			
> 8.0	10th	12	13.2	0.505	4.33	86	15.1	0.674	3.80	137	8.6	0.203	2.22
	50th	16	16.0	0.747	4.86	87	17.1	0.697	4.15	218	10.3	0.252	2.60
	90th	28	23.5	1.258	5.45	88	19.0	0.729	4.49	227	13.3	0.357	3.17
		n = 6 (102)				n = 2 (44)				n = 9 (93)			

Note: n = number of raw waters (number of data points).

From this database, the Colorado University research team (Edwards, 1997; Tseng & Edwards, 1997) developed a model for predicting organic carbon removal during enhanced coagulation, using as input the coagulant dose, coagulation pH, raw-water UV absorbance, and raw-water DOC concentration. The model assumes that all DOC can be divided into two distinct fractions (Figure III–13): DOC that strongly complexes hydroxide surfaces formed during coagulation and DOC that does not (Edwards et al., 1996). Edwards defined these fractions as sorbing and nonsorbing DOC, respectively. In the model, the relative fraction of sorbing and nonsorbing NOM is calculated using an empirical relation based on the value of SUVA (Edwards, 1997).

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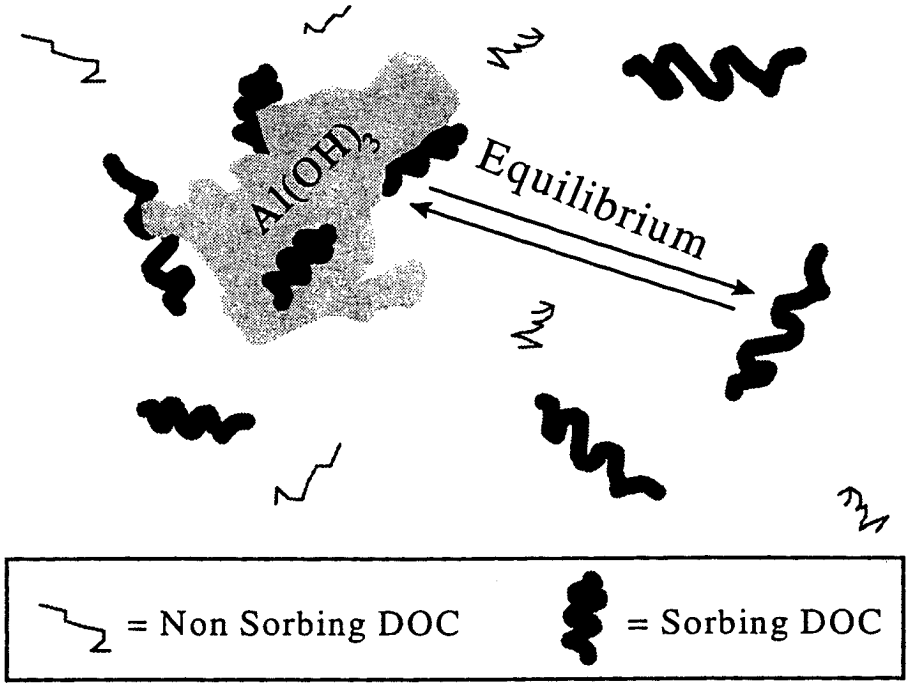
Figure III-13: Basic conceptualization of two hypothetical DOC fractions in natural waters.



Basic conceptualization of two hypothetical DOC fractions in natural waters. The sorbing DOC fraction is in equilibrium with sorbent hydroxide formed during coagulation.

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In the Colorado University modeling effort (Edwards, 1997), the best predictive capability was provided by a site-specific approach using a best-fit sorption constant and nonsorbing DOC fraction for each water quality and coagulant type (Figure III–14). Assuming a typical DOC analytical error of either ±0.25 mg/L or ±5 percent, 81 percent of the model predictions were accurately predicted within analytical precision.

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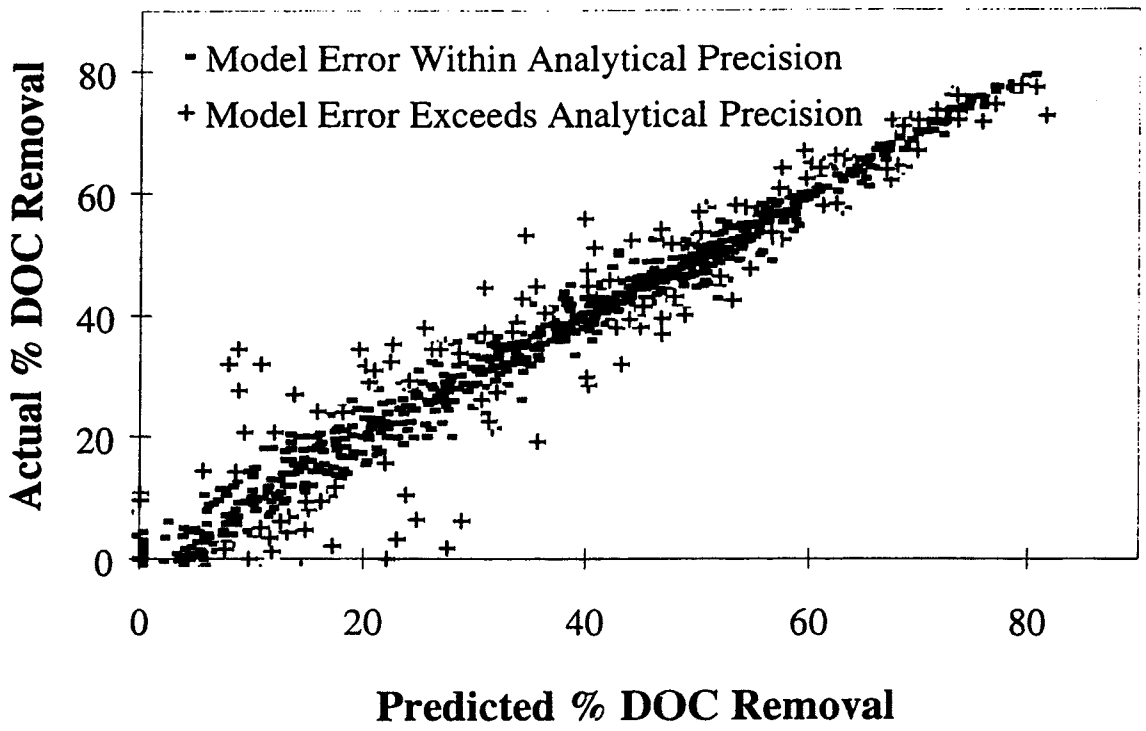
Figure III-14: Actual percentage of DOC removal versus model prediction for DOC model



Actual percentage DOC removal versus model prediction for DOC model calibrated using a site specific sorption constant and non-sorbing DOC fraction. Only 19% of all model predictions exceeded expected error in calculating %DOC removal of either ± 0.25 mg/L or ± 5%, whichever is greater

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The Colorado University DOC/SUVA model was subsequently used to determine the ''maximum'' TOC removal that can be achieved with enhanced coagulation. All nine boxes in the 3×3 matrix (Table III–3) were evaluated using the 10th, 50th, and 90th percentile water qualities. The model was used to determine the amount of sorbable TOC and to examine removal of 100, 90, 80, 70, 60, and 50 percent of the sorbable TOC.

Table III–4 summarizes the results from the maximum TOC removal task. A 10th percentile SUVA value corresponds to a water that is difficult to treat (relative to other waters in that same box), whereas a 50th and 90th percentile SUVA value corresponds to waters that are average and easy to treat, respectively, in that box. The sorbable amount of TOC represents the maximum amount of TOC that can be removed using coagulants with no limit on coagulant dosage. Therefore, these values may not be practical or realistic to achieve. In Table III–4, the 1994 proposed Step 1 TOC removal requirements are listed, along with a 15 percent safety factor. For example, in the low-TOC, low alkalinity box, the current Step 1 TOC removal requirement (40 percent) with a safety factor is 46 percent. In this box, for an easy to treat water (90th percentile SUVA of 3.97), 62 percent of the sorbable TOC would need to be removed to ensure compliance with the proposed requirement; whereas for a difficult to treat water (10th percentile SUVA of 2.84), 71 percent of the sorbable TOC would need to be removed.

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TABLE III-4: Prediction of "Maximum" TOC Removal Based on Colorado University DOC/SUVA Model

Percentile	TOC mg/L	Alkalinity = 0-60 mg/L							Step 1 TOC Rem.	Step 1 TOC Rem. +15%	%Sorb. TOC Rem.: Meet Step1 +15%
		SUVA	TOC Removal (% Sorbable TOC Removal)								
			(100%)	(90%)	(80%)	(70%)	(60%)	(50%)			
10th	>2-4	2.84	65	59	52	46	39	33	40	46	71%
50th		3.38	69	62	55	48	41	35	40	46	67%
90th		3.97	74	67	59	52	44	37	40	46	62%
10th	>4-8	2.38	62	56	50	43	37	31	45	52	83%
50th		3.29	69	62	55	48	41	35	45	52	75%
90th		4.79	80	72	64	56	48	40	45	52	65%
10th	>8	4.33	76	68	61	53	46	38	50	58	76%
50th		4.86	80	72	64	56	48	40	50	58	72%
90th		5.54	86	77	69	60	52	43	50	58	67%

Percentile	TOC mg/L	Alkalinity >60-120 mg/L							Step 1 TOC Rem.	Step 1 TOC Rem. +15%	%Sorb. TOC Rem.: Meet Step1 +15%
		SUVA	TOC Removal (% Sorbable TOC Removed)								
			(100%)	(90%)	(80%)	(70%)	(60%)	(50%)			
10th	>2-4	2.03	59	53	47	41	35	30	30	35	58%
50th		2.73	64	58	51	45	38	32	30	35	54%
90th		3.09	67	60	54	47	40	34	30	35	51%
10th	>4-8	1.93	58	52	46	41	35	29	35	40	69%
50th		2.48	63	57	50	44	38	32	35	40	64%
90th		3.83	73	66	58	51	44	37	35	40	55%
10th	>8	3.80	73	66	58	51	44	37	40	46	63%
50th		4.15	75	68	60	53	45	38	40	46	61%
90th		4.49	78	70	62	55	47	39	40	46	59%

Percentile	TOC mg/L	Alkalinity >120 mg/L							Step 1 TOC Rem.	Step1 TOC Rem. +15%	%Sorb. TOC Rem.: Meet Step1 +15%
		SUVA	TOC Removal (% Sorbable TOC Removed)								
			(100%)	(90%)	(80%)	(70%)	(60%)	(50%)			
10th	>2-4	1.43	55	50	44	39	33	28	20	23	42%
50th		1.74	57	51	46	40	34	29	20	23	40%
90th		3.68	72	65	58	50	43	36	20	23	32%
10th	>4-8	1.64	56	50	45	39	34	28	25	29	51%
50th		1.90	58	52	46	41	35	29	25	29	50%
90th		3.01	67	60	54	47	40	34	25	29	43%
10th	>8	2.22	61	55	49	43	37	31	30	35	57%
50th		2.60	64	58	51	45	38	32	30	35	54%
90th		3.17	68	61	54	48	41	34	30	35	51%

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The next analyses evaluated what TOC removal is ''practical'' to achieve in order to better define the 3×3 matrix. The data analyses were aimed at developing an alternative set of percent TOC removal numbers for step 1 requirements, recognizing that the goal was to select values that could be ''reasonably'' met by 90 percent of the systems implementing enhanced coagulation. Using the database compiled through the Malcolm Pirnie, Inc./AWWA project and summarized in Table III–3, the following nine equations were developed to predict ''90th-percentile'' TOC for a given coagulant dose. Figure III–15 illustrates the shape of the curves for the low-alkalinity waters.

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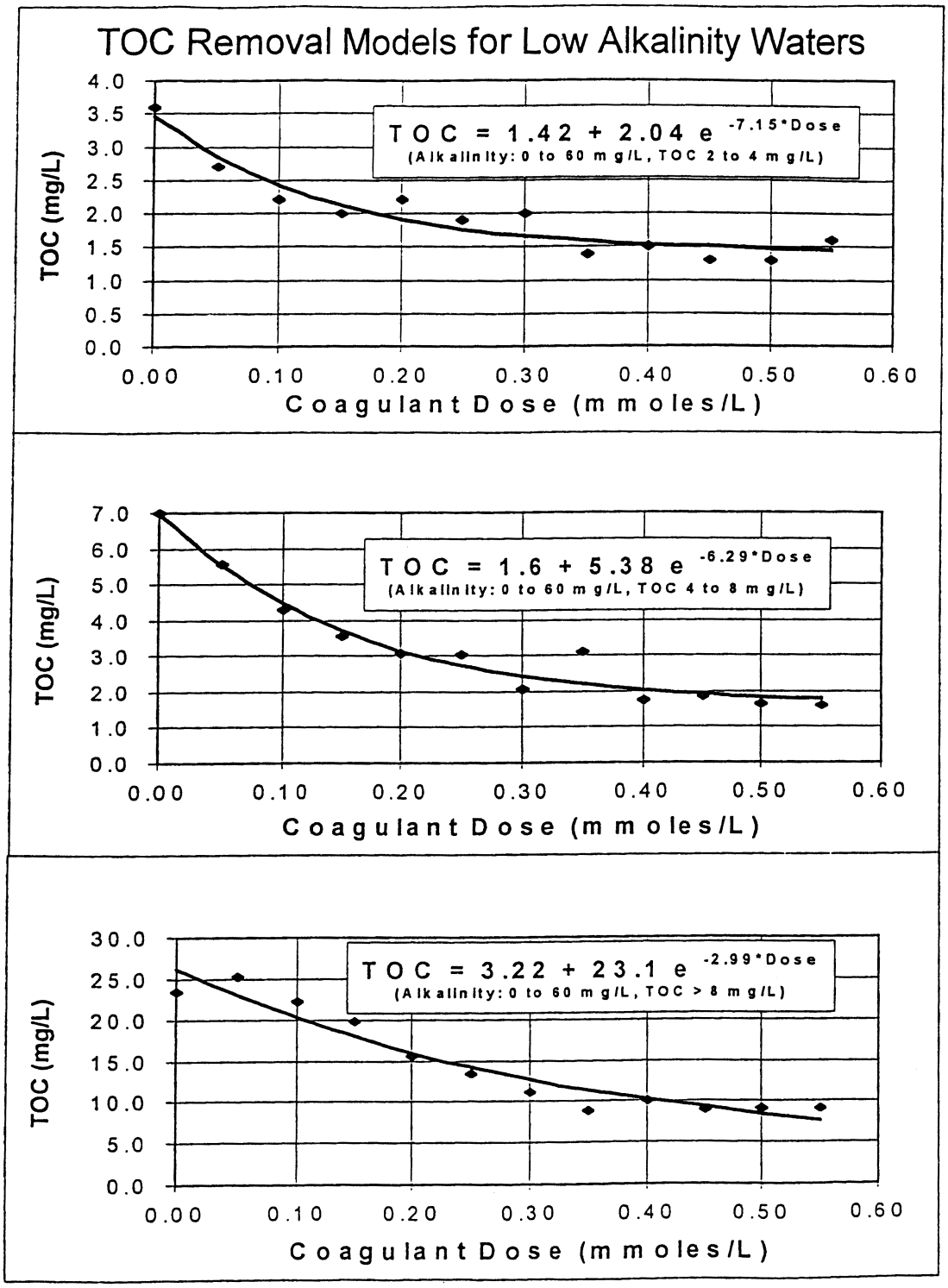
Figure III-15: TOC Removal Models for Low Alkalinity Waters



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The significance of the 90th-percentile data point is that 90 percent of systems (represented by the database) will have a lower residual TOC compared to what is predicted by the equations for a given coagulant dose.

1. $TOC=1.42+2.04 \bullet e^{-7.15 \bullet Dose\ (moles/L)}$ [for low-TOC, low-alkalinity box]
2. $TOC=1.37+2.10 \bullet e^{-3.92 \bullet Dose\ (moles/L)}$ [for low-TOC, medium-alkalinity box]
3. $TOC=2.10+1.27 \bullet e^{-2.73 \bullet Dose\ (moles/L)}$ [for low-TOC, high-alkalinity box]
4. $TOC=1.60+5.38 \bullet e^{-6.29 \bullet Dose\ (moles/L)}$ [for medium-TOC, low-alkalinity box]
5. $TOC=2.11+4.41 \bullet e^{-3.47 \bullet Dose\ (moles/L)}$ [for medium-TOC, medium-alkalinity box]
6. $TOC=2.64+3.30 \bullet e^{-4.83 \bullet Dose\ (moles/L)}$ [for medium-TOC, high-alkalinity box]
7. $TOC=3.22+23.1 \bullet e^{-2.99 \bullet Dose\ (moles/L)}$ [for high-TOC, low-alkalinity box]
8. $TOC=4.88+13.8 \bullet e^{-3.33 \bullet Dose\ (moles/L)}$ [for high-TOC, medium-alkalinity box]
9. $TOC=6.61+6.44 \bullet e^{-3.57 \bullet Dose\ (moles/L)}$ [for high-TOC, high-alkalinity box]

Based upon the above equations, the coagulant dosages for achieving the proposed percent TOC removals and the proposed PODR slope criterion (i.e., 0.3 mg/L TOC per 10 mg/L of alum) were calculated. These calculations indicated that the low-TOC boxes will be at the proposed slope criterion at coagulant dosages lower than what would be required for achieving the proposed step 1 percent TOC removals. The opposite was true for the high-TOC boxes. For the medium-TOC boxes, the calculated coagulant dosages were approximately equal for both criteria. The trends for the different boxes in the matrix are similar to that observed by the UNC research team (Table III–2). Table III–5 summarizes the controlling criteria.

TABLE III–5.—CONTROLLING CRITERION FOR ENHANCED COAGULATION FOR WATERS EVALUATED IN MALCOLM PIRNIE, INC. STUDY, BASED ON MODELING APPROACH

TOC (mg/L)	Alkalinity mg/L		
	0–60	>260–120	>120
>2.0–4.0	PODR	PODR	PODR
>4.0–8.0	Step 1	PODR	Step 1
>8.0	Step 1	Step 1 ...	Step 1

Malcolm Pirnie, Inc. next examined SUVA removal curves (Figure III–16), similar to what was examined by the UNC research team (Figure III–6).

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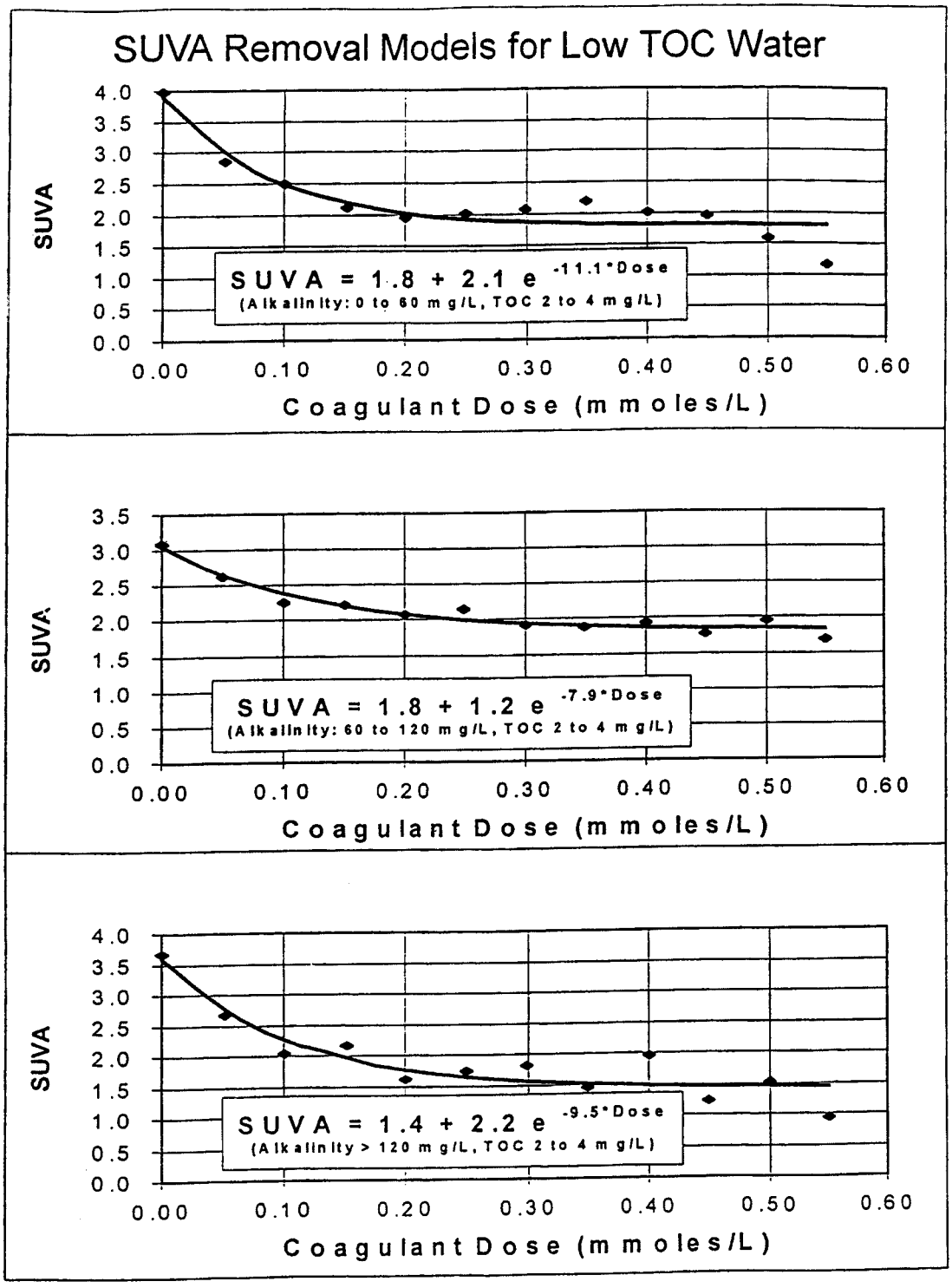
Figure III-16: SUVA Removal Models for Low TOC Waters



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The 90th-percentile SUVA curves were observed to reach asymptotic values with increasing coagulant Dose (Figure III–16 illustrates the shape of the curves for the low-TOC waters). The following seven equations were developed to predict the 90th-percentile SUVA for a given coagulant Dose. The three alkalinity ranges for the high-TOC waters were collapsed into one group due to lack of sufficient data. Similar to the TOC equations, the significance of the 90th-percentile data point is that 90 percent of systems (represented by the database) will have a lower residual SUVA compared to what is predicted by the equations for a given coagulant Dose.

a. $SUVA=1.8+2.1 \bullet e^{-11.1 \bullet Dose\ (moles/L)}$ [for low-TOC, low-alkalinity box]

b. $SUVA=1.8+1.2 \bullet e^{-7.9 \bullet Dose\ (moles/L)}$ [for low-TOC, medium-alkalinity box]

c. $SUVA=1.4+2.2 \bullet e^{-9.5 \bullet Dose\ (moles/L)}$ [for low-TOC, high-alkalinity box]

d. $SUVA=1.9+2.8 \bullet e^{-17.5 \bullet Dose\ (moles/L)}$ [for medium-TOC, low-alkalinity box]

e. $SUVA=1.8+2.0 \bullet e^{-5.2 \bullet Dose\ (moles/L)}$ [for medium-TOC, medium-alkalinity box]

f. $SUVA=2.1+0.95 \bullet e^{-6.0 \bullet Dose\ (moles/L)}$ [for medium-TOC, high-alkalinity box]

g. $SUVA=2.5+2.8 \bullet e^{-3.8 \bullet Dose\ (moles/L)}$ [for high-TOC boxes]

From a theoretical viewpoint, the asymptote of the above equations represents the minimum SUVA that could be achieved for a given data set (box) of the 3x3 matrix. The dosages for the minimum SUVA are related to certain maximum percent TOC removals. However, from a practical standpoint, achieving the minimum SUVA could be extremely difficult. An alternative approach could be to attempt to reach SUVA values which are 20 or 25 percent above minimum SUVA indicated by the above equations. Equations 1 through 9 and equations a. through g. were combined to determine the practical percent TOC removal values that could be achieved. The results for ''minimum SUVA+25%'' are shown in Table III–6.

TABLE III–6.—TOC REMOVALS (%) AT ''MINIMUM SUVA+25%,'' BASED ON MALCOLM PIRNIE, INC. MODELING EFFORT

TOC (mg/L)	Alkalinity (mg/L)		
	0–60	>60–120	>120
>2.0–4.0	35	25	15
>4.0–8.0	35	45	20
>8.0	60	55	35

One limitation of a step 2 based on a settled-water SUVA approach would be that the utilities would have to determine these SUVA values in the absence of any oxidant (such as chlorine, permanganate, or ozone). Addition of oxidant changes the characteristics of the NOM in a manner that disproportionately affects the UV absorbance compared to TOC, thus changing the SUVA values without any actual removal of TOC.

d. Evaluation of current (baseline) TOC removals at full-scale. Full-scale TOC removal data were obtained from 76 treatment plants (Table III–7). These data were obtained from plants in the American Water Works Service Company (AWWSCo) system, plants studied by Randtke et al. (1994), and plants in North Carolina studied by Singer et al. (1995). Note that these data represent a one-time sampling at each plant and no specific attempt was made to meet the proposed TOC removal percentages. Also, the proposed compliance requirements were based on an annual average. Based on current treatment, 83 percent of the systems treating moderate-TOC, low-alkalinity water removed an amount of TOC greater than the proposed step 1 requirement, whereas only 14 percent of the systems treating water with low TOC and high alkalinity met the proposed step 1 requirement. For the other systems treating low- or moderate-TOC water, 29–38 percent met the proposed step 1 requirements with existing treatment. Although all of the high-TOC systems met the proposed TOC removal requirements with current treatment, the number of systems in this database were insignificant (1–2 per box).

TABLE III–7.—TOC REMOVAL AT FULL-SCALE TREATMENT PLANTS

TOC >2.0–4.0 mg/L			Percent of plants that achieve specified TOC removal				
Alkalinity (mg/L)	No. of Plants	Step 1 TOC%	0–10% removal	10–20% removal	20–30% removal	30–40% removal	>40% removal
0–60	14	40	14	14	14	29	***29**
>60–120	11	30	36	0	27	**18**	**18**
>120	7	20	57	29	**14**	**0**	**0**
TOC >4.0–8.0 mg/L			Percent of plants that achieve specified TOC removal				
			0–15% removal	15–25% removal	25–35% removal	35–45% removal	>45% removal
0–60	18	45	0	0	11	6	**83**
>60–120	8	35	12	25	25	**38**	**0**
>120	13	25	31	31	**23**	**15**	**0**
TOC >8.0 mg/L			Percent of plants that achieve specified TOC removal				
			0–20	20–30	30–40	40–50	>50
0–60	2	50	0	0	0	0	**100**
>60–120	2	40	0	0	0	**0**	**100**
>120	1	30	NA	NA	**100**	**NA**	**NA**

*Values in bold represent the percentage of systems that achieved full-scale TOC removal that is greater than the proposed step 1 requirements.

e. *Evaluation of ''optimized'' TOC removal.* An ''optimized'' coagulation database was assembled, utilizing experiments performed by AWWSCo and by Randtke et al. (1994) (Table III–8). This database included experiments in which a combination of coagulant and acid was evaluated. The National Sanitation Foundation (NSF) limit on sulfuric acid addition (to minimize the introduction of trace impurities present in the acid) is 50 mg/L. In examining the database, an attempt was made to limit coagulant doses to ~10–20 times the TOC level. Thus, a water with 3 mg/L TOC might use up to 30–60 mg/L of coagulant (with or without acid), but would not use 100 mg/L of coagulant full-scale. However, a water with 10 mg/L TOC could use 100 mg/L or more of coagulant given the aforementioned ~10–20 multiplier for coagulant dose and TOC. A dose of this magnitude is discouraged because the NSF limits on aluminum sulfate and ferric chloride are 150 mg/L and 250 mg/L, respectively. Because these experiments were performed without these acid and coagulant dose limits as constraints, some waters were evaluated with more realistic chemical doses in the PODR experiments. A judgment was made in deciding which set of conditions was the most realistic for each water evaluated. With these elements in mind, an assessment was made as to which experiment was the most appropriate (controlling criteria) for each water. In some cases, a source water was tested more than once. If the identical sample of water (same TOC, SUVA, alkalinity) was coagulated with different coagulants, with or without acid, the highest TOC removal for that water was chosen, as many systems enhancing their coagulation process are also evaluating switching the type of coagulant.

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TABLE III-8: Analysis of the Optimized Coagulation Database

TOC Removal at "Controlling" Condition				
Statistic	TOC	Alkalinity (mg/L)		
		0-60	>60-120	>120
(% w/$SUVA_r$<2.0)	>2-4 (mg/L)	(13%)	(0%)	(64%)
(no. w/$SUVA_r$>2.0)		(12)**	(7)	(5)
minimum*		26%	16%	2%
25th percentile*		30%	~25%	17%
50th percentile*		39%	27%	20%
75th percentile*		46%	~34%	22%
maximum*		57%	46%	28%
(% w/$SUVA_r$<2.0)	>4-8	(0%)	(36%)	(57%)
(no. w/$SUVA_r$>2.0)		(12)	(6**)	(2**)
minimum*		17%	19%	10%
25th percentile*		46%	34%	N/A
50th percentile*		54%	39%	N/A
75th percentile*		61%	43%	N/A
maximum*		68%	50%	44%
(% w/$SUVA_r$<2.0)	>8	(0%)	(0%)	(0%)
(no. w/$SUVA_r$>2.0)		(7)	(2)***	(4)
minimum*		56%	65%	37%
25th percentile*		56%	N/A	N/A
50th percentile*		68%	68%	44%
75th percentile*		69%	N/A	N/A
maximum*		76%	72%	61%

*Cumulative probability distribution for waters with $SUVA_r$>2.0.

**Number of waters with $SUVA_r$>2.0, excluding waters evaluated w/acid dose>NSF limit.

***Same source water.

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f. ''Case-by-case'' data analyses. A decision was made by the TWG, based on the Malcolm Pirnie, Inc. modeling effort and examination of the case-by-case data, to segment out raw waters with SUVA ($SUVA_r$) <2.0 L/mg-m during the analyses of the optimized coagulation database. This decision was made because including a significant number of low-SUVA waters in the analysis of the boxes results in lowering the amount of TOC that 90 percent of the systems in that box can remove. Thus, the TWG decided to examine what TOC removal could be accomplished by the medium-and high-SUVA waters that remained in each box.

Table III–8 provided a statistical summary of all the waters in each box of the matrix. Listed below are a summary of the key observations:

(1) A majority of the high-alkalinity (>120 mg/L) waters in the low (>2–4 mg/L) and moderate (>4–8 mg/L) TOC boxes have SUVA <2.0 L/mg-m. For many of these waters, optimized coagulation requires very high doses of acid or coagulant, which are not practical to use. Many of these waters are not readily amenable to enhanced coagulation. However, some of the systems that treat these waters will incorporate some level of enhanced coagulation in order to control DBP formation.

(2) For the waters in which the raw-water SUVA was >2.0 L/mg-m, the minimum, 25th percentile, 50th percentile, 75th percentile, and maximum TOC removal for each of the boxes in the 3 x 3 matrix were determined. This analysis allowed for an analysis of the cumulative probability distribution of TOC removal for waters that are amenable to enhanced coagulation.

(3) For example, the high-TOC (>8 mg/L)/low alkalinity (0-60 mg/L) box had a range of TOC removals from 56 to 76 percent. In order to comply with a 50 percent TOC removal (the proposed step 1 value for that box) with a safety factor of 15 percent, a 57 percent TOC removal would be required. The minimum and 25th percentile TOC removal for that box is 56 percent. Thus, it is expected that essentially all of the waters in this box (based on this limited data set and data from other sources) could comply with the proposed step 1 requirement.

(4) If the step 1 requirement for the high-TOC/low-alkalinity box was raised, for example, to 60 percent, then systems would need a 69 percent TOC removal to safely meet such a requirement. The 75th percentile of TOC removal for this box is 69 percent. Thus, raising the step 1 requirement to 60 percent could potentially drive half or more of the systems in this box to need to do step 2 testing for possible alternative performance criteria. Thus, these data suggest that for this and a number of other boxes (all of the high-TOC boxes and probably most of the moderate-TOC boxes), the currently proposed step 1 TOC removals are appropriate. Systems that can achieve higher TOC removals in these boxes will consider doing so in order to more effectively meet the DBP MCLs that have been proposed.

(5) For the low-TOC boxes, even after excluding the low-SUVA waters, the proposed step 1 TOC removal levels still appear too high. In Malcolm Pirnie, Inc.''s modeling of TOC removal at minimum SUVA + 25 percent, it was predicted that the required TOC removals in the low-TOC boxes would be 35, 25, and 15 percent for low-, moderate-, and high-alkalinity, respectively. These predicted TOC removal values are in the range for which the majority of low-TOC waters with SUVA values >2.0 L/mg-m can achieve. Thus, the TWG recommended to the FACA Negotiating Committee-based on Malcolm Pirnie, Inc.''s modeling effort and this case-by-case analysis—a revised set of TOC removal numbers for the low-TOC boxes, keeping in mind that low-SUVA waters would be excluded from the requirement.

(6) The TWG also recommended to the FACA Negotiating Committee an alternative step 2 point of diminishing return (PODR) of settled-water SUVA ≤2.0 L/mg-m. This action will also reduce transactional costs, as presentation of a settled-water SUVA value will be easier than presenting jar-test data. Nonetheless, the jar-test protocol and slope criterion will still be needed for evaluating alternative performance criterion for other waters.

2. New Data on Enhanced Softening

a. AWWARF studies—data on TOC removal. Several studies examined the relationship between increased coagulant dose and TOC removal (Shorney and Randtke, 1996; Clark et al. 1994). These studies indicate that the benefit from increased coagulant dose in TOC removal was dependent on the raw water. In a study funded by AWWARF, Shorney and Randtke (1994) indicated that utilities treating source water relatively low in TOC (i.e., 2.5 to 4 mg/L) and low in turbidity will have the greatest difficulty in removing TOC (Figure III–17 and III–18).

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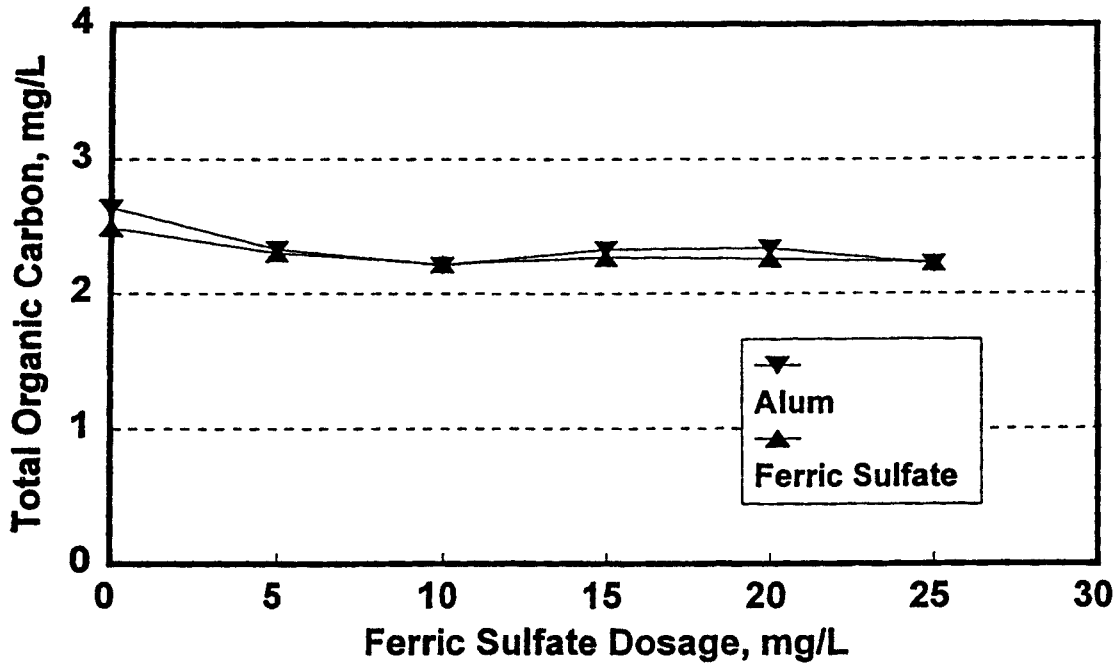
Figure III-17: The Effect of Increasing Coagulant Dosage on TOC Removal by Softening (100 mg/L CaO) of UT6 Water



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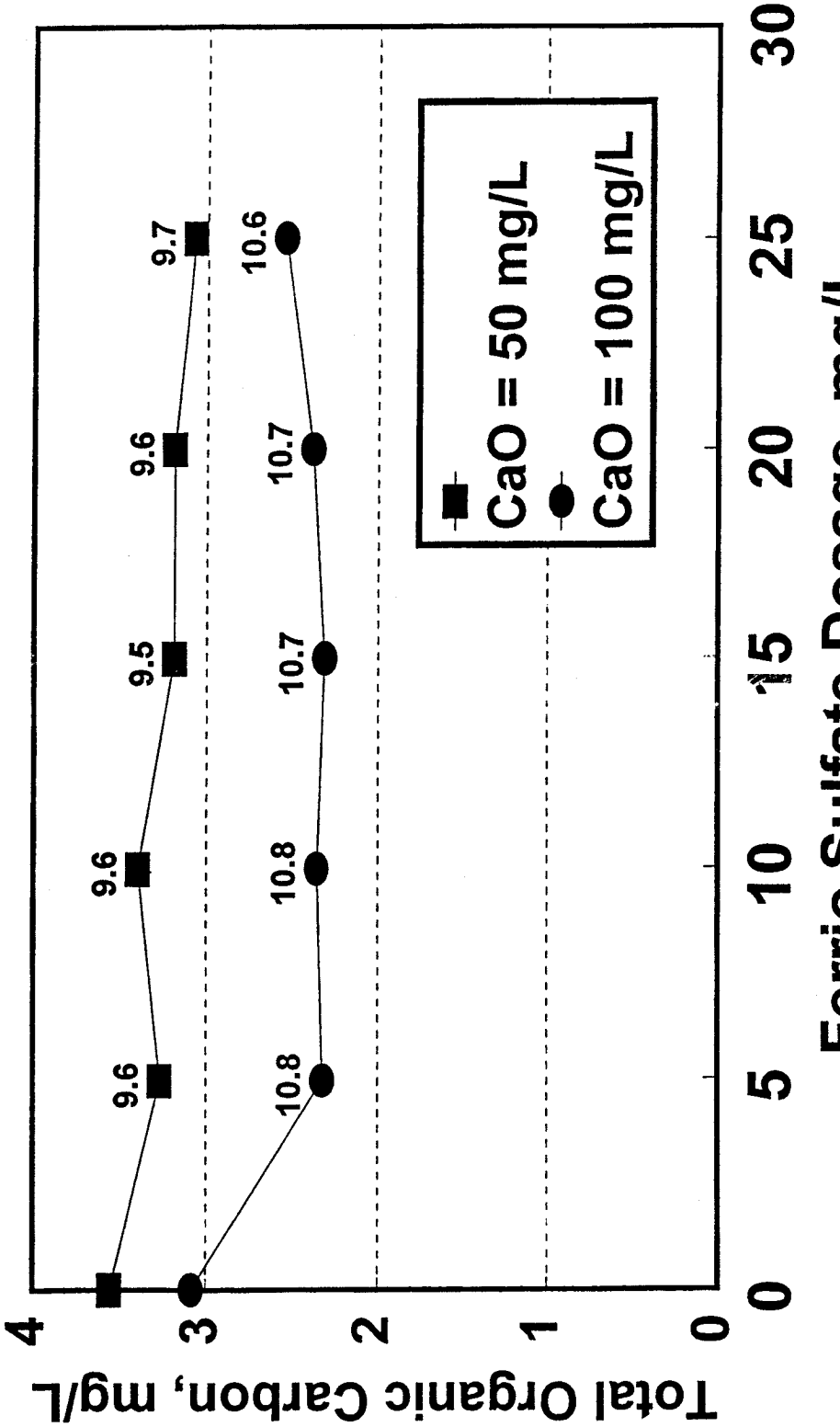

Figure III-18: the Effect of Increasing Coagulant Dosage on TOC Removal by Softening of UT1 Water

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The authors indicate some improved TOC removal from small doses of iron salts (5 mg/L ferric sulfate), but no additional TOC removal during softening occurred with increased coagulant addition (up to 25 mg/L dose) as shown in Figures III–17 and III–18.

In limited jar testing and in pilot testing, the City of Austin (a softening plant) has observed no significant difference in TOC removal with increasing doses of ferric sulfate beyond a low dose. Table III–9 shows the impact of increasing ferric sulfate doses on the turbidity and TOC concentration for jar tests in the City of Austin. The results indicate no significant difference in TOC removal with increasing doses of ferric coagulants, but did show that varying the coagulant dose did impact the turbidity removal as measured by NTU.

TABLE III–9.—IMPACT OF VARYING FERRIC COAGULANT DOSE ON TOC REMOVAL, AUSTIN, TEXAS, 4/9/93, 110 mg/L LIME DOSE, JAR TESTS

Ferric sulfate addition (mg/L)	Treated water turbidity, NTU	Treated water TOC (mg/L)
3	16	2.45
6	15	2.30
9	12	2.46
12	12	2.23
18	5.5	2.31

Pilot testing confirmed the jar test results by showing that increasing ferric sulfate doses beyond that required for turbidity removal proved to have no advantage in additional TOC removal (see Figure III–19).

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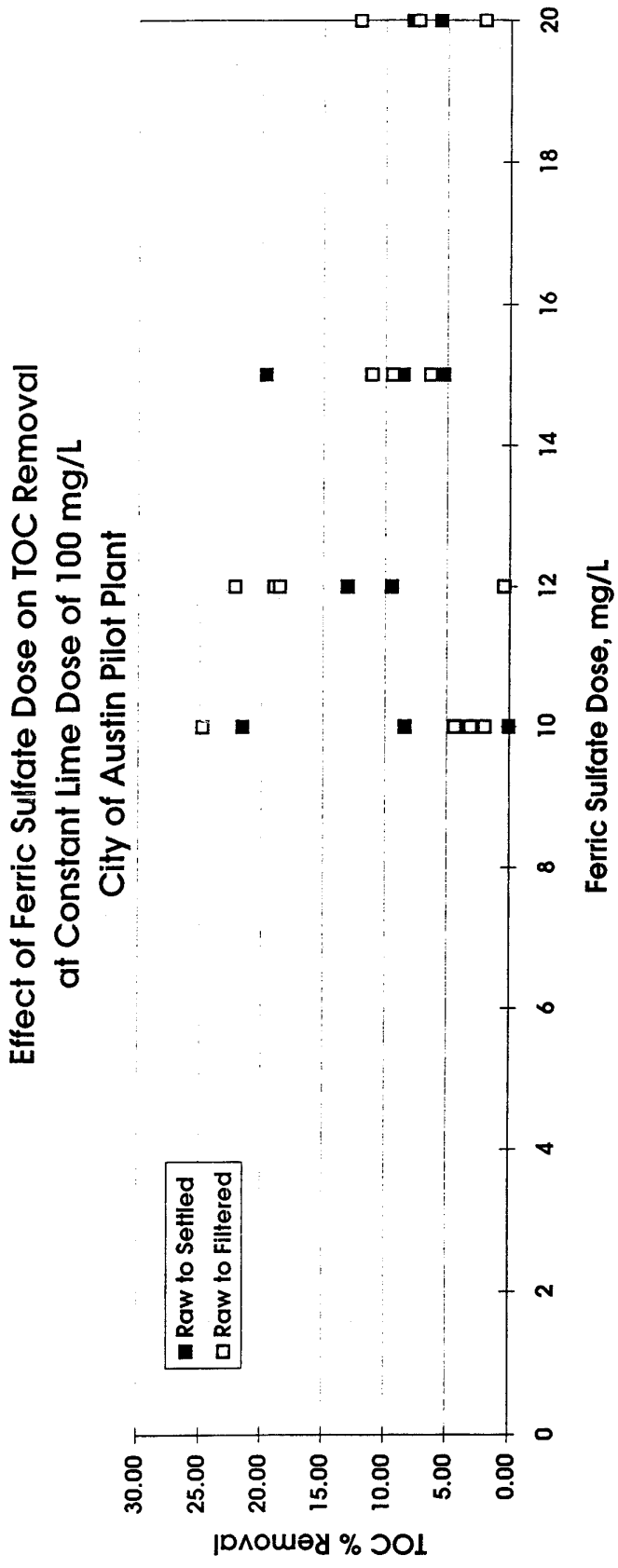

Figure III-19: Effect of Ferric Sulfate Dose on TOC Removal

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Full-scale plant data from St. Louis County Water Company and Kansas City, MO Water Services show that water temperature, turbidity, and raw water TOC levels have direct impact upon the efficiency of lime softening with iron salt coagulants to improve TOC removal.

Multiple jar tests on various waters done by Singer et al. (1996) focused on the relationship between use of lime and soda ash and TOC removal. Using only lime and soda ash (no coagulants), Singer et al. defined the dosages required to meet TOC removal percentages in the matrix. He also defined the dosages required to remove 10 mg/L of magnesium for nine waters that met the alkalinity levels in the right hand column of the matrix (i.e., >120 mg/L). Results of these jar tests are shown in Table III–10. Impacts of the proposed rule would be significant to softening plants if the TOC removal requirements were required to be met by all plants because the requisite lime and soda ash doses were higher than existing doses in the plants. Singer et al. (1996) found the removal of 10 mg/L of magnesium hardness to have less impact, although using the magnesium criteria would make TOC removal levels variable and less significant than meeting the removal levels in the matrix.

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Table III-10: Lime and Soda Doses Required for Various Enhanced Softening Criteria

Utility	% TOC Removal Required	Existing Plant Doses*	Existing pH of Settled Water at Treatment Plant	Doses* to Meet Req'd Percent TOC Removal	Corres-ponding Settled Water pH	Corres-ponding Mg Removal*	Doses to Remove 10 mg/l Mg*	Corres-ponding Settled Water pH	Corres-ponding Percent TOC Removal
Omaha, NE	20.0%	n/a	n/a	140 Lime 51 Soda	10.8	9	150 Lime 72 Soda	11.0	28
Austin, TX	20.0%	100 Lime 0.0 Soda	10.0	158 Lime 77 Soda	11.1	43	126 Lime 0.0. Soda	10.7	9
St. Louis, MO	20.0%	116 Lime 0.0 Soda	9.5	174 Lime 88 Soda	11.0	34	138 Lime 0.0 Soda	10.4	13
Ann Arbor, MI	25.0%	209 Lime 0.0 Soda	11.3	142 Lime 0.0 Soda	10.6	10	142 Lime 0.0 Soda	10.8	29
Adilan, MI	25.0%	146 Lime 0.0 Soda	9.7	161 Lime 0.0 Soda	10.4	17	161 Lime 0.0 Soda	10.4	31
Topeka, KS	25.0%	145 Lime 0.0 Soda	10.2	195 Lime 159 Soda	11.1	47	166 Lime 0.0 Soda	10.9	24
Sioux Falls, SD	30.0%	n/a	n/a	198 Lime 0.0 Soda	10.7	77	118 Lime 0.0 Soda	9.6	16
St. Paul, MN	30.0%	145 Lime 0.0 Soda	11.0	140 Lime 60 Soda	10.7	18	81 Lime 0.0 Soda	9.9	19
Ft. Lauder-dale, FL	30.0%	168 Lime 0.0 Soda	9.6	216 Lime 123 Soda	10.9	9	239 Lime 172 Soda	11.0	33

Notes: *Lime doses in mg/L as CaO/Soda Ash doses in mg/l as Na_2CO_3, *Mg removal expressed in mg/l as $CaCO_3$, n/a = not applicable

From Singer, et al, "Enhanced Coagulation and Enhanced Softening for the Removal of Disinfection By-Product Precursors: An Evaluation," Report to AWWA Disinfectants/Disinfection By-Products Technical Advisory Workgroup of the Water Utility Council, December 1996.

b. Shorney and coworkers—data on use of SUVA. As discussed previously, SUVA may be a practical method for determining which PWSs would be required to perform enhanced coagulation and enhanced softening. SUVA has been found to be a good indicator of humic content and it is the humic material that is best removed by coagulation. Shorney et al. (1996) report raw water SUVA values <3 in the harder (softened) source waters that have high levels of both turbidity and hardness. SUVA is defined as the UV absorbance measured as (m^{-1}) divided by the DOC concentration (mg/L). Typically, SUVA values <3 L/mg-m are representative of largely non-humic material, whereas SUVA values in the range of 4–5 L/mg-m represent mainly humic material (Edzwald & Van Benschoten, 1990). Shorney et al. (1996) report that coagulation and softening decreased SUVA, as expected, resulting in SUVA values between 1 and 2 L/mg-m. The decrease in SUVA, by treatment, also corresponded to a decrease in the apparent molecular weight. Austin's pilot work indicated that for their water, no additional TOC removal was observed with increasing lime and coagulant doses, demonstrating the difficulty in coagulation (see Figure III–20). Austin's water typically has a SUVA of approximately 2, indicating that most of the TOC in that water is non-humic and therefore likely to be difficult to coagulate. Concurrent work to fine-tune the enhanced coagulation criteria has yielded extensive justification for using SUVA values below 2 to define raw waters that have hard-to-treat TOC.

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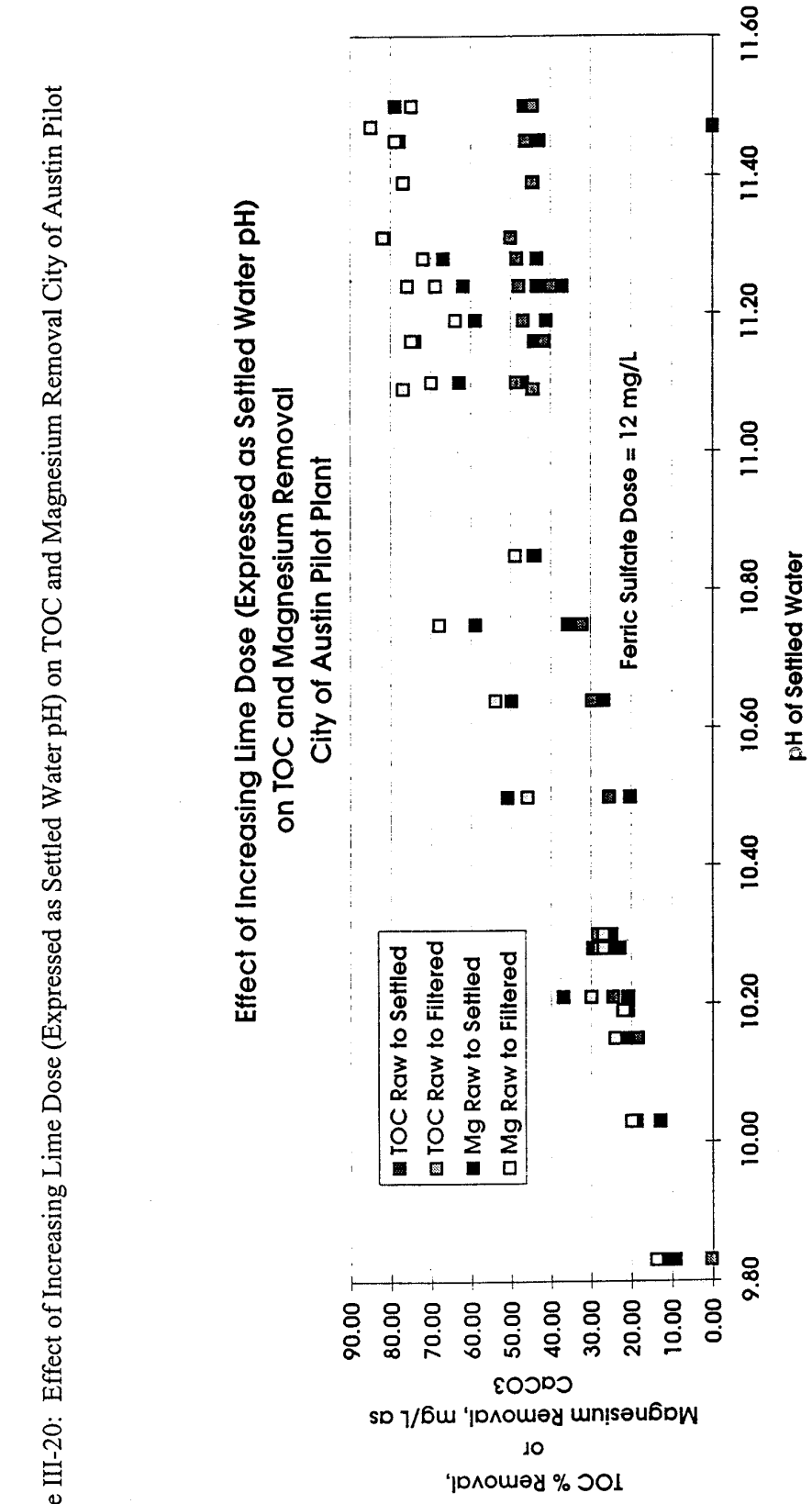

Figure III-20: Effect of Increasing Lime Dose (Expressed as Settled Water pH) on TOC and Magnesium Removal City of Austin Pilot Plant

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c. Malcolm Pirnie, Inc. modeling. Efforts to model the removal of TOC in softening systems were included in an American Water Works Association (AWWA) study done by Malcolm Pirnie, Inc. A database was compiled consisting of all the known and accessible jar test, pilot, and full-scale data from softening studies that investigated TOC removal. The database was used to develop some predictive equations for TOC removal for each raw water TOC level (as identified in Table III–1 of this Notice). Comparison of the predictive equations to case-by-case analyses of the same data base showed the equations to be fairly accurate for the low TOC waters (median removal levels of 20–25 percent) and medium TOC waters (median removal levels of 40 percent). Insufficient data made analysis unreliable for the high TOC group.

d. ICR mail survey. In order to obtain additional information on the current TOC removals being achieved by softening plants, a survey was sent to all the Information Collection Rule (ICR) softening utilities (49 plants) requesting that they fill out a single page of information with yearly average, maximum and minimum values for multiple operating parameters for each softening plant. The survey also asked for information regarding the use of coagulants. Most of the plants reported using a coagulant in addition to lime (88%) and some used multiple coagulants. Iron salts were the most frequently used coagulants, but alum, polymers, and starch were also used. Of the 49 plants responding to the survey, there was sufficient data to perform an analysis of TOC removal for 41 plants. The distribution of the number of responding plants in each TOC category is shown in Table III–11.

TABLE III–11.—DISTRIBUTION OF RESPONDING PLANTS BY TOC CONCENTRATION

Raw TOC (mg/L)	Number of plants responding	Number reporting sufficient data to calculate %TOC removal
0–2	5	5
>2–4	11	8
>4–8	20	17
>8	4	3

The data were analyzed with two goals in mind: to find the appropriate TOC removal levels for the rule matrix for softening plants and to determine what would define an appropriate step 2 for softening systems. To address the first question, the average TOC percent removals for each TOC group were plotted on a percentile basis and are shown in Figure III–21 (Clark et al., 1997) for the 2–4 mg/L TOC, and Figure III–22 for the 4–8 mg/L TOC (Clark et al., 1997).

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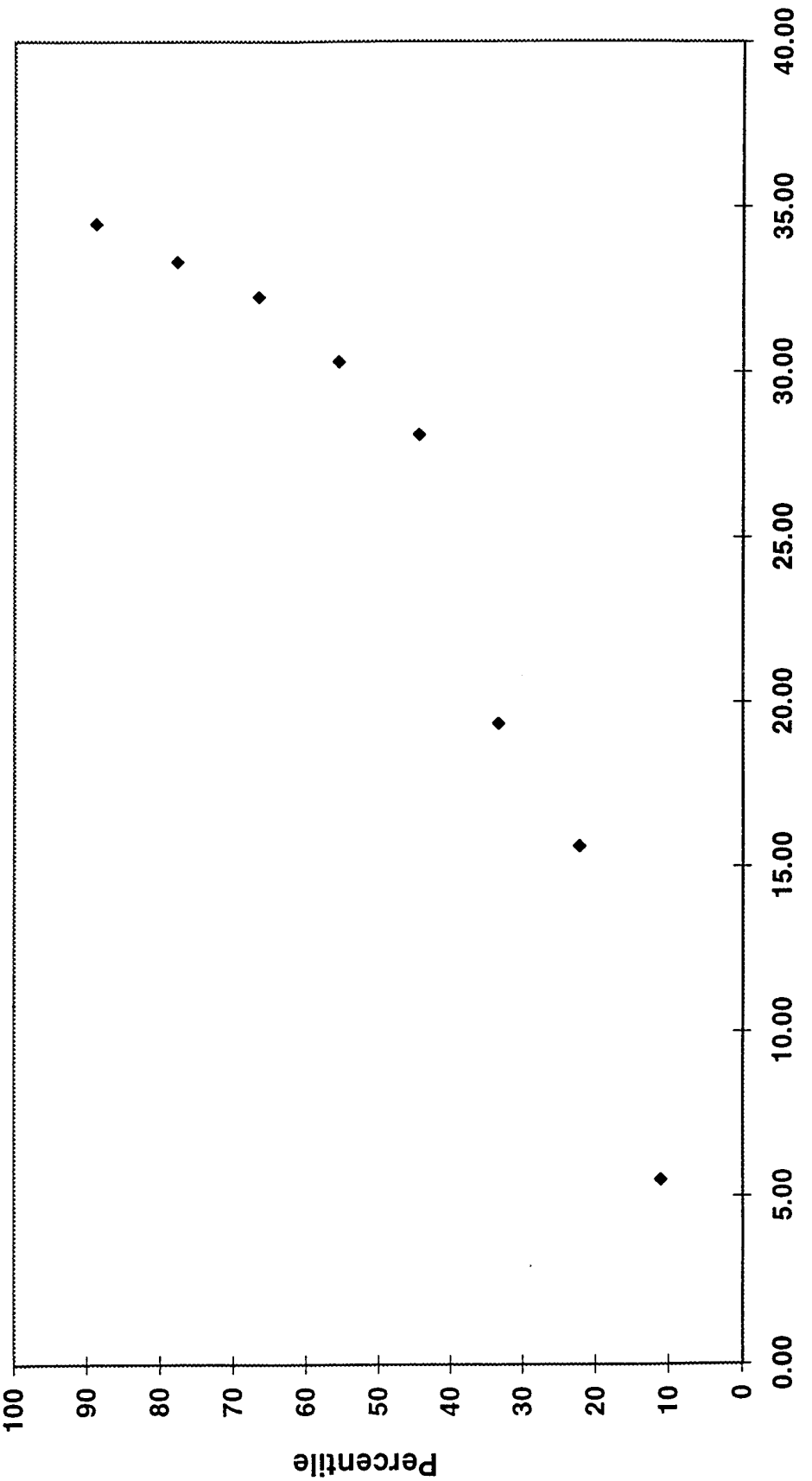

Figure III-21: Percent TOC Removal ICR Softening Plants with Raw TOC 2-4 mg/L.

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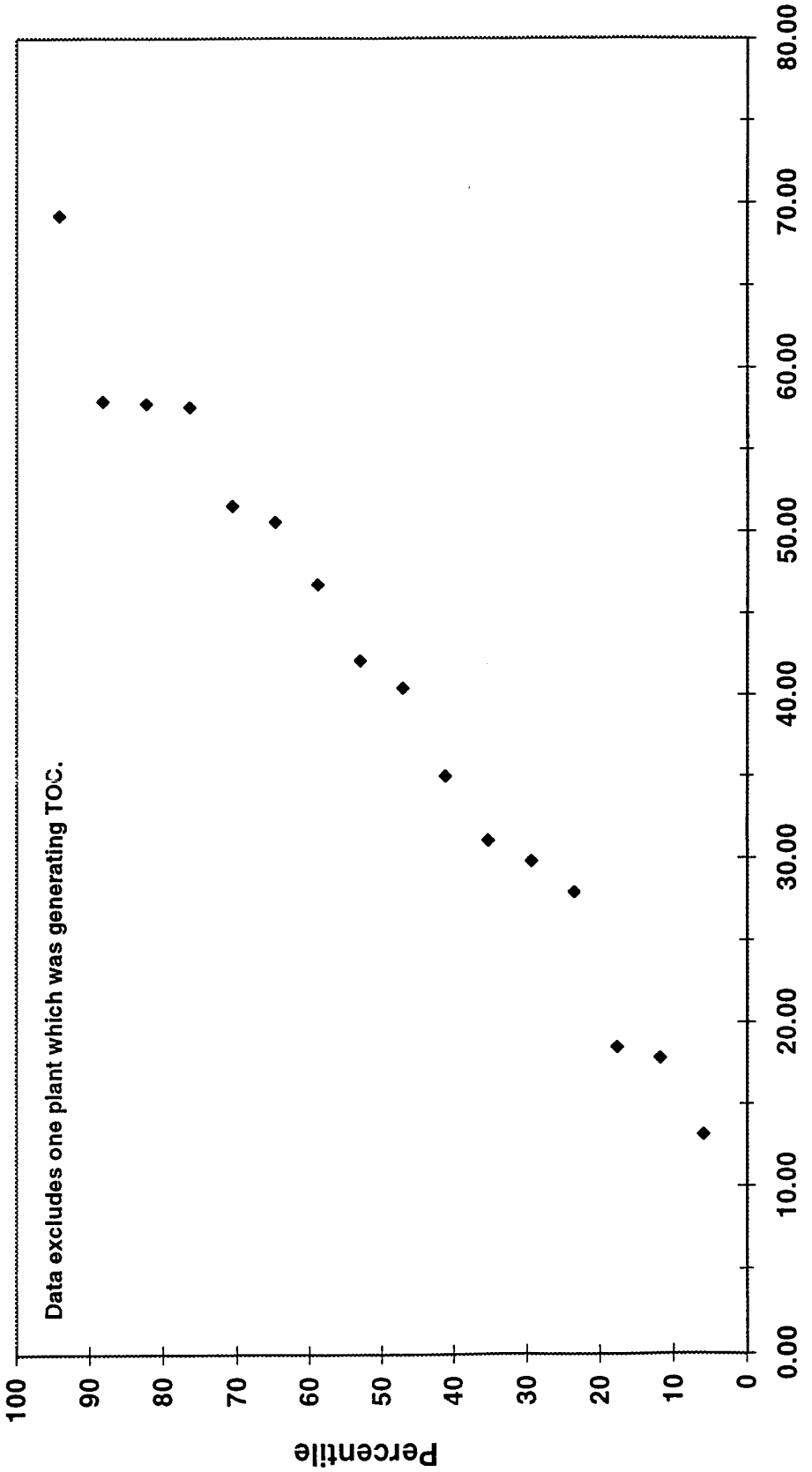

Figure III-22: Percent TOC Removal ICR Softening Plants with Raw TOC 4-8 mg/L

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To examine the percentage of plants that would meet the proposed requirements, the survey data were analyzed and the results are shown in Table III–12. The results in Table III–12 indicate that the relative impact of meeting the TOC removal requirement in the proposed rule would be greatest in the low TOC group (>2–4 mg/L) .

TABLE III–12.—PERCENTAGE OF SOFTENING PLANTS MEETING CURRENT PROPOSED REQUIREMENTS

Raw TOC (mg/L)	Proposed 1994 required percent removals	Percentage of plants that met requirements
>2–4	20	60
>4–8	25	80
>8	30	66

To address the second question regarding Step 2 criteria, the survey results for percent removal TOC and lime dose were plotted to examine the relationship between them (see Figure III-23) and to determine whether a point of diminishing returns can be identified for lime addition. Figure III–23 indicates that no correlation can be discerned, the data are highly variable, and no point of diminishing returns corresponding to a specific lime dose addition can be identified. The wide variation in water quality (e.g., pH, alkalinity, type of TOC), as well as the differences in coagulant usage, probably contributed to data variability.

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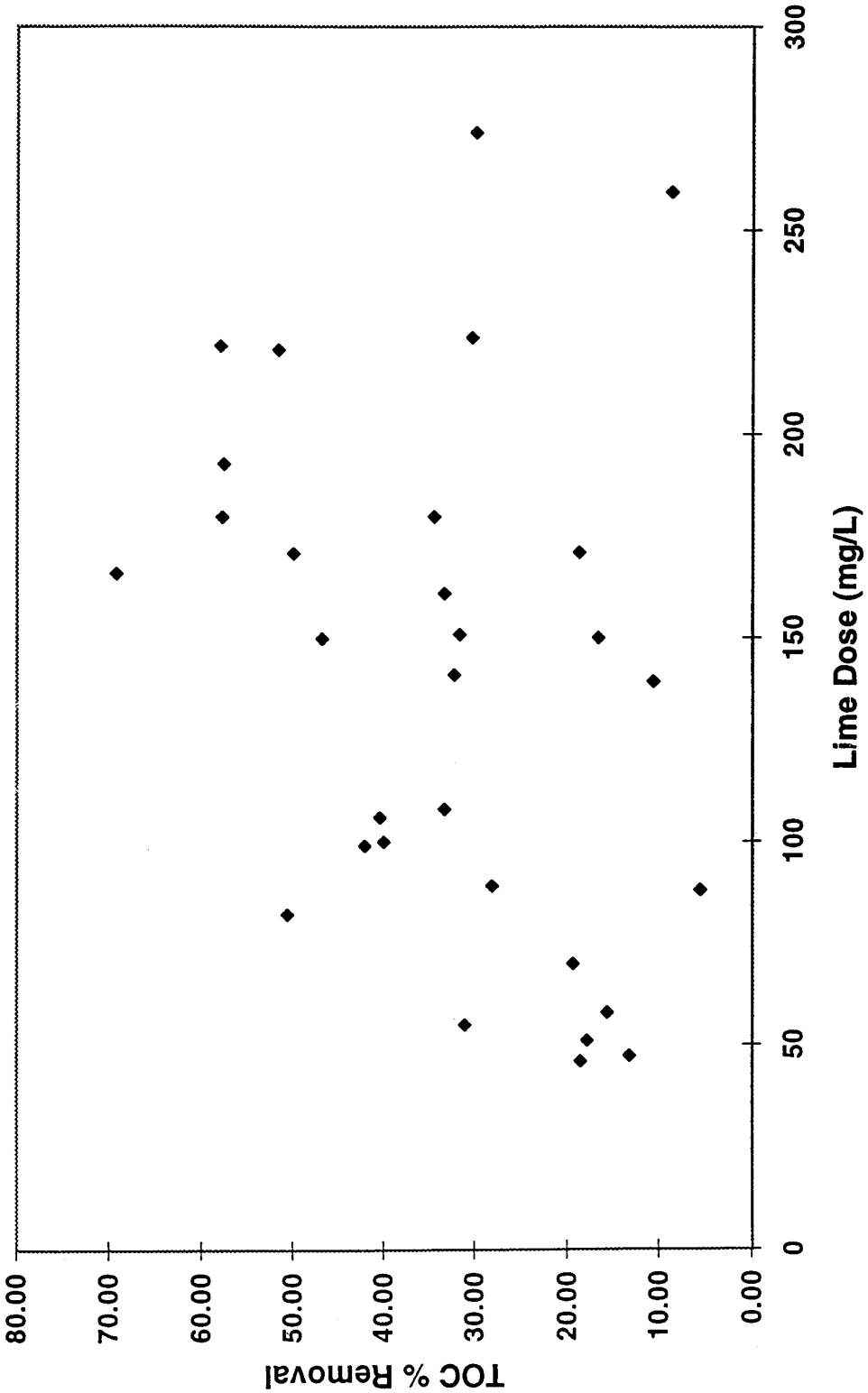

Figure III-23: Relationship of Lime dose to TOC Removal ICR Softening Plants

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Another important issue for softening systems is the pH level used in the softening process. As the lime dose is increased, the pH of the softening process increases and the character of the precipitate changes; as the pH rises above 10, the major precipitate formed changes from calcium carbonate to magnesium hydroxide. The TOC percent removal in the survey data was plotted versus the pH of softening and is shown in Figure III–24 . The data show that at higher softening pH levels, generally greater percentages of TOC are removed. Also as the lime dose is increased alkalinity is consumed and if the lime dose is high enough to deplete the raw water alkalinity, soda ash must be added to maintain the precipitation process. Crossing either one of these thresholds (either changing the dominant precipitate from calcium carbonate to magnesium hydroxide or changing from a lime softening system to a lime/soda softening system) constitutes a major change in the treatment process. Magnesium hydroxide floc do not act the same as calcium carbonate floc either in settling or in sludge treatment and the plant design for the two precipitates would be significantly different. Forcing a plant to increase pH to the point of having to add soda ash would also be a significant treatment change due to pH adjustment problems and because the precipitate would likely be changing at the same time. Most softening plants are normally operated without soda ash addition because of the high cost of soda ash, the additional sludge production, the increased chemical addition to stabilize the water and the increased sodium levels in the finished water (Randtke et al., 1994 and Shorney et al., 1996).

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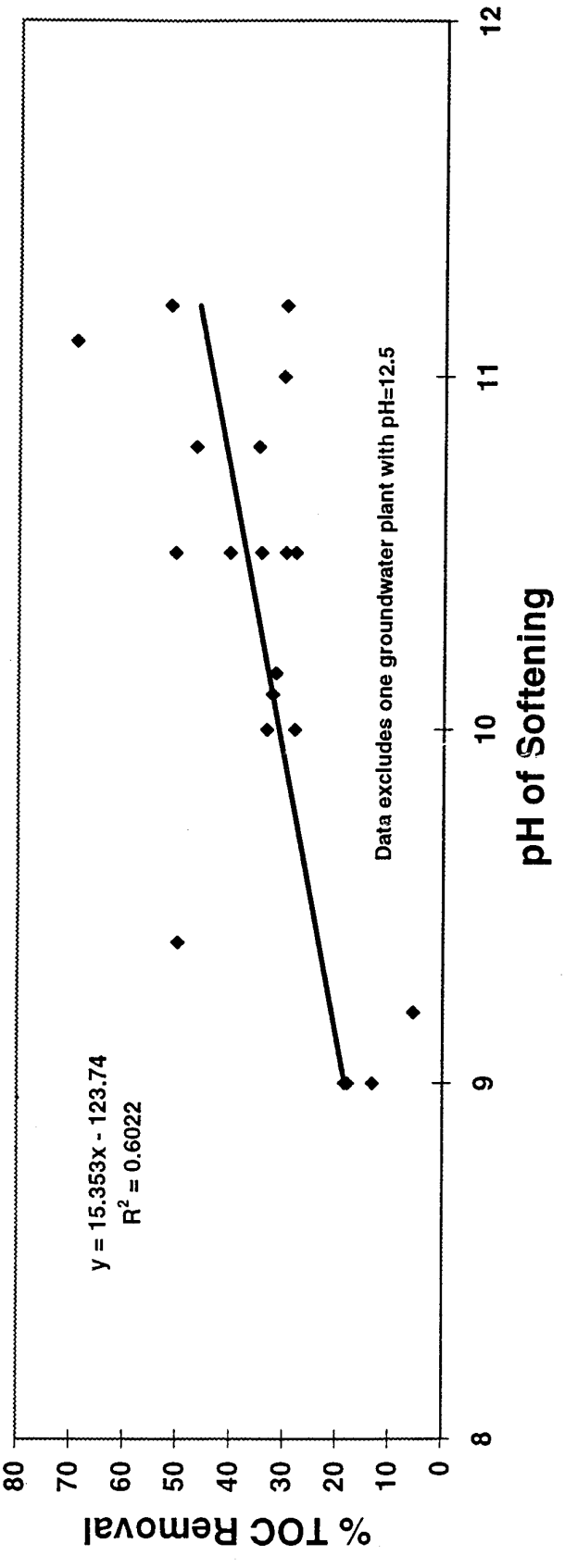

Figure III-24: pH of Softening and TOC Removal ICR Softening Plants

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Raising the pH by adding lime can have other impacts such as depleting alkalinity and potentially causing corrosion problems. To determine what finished water alkalinity most softening plants produce, the survey data was plotted for finished water alkalinity and TOC percent removal (see Figure III–25 (Clark et al., 1997)). With only a few outliers and regardless of the percent TOC removal, most plants produce finished water with alkalinity between 30 and 60 mg/L as $CaCO_3$.

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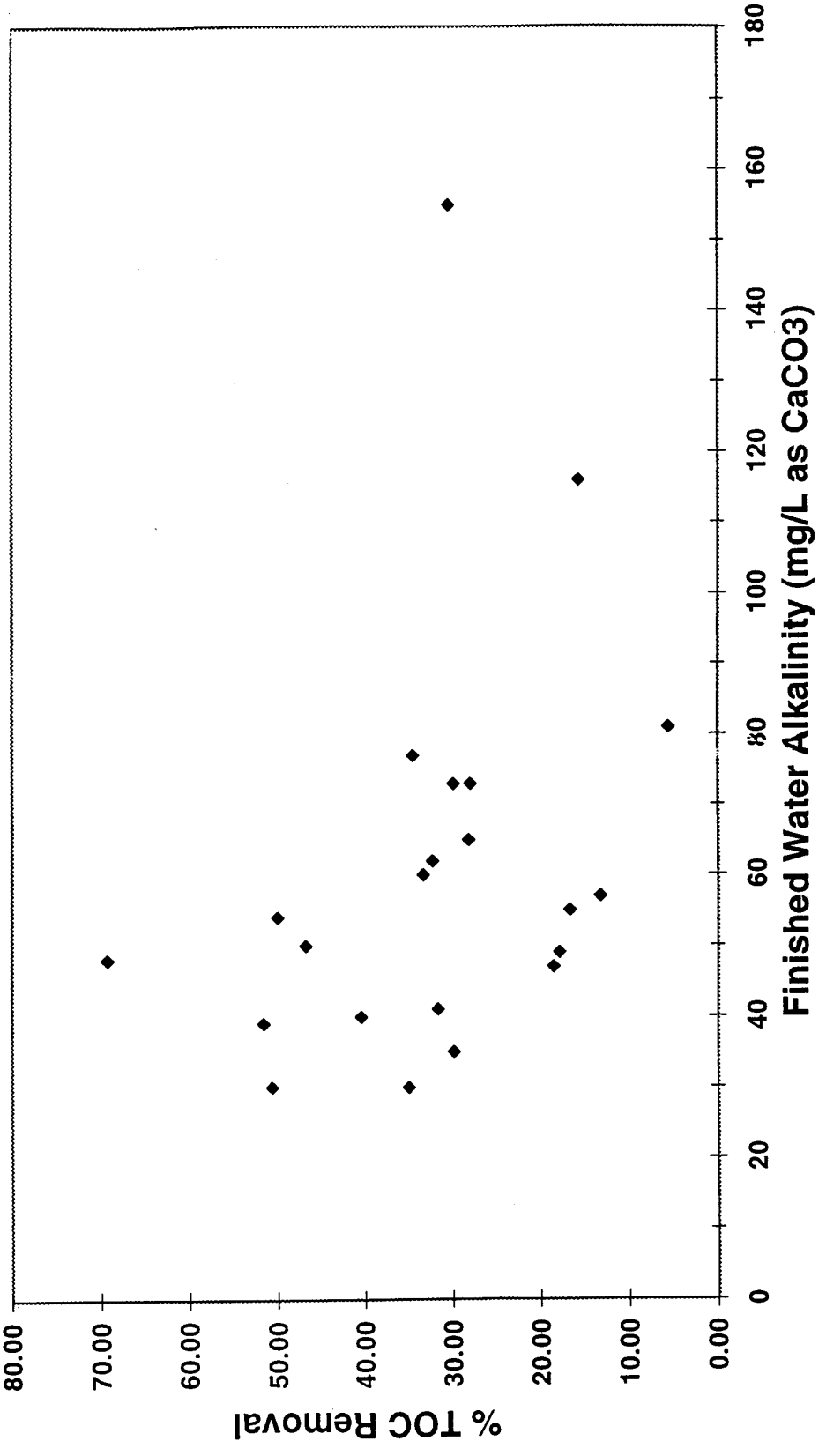

Figure III-25: Relationship between Finished Water Alkalinity and TOC Removal ICR Softening Plants

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The survey obtained basic information on disinfection practices in softening plants. Forty percent of the plants responding predisinfect. Softening plants predisinfect for the same reasons that conventional coagulation plants do, that is, to comply with Surface Water Treatment Rule Disinfection requirements, to oxidize iron and manganese, to control zebra mussels and Asiatic clams, and to control taste and odor problems. Disinfectants in use in softening plants are as follows:

- 28% of plants use free chlorine for both primary and secondary disinfection.
- 50% of plants use free chlorine/chloramine.
- 10% of plants use chloramine.
- 7% of plants use chlorine dioxide/chloramine.
- 5% of plants use ozone/chloramine.

In spite of the fact that some 78% of softening plants are using free chlorine for at least a portion of their disinfection, the reported yearly average THMs indicate that 90 percent of plants are currently meeting an 80 µg/L level for THMs (see Figure III–26 (Clark et al., 1997)). All reporting softening plants have average HAA5 levels below 60 µg/L (see Figure III–27 (Clark et al., 1997)). For the majority of softening plants, minor adjustments to disinfection practices may bring them into compliance with the proposed total THM and HAA5 MCLs, as long as predisinfection credit is allowed. Without predisinfection credit, these plants could face the major impact of having to provide disinfection time after sedimentation, and for at least one of the reporting utilities, that could mean significantly increasing the free chlorine contact time to get the maximum CT credit by making up for a shortened detention time. The end result for that system will likely be an increase in finished water total THMs over what are being produced using predisinfection credit. However, these site-specific issues will need to be addressed individually, as removing the precursors by enhanced softening will also remove some of the chlorine demand resulting in less disinfectant addition to obtain the necessary residual.

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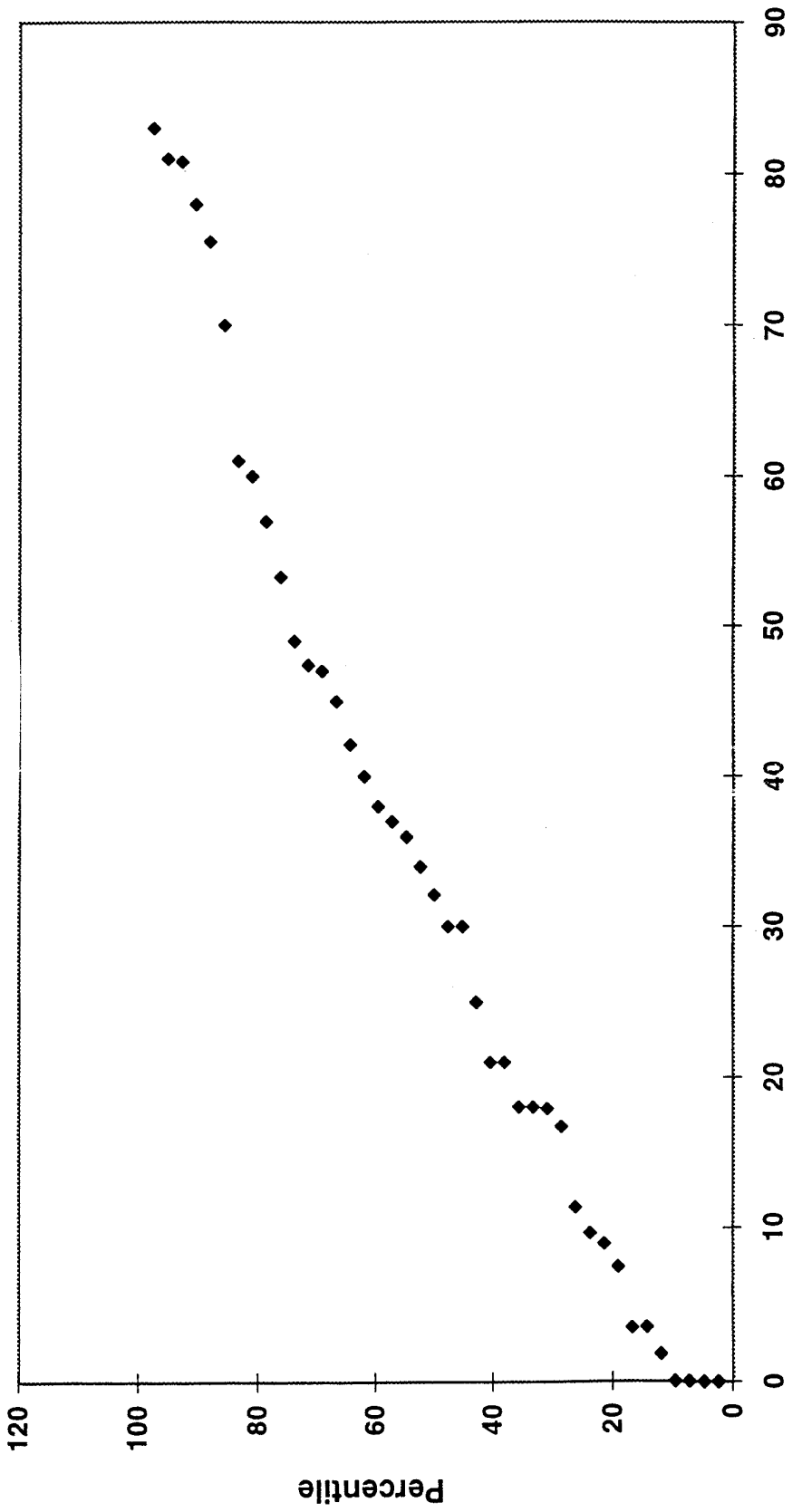

Figure III-26: Average THMs for ICR Softening Plants

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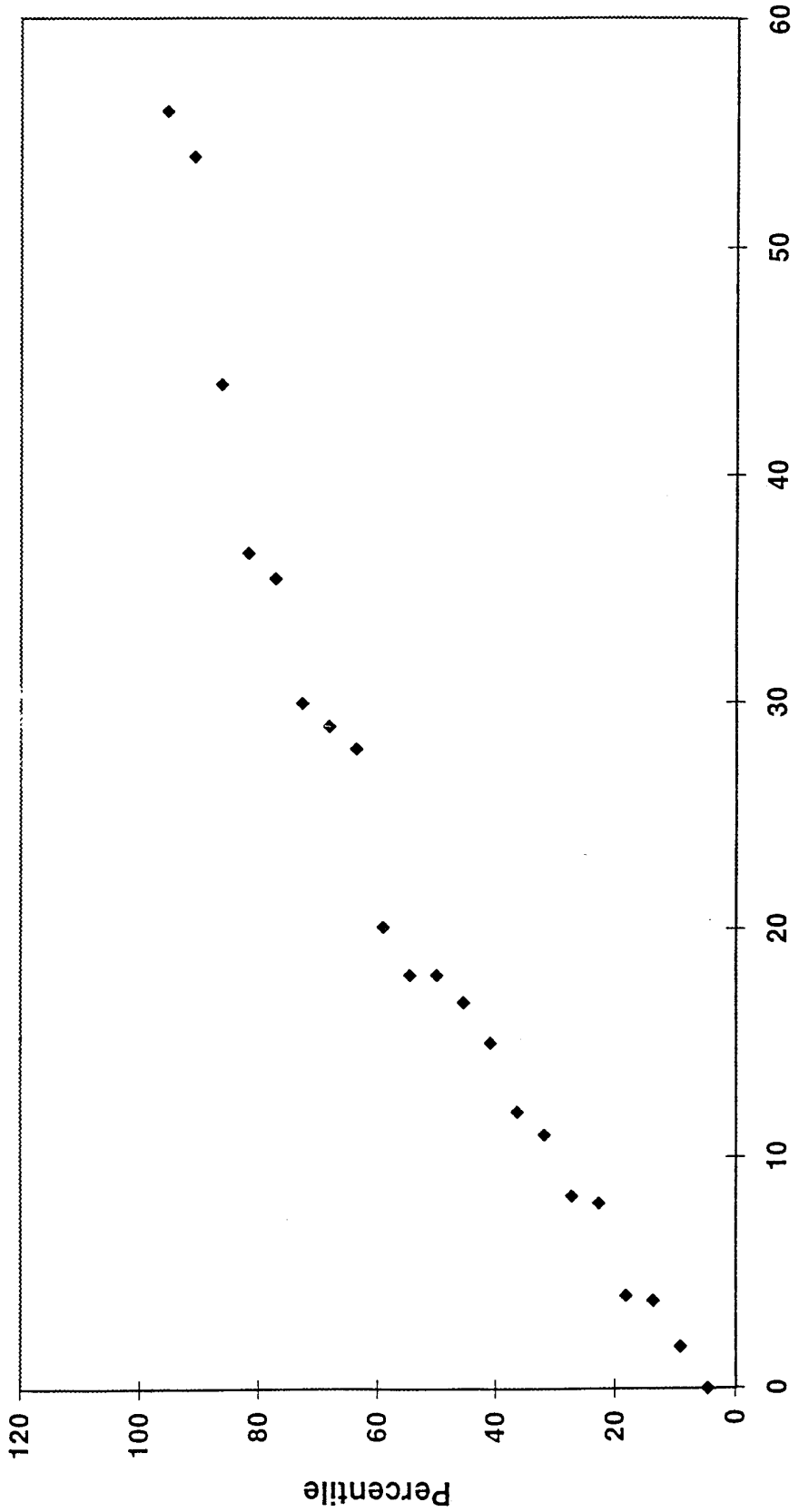

Figure III-27: Average HAA5 for ICR Softening Plants

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C. Summary of Key Enhanced Coagulation and Enhanced Softening Observations

Based on the data and analysis outlined above, the M/DBP Advisory Committee has recommended the following revisions to the proposed enhanced coagulation and softening requirements to address the outstanding issues on the use of this technology to control DBP precursors (see Table III–13). The top row has been modified from the proposal by lowering the values by 5%. Enhanced softening systems are required to comply with the column for alkalinity > 120 mg/L as $CaCO_3$.

TABLE III–13.—1997 PROPOSED REQUIRED REMOVAL OF TOC BY ENHANCED COAGULATION/ENHANCED SOFTENING FOR SURFACE-WATER SYSTEMS USING CONVENTIONAL TREATMENT

Source water TOC, mg/L	Source water alkalinity, mg/L as $CaCO_3$		
	0–60a (percent)	>60–120 [a] (percent)	>120 [a b] (percent)
>2.0–4.0	35.0	25.0	15.0
>4.0–8.0	45.0	35.0	25.0
>8.0	50.0	40.0	30.0

[a] Not applicable to waters with raw-water SUVA ≤ 2.0 L/mg-m.
[b] Systems practicing precipitative softening must meet the TOC removal requirements in this column.

For waters with TOC >4.0 mg/L (6 of the 9 boxes in the 3 x 3 matrix), the TWG felt that 90 percent of these waters can meet the 1994 proposed step 1 TOC removal requirements. For waters with TOC >2.0–4.0 mg/L, the Committee recommended that the TOC removal requirements be 35, 25, and 15 percent for low-, moderate-, and high-alkalinity waters, respectively. For low-TOC waters with raw-water SUVA >2 L/mg-m, the TWG felt that 90 percent of the systems treating such waters will be able to comply with the revised step 1 TOC removal levels.

The Committee recommended that waters with raw-water SUVA ≤2.0 L/mg-m be given an exemption to enhanced coagulation and enhanced softening. SUVA is an indicator of the humic content of a water. Coagulation removes humic matter, so waters with low-SUVA values contain primarily nonhumic matter, which is not amenable to enhanced coagulation. The use of a raw water SUVA < 2.0 liter/mg-m as a criterion for not requiring a system to practice enhanced coagulation or softening should be added to those proposed in § 141.135(a)(1)(i)–(iv).

For systems practicing enhanced coagulation (in any of the 9 boxes in the matrix) that can not meet the step 1 removal values, a step 2 protocol needs to be used to develop alternative TOC removal requirements. In addition to the current proposed PODR of the slope criterion of 0.3 mg/L of TOC removal per incremental 10-mg/L alum dose, the TWG developed another PODR (a second option for the protocol), which is a settled-water SUVA ≤2.0 L/mg-m. At this point, the residual TOC is mainly composed of nonhumic matter that is not amenable to enhanced coagulation; therefore, it is not productive to add additional coagulant. Because oxidants can destroy UV, but not TOC, SUVA must be determined on water that has not been exposed to oxidants. Thus, using a settled-water SUVA ≤2.0 L/mg-m as a PODR should be done on jar-tested water (as the slope criterion is done) unless the full-scale plant is not using preoxidation/predisinfection. The TWG believes that these revised requirements will result in a limited amount of transactional costs for the PWSs and their primacy agencies. The Committee recommended this option to EPA.

Enhanced softening systems that cannot meet the removal percentages specified in the TOC removal matrix must demonstrate that they have met alternative performance criteria, e.g., depressed the alkalinity to a minimum level or lowered settled water SUVA ≤ 2.0 L/mg-m. Also, systems that remove a minimum of 10 mg/L of magnesium hardness (as $CaCO_3$) from their raw water are exempt for enhanced softening requirements. Lime softening plants would not be required to perform lime-soda ash softening, and no softening plant will be required to lower treated effluent alkalinity below 40 mg/L (as $CaCO_3$), as part of any Step 2 procedure.

Because the determination of SUVA requires measurement of DOC, the TWG believed that guidance on this determination is necessary. DOC is determined on filtered samples, but it is important that the filter paper does not leach DOC. Protocols and quality assurance measures to ensure that SUVA is properly measured are discussed in the analytical methods section.

Another exception to enhanced coagulation in the proposed 1994 rule was for systems that treated water with <4.0 mg/L TOC and >60 mg/L alkalinity that achieved TTHMs <0.040 mg/L and HAA5 <0.030 mg/L. Waters with low TOC and moderate-to-high alkalinity were expected to be some of the more difficult to treat with enhanced coagulation, so this exception encouraged systems treating such waters to explore alternative technologies (e.g., ozone/chloramines) that could reduce DBP levels significantly below the proposed Stage 1 MCLs (i.e., <50 percent of the proposed Stage 1 MCLs). The analysis of the optimized coagulation database (Table III–10 in the draft NOA) confirms this point. Thus, the Committee recommended maintaining this exception to enhanced coagulation.

D. Request for Public Comment on Enhanced Coagulation and Enhanced Softening Issues

The 1994 proposal required that TOC compliance monitoring be performed before continuous disinfection. If there are no limits to where a PWS can add a disinfectant for compliance with disinfection requirements, EPA must address the question of where the TOC compliance monitoring point should be located. Two possible compliance monitoring locations (pre- and post-filtration) are discussed below. Pre-filtration sampling may not give utilities complete TOC removal credit because a small portion of the TOC may bind with coagulant but remain in suspension and fail to settle; it would pass through the sedimentation basin and be removed by the filter. Even though the TOC would be removed by the filter and prevented from entering the distribution system to form DBPs, PWSs would not receive TOC removal credit with a pre-filtration sampling point. Post-filtration sampling would ensure utilities receive credit for all TOC removed by the treatment train. It is possible, although unlikely, that some utilities would use filtration to buttress their TOC removal capability in place of optimizing the enhanced

coagulation process. EPA solicits comment on where the TOC compliance monitoring point should be located. EPA also requests comment on the modifications to enhanced coagulation TOC removal concentrations and other provisions for enhanced coagulation outlined above. Finally, EPA requests comment on the modifications to the requirements for enhanced softening.

IV. Disinfection Credit

A. 1994 Proposal

The proposed 1994 DBP Stage I rule discouraged the overuse of disinfectants prior to precursor (measured as TOC) removal by not allowing credit for compliance with disinfection requirements in the SWTR prior to removal of a specified percentage of TOC, at treatment plants using conventional treatment. The proposed IESWTR options, scheduled to be promulgated concurrently with the Stage 1 DBPR, were intended to include microbial treatment requirements to prevent increases in microbial risk. The purpose of not allowing predisinfection credit was to maximize removal of TOC prior to the addition of chlorine or chloramines, thus minimizing disinfection byproduct (DBP) formation.

Many drinking water systems use preoxidation to control a variety of water quality problems such as iron and manganese, sulfides, zebra mussels, Asiatic clams, and taste and odor. The 1994 proposed rule did not preclude the continuous addition of oxidants to the influent to the treatment plant to control these problems. However, the proposed regulations did not allow credit for compliance with disinfection requirements prior to precursor removal through enhanced coagulation or enhanced softening. Enhanced coagulation and enhanced softening processes would decrease the concentration of TOC and UV absorbing compounds, thereby decreasing the precursor concentration and the chlorine demand. Thus, analysis supporting the proposed rule concluded that many plants would be able to comply with the Stage 1 MCLs for THMs and HAA5 of 0.080 mg/L and 0.060 mg/L, respectively, by reductions in DBP levels as a result of reduced disinfection practice in the early stages of treatment. Also, enhanced coagulation and enhanced softening was thought to lower the formation of other unidentified DBPs as well. The 1994 proposal assumed that addition of disinfectant prior to TOC removal would initiate DBP formation through contact of the chlorine with the TOC thus effectively ''mooting'' the value of the EC step. Finally, the analysis underlying the 1994 proposed elimination of the preoxidation credit assumed that the addition of disinfectant was essentially ''mutually exclusive'' of the goal to reduce DBP formation by the removal of TOC. As discussed below, new data developed since 1994 suggests this may not be the case.

In the 1994 proposal, preoxidation credit was allowed for some systems that met any of the following criteria:

—Credit may be taken prior to precursor removal when the water temperature was less than 5 °C and the total THM (TTHM) and HAA5 quarterly averages are no greater than 0.040 mg/L and 0.030 mg/L, respectively.

—PWSs which purchase water from another entity were allowed to include this credit if the TTHM and HAA5 quarterly averages are no greater than 0.040 mg/L and 0.030 mg/L, respectively. If these DBP averages are higher, then the systems may use a ''C'' of 0.2 mg/L or the measured value (whichever is lower) and the actual contact time. The credit is allowed from the disinfectant feed point, through a closed conduit, and ending at the delivery point in the treatment plant.

—For ozone, disinfection credit would be allowed prior to enhanced coagulation, if ozonation is followed by biologically active filtration (BAF), to ensure the control of the ozonation byproducts by BAF.

—For chlorine dioxide, disinfection credit would be allowed if the PWS could demonstrate 95 percent efficient yield of chlorine dioxide from sodium chlorite (i.e., the chlorine dioxide feed stream must contain less than five percent per weight free chlorine residual).

EPA solicited comments on several issues related to the predisinfection credit requirements:

—Whether preoxidation was necessary in water treatment to control the various water quality problems such as iron and manganese oxidation, control of taste and odor, zebra mussels and Asiatic clams?

—Would the addition of a preoxidant before precursor removal by enhanced coagulation or enhanced softening produce excessive DBP levels?

B. New Information Since 1994 Proposal

At the time of the proposed rule, EPA intended to use data from the ICR to develop the IESWTR (specifically risk-based disinfection requirements). For the reasons outlined in section I.E., the ICR monitoring data will not be available for consideration as part of developing the IESWTR. In light of this, M/DBP FACA members agreed that the IESWTR should include requirements for a disinfection benchmark to assure no significant reductions in existing levels of microbial inactivation while PWSs complied with the Stage 1 DBP requirements, unless they met certain site-specific conditions. In a separate NODA concerning the IESWTR published today, EPA describes the disinfection benchmark requirements that it intends to promulgate by November 1998. The Advisory Committee was specifically concerned about maintaining the same level of disinfection while (1) not compelling many more systems to install either substantial replacement contact time or an alternative disinfectant after precursor removal than were predicted in 1994 and (2) still allowing systems to meet the TTHM and HAA5 MCLs. This was an issue because MCL compliance predictions in the 1994 proposal were based on assumptions that (1) TTHM and HAA5 formation would be limited by precursor removal, which would limit the number of systems having to install alternative disinfectants or advanced precursor removal (GAC or membranes) and (2) systems would, where possible, receive necessary inactivation credit through addition of contactors located after precursor removal processes. Several committee members were concerned that these assumptions would result in systems installing costly technologies or contact basins in order to meet DBP MCLs that would prove unnecessary when EPA was able to develop a risk-based ESWTR. However, if systems could continue to receive inactivation credit for all disinfection used and still meet DBP MCLs, these costly alternatives to achieve compliance could be avoided. The following is information considered by committee members that led to the recommendation to allow disinfection credit for disinfection used, as is currently allowed.

1. ICR Mail Survey—Predisinfection Practices

To obtain information on the current predisinfection practices of systems, a survey was sent out to utilities participating in the ICR. The results of the survey of 329 surface water treatment plants indicated that 80 percent (263) of these plants use predisinfection for one or more reasons. A detailed breakdown of the reasons cited is shown below:

Predisinfection reason	Number of "yes" responses (% of total)
Taste and Odor Control	114 (35%)
Turbidity Control	38 (12%)
Algae Growth Control	177 (54%)
Inorganic Oxidation	104 (32%)
Microbial Inactivation	222 (67%)
Other	27 (8%)

The survey indicated that the majority of the plants using predisinfection were doing so for multiple reasons. The main reported reason for predisinfection was microbial inactivation, followed by algae control, taste and odor and inorganic oxidation. Seventy-seven percent of plants that predisinfected reported that their current levels of *Giardia lamblia* inactivation would be lowered if predisinfection was discontinued and no subsequent additional disinfection was added to compensate for change in practice. Eighty-one percent of plants that predisinfected would have to make major capital investments to make up for the lost logs of *Giardia lamblia* inactivation. Thus, to maintain the same level of microbial protection currently afforded, additional contact time would have to be provided if predisinfection was eliminated. Most of the surveyed plants also used preoxidation to control for taste and odor, algae growth or inorganic oxidation. Therefore, many PWSs would have had to continue use of a predisinfectant for these problems and also provide additional contact time for disinfection credit.

The survey also demonstrated that many utilities were unfamiliar with the concept of log inactivation of *Giardia lamblia* and did not know how to determine it, since the SWTR only requires unfiltered systems to make this calculation. Instead, many utilities reported the ratio of CT values, which is the ratio of the actual CT to the required value, instead of actual log inactivation.

In addition to the ICR mail survey, results from EPA's Comprehensive Performance Evaluations (CPE) of a total of 307 PWSs (4 to 750 mgd) reported that 71 percent of the total number of plants used predisinfection and 93 percent of those that predisinfected used two or three disinfectant application points during treatment.

Based on the above information, EPA believes that predisinfection is used by a majority of PWSs for microbial inactivation, as well as other drinking water treatment objectives.

2. Summers et al.—Impact of Chlorination Point on DBP Production

In developing the 1994 proposal, EPA assumed that the removal of precursors by enhanced coagulation or enhanced softening had to precede Cl_2/chloramine addition in order to lead to reduction of DBPs. Four investigators tested the validity of this assumption. Summers (Summers et al., 1997) summarized the findings of the four investigators concerning the impact of moving the point of chlorination during coagulation, flocculation and sedimentation on DBP formation for a representative range of waters and treatment conditions. In addition, studies were carried out at the University of Cincinnati under the sponsorship of EPA, the American Water Works Association (Water Utility Council-Water Industry Technical Action Fund) and the Chlorine Chemistry Council (Solarik et al., 1997). The results of these studies are summarized here.

Sixteen source waters have been evaluated to date. The waters were selected to proportionately represent the national source water distribution in the enhanced coagulation 3 x 3 (TOC—alkalinity) matrix as estimated from AWWA water industry database (WIDB). Waters were chosen to represent the >2.0–4.0 mg/L and >4.0–8.0 mg/L TOC ranges. For TOC >8.0 mg/L, prechlorination would generally not be a suitable option, as experience and computer modeling have shown that prechlorination of these waters under the conditions of this study is likely to yield TTHM and HAA5 values that exceed the 0.080 mg/L and 0.060 mg/L proposed MCLs, respectively. WIDB TOC data indicate that less than 10 percent of the surface waters have TOC concentrations greater than 8.0 mg/L.

The study was conducted using a bench-scale batch jar testing procedure with chlorine added at different times to simulate full-scale continuous flow conditions with chlorine added at different points. Alum ($Al_2(SO_4)_3 \bullet 18H_2O$) was used as the coagulant for all waters and two alum doses were examined for 14 of the 16 waters evaluated. The baseline dose was set at the level required for turbidity control, while a second increased dose was set at the level necessary to meet the required percent TOC removal in the 3 X 3 enhanced coagulation matrix. In three cases, the required TOC removal was achieved by baseline coagulation. The jar tests were carried out at ambient laboratory temperature, (22°C).

Chlorine was added to four parallel jars at four different times during the coagulation, flocculation and sedimentation process for both the baseline coagulant dose and the increased coagulant dose: 1) 3 minutes before rapid mixing (Pre-RM), (2) at the end of rapid mixing (Post-RM), (3) in the middle of flocculation (Mid-Floc), and (4) at the end of sedimentation (Post-Sed). Additionally, the raw uncoagulated water was adjusted to the settled water pH and chlorinated. The DBP results from the raw uncoagulated water served as a basis for comparison. The chlorine doses were chosen to yield a free chlorine residual of 0.6 ± 0.4 mg/L after 3 hours of total contact time at ambient pH (6.1–8.1) and laboratory temperature (22°C). The 3 hour reaction time is representative of that of a typical coagulation, flocculation and sedimentation process train. At the end of the 3 hour incubation time, the reaction was quenched and DBPs were assessed. Settled water was also chlorinated under uniform formation conditions (UFC) (Summers et al., 1996) to represent distribution system DBP formation. A more detailed experimental approach is presented elsewhere (Solarik et al., 1997, Summers et al., 1997).

Impact of Point of Chlorination

The impact of moving the point of chlorination downstream for both baseline and increased dose coagulation is shown in Figures IV.1, IV.2, and IV.3 for TOX, TTHM, and HAA5 concentrations, respectively. The distribution of data is shown as box and whisker plots indicating the mean and median, the 10th, 25th, 75th, and 90th percentiles, and any data that lies outside the 10th and 90th percentiles. Moving the point of chlorination further downstream decreased the concentration of DBPs formed after three hours of contact time with free chlorine. The DBP concentrations shown in these three figures are not intended to represent occurrence levels of DBPs in the distribution system, only those which were formed under the conditions of this study. Figures IV.4, IV.5, and IV.6 show the percent decrease in DBP formation relative to that formed in the raw uncoagulated water.

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Figure IV. 1: Impact of point of chlorination on TOX formation

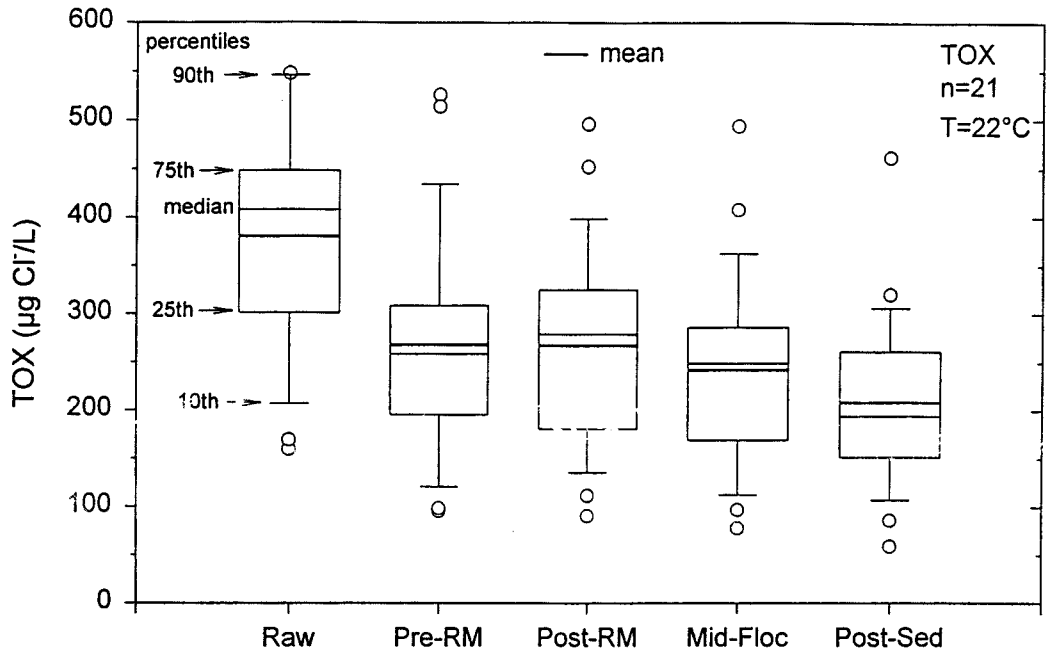

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Figure IV.2: Impact of point of chlorination on TTHM formation

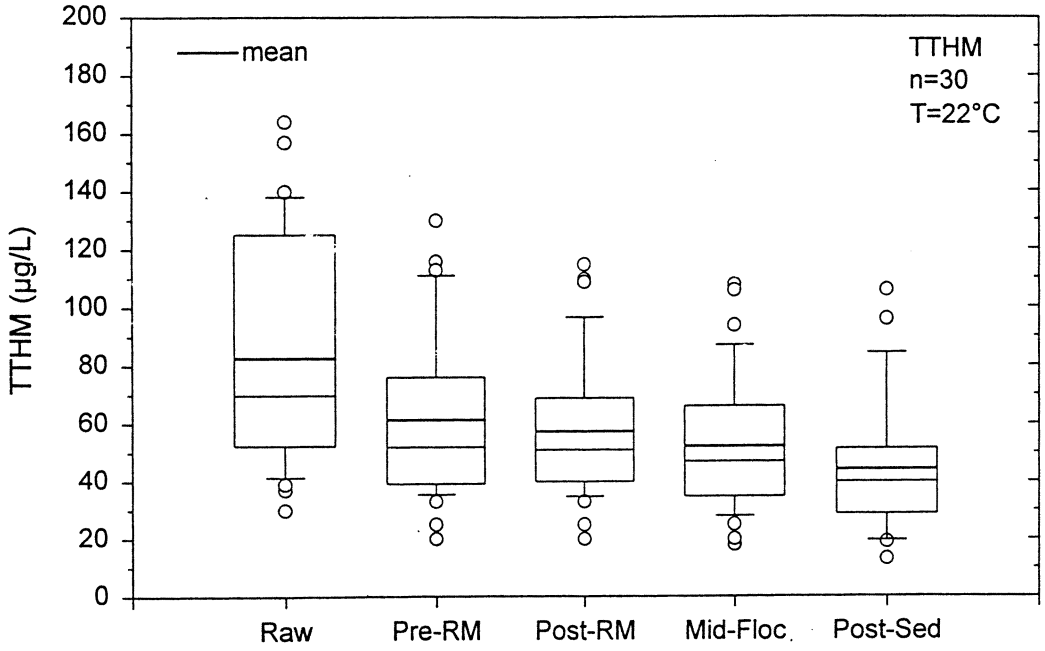

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Figure IV.3: Impact of point of chlorination on HAA5 formation

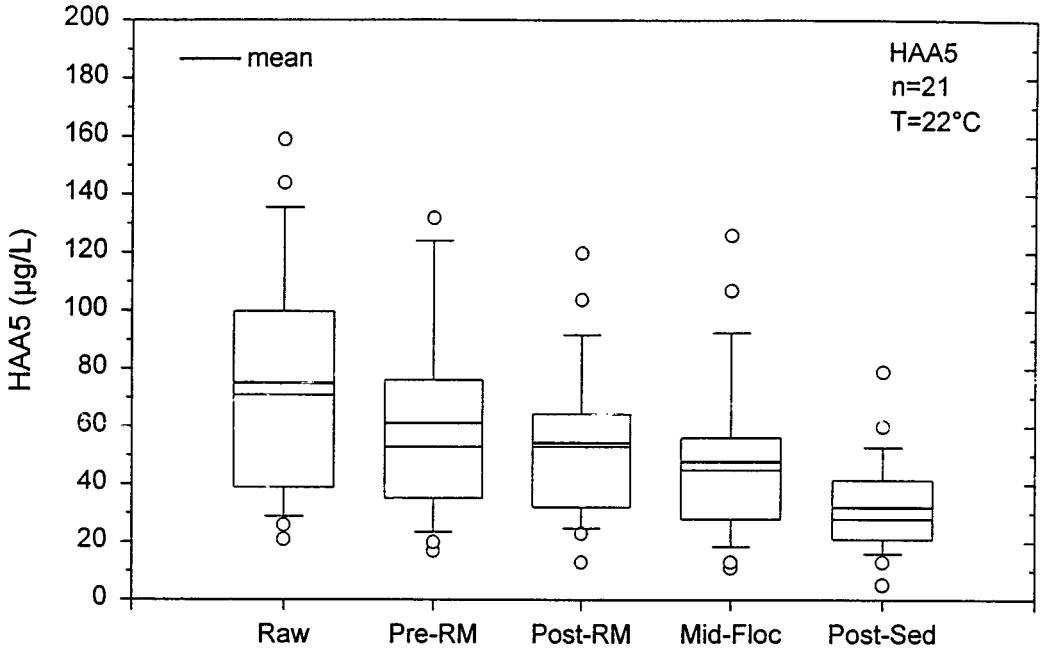

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Figure IV.4: Impact of point of chlorination on percent decrease in TOX formation for all waters (compared to raw)

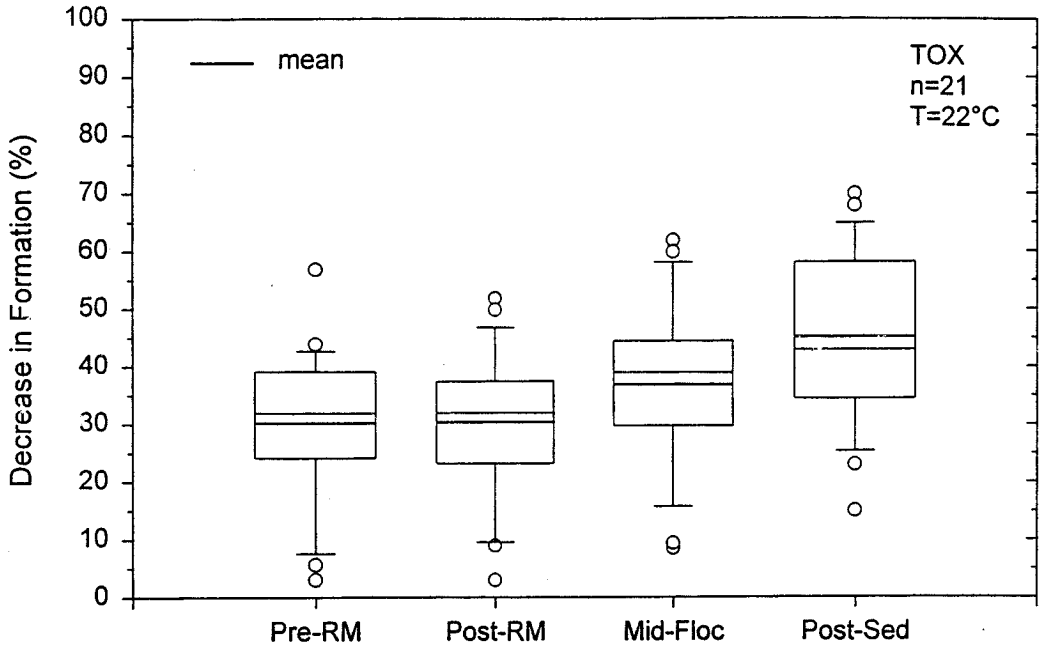

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Figure IV.5: Impact of point of chlorination on percent decrease in TTHM formation for all waters (compared to raw)

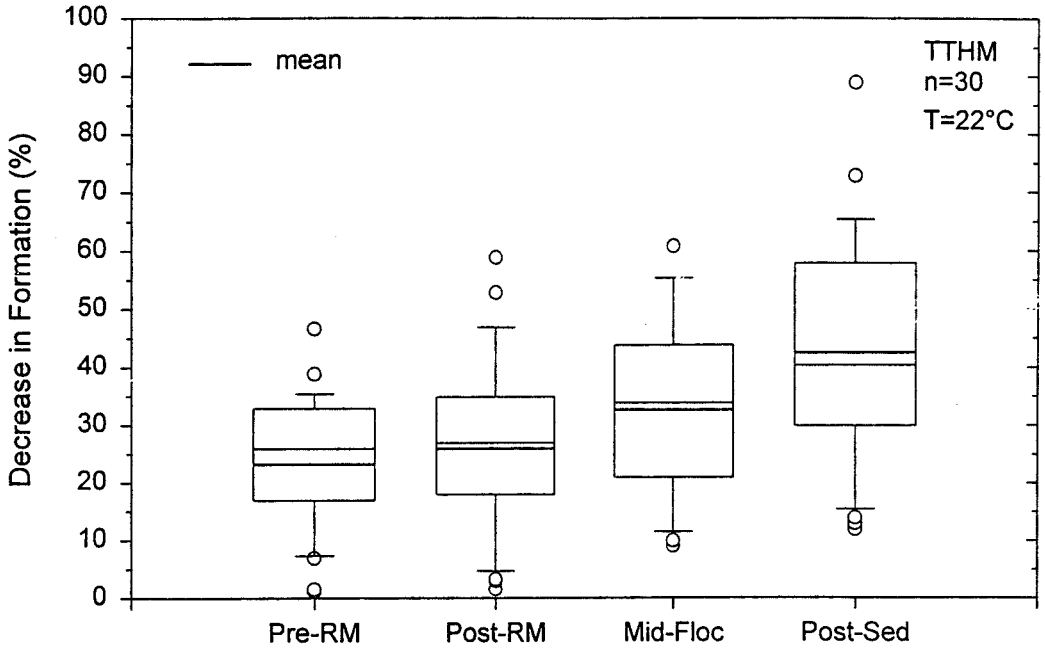

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Figure IV.6: Impact of point of chlorination on percent decrease in HAA5 formation for all waters (compared to raw)

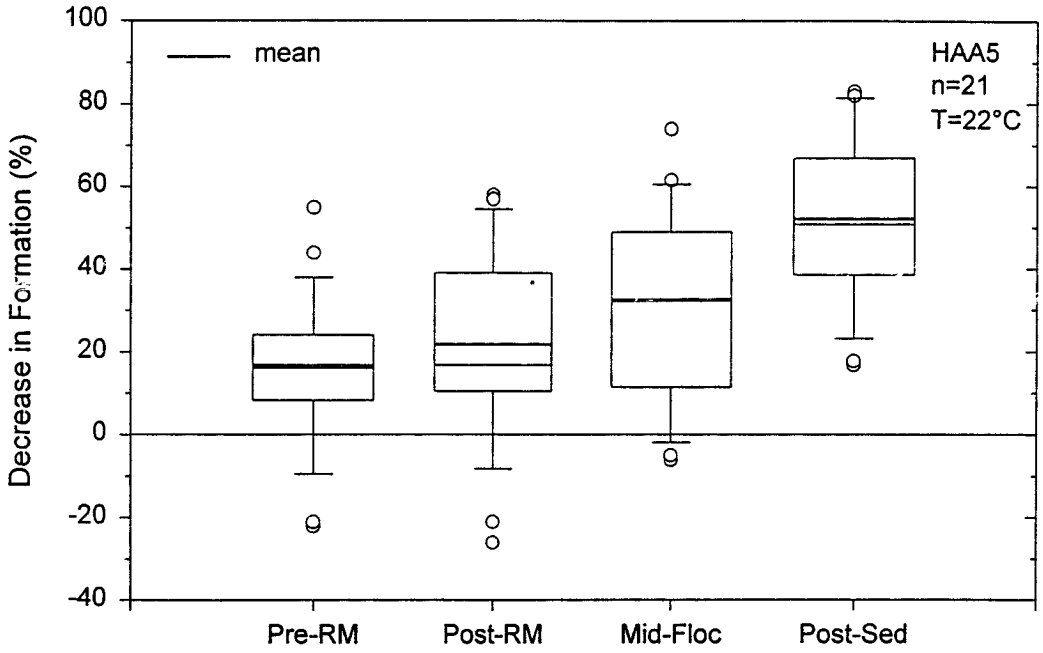

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Figure IV.7: Impact of point of chlorination and percent TOC removal on percent decrease in TOX formation for all waters (compared to raw)

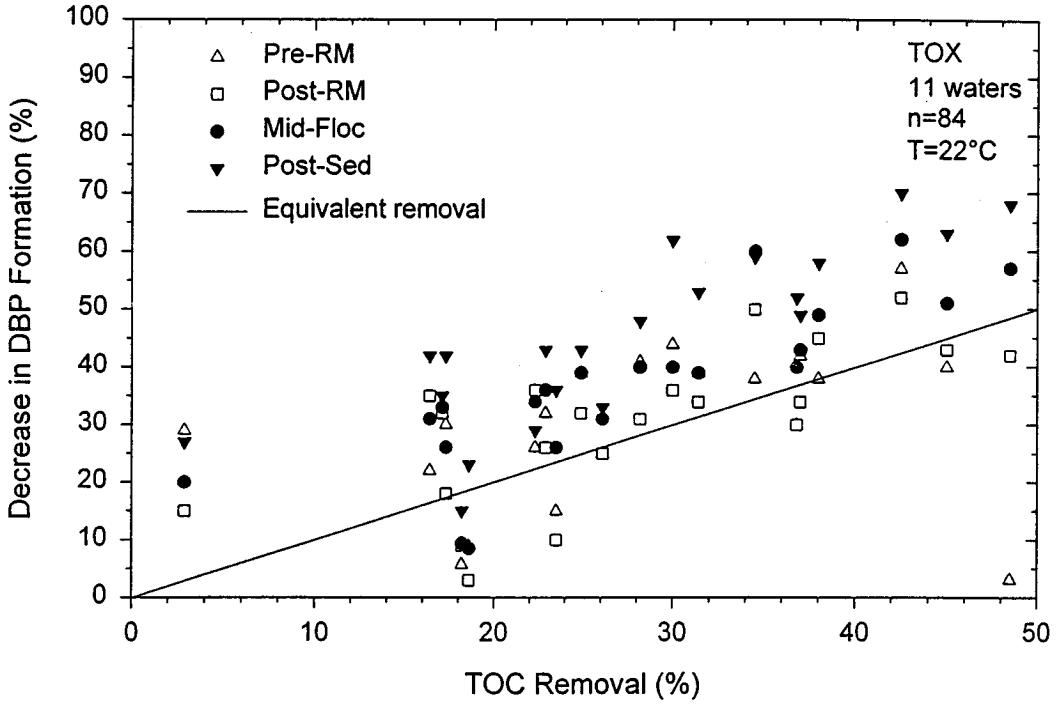

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Figure IV.8: Impact of point of chlorination and percent TOC removal on percent decrease in TTHM formation for all waters (compared to raw)

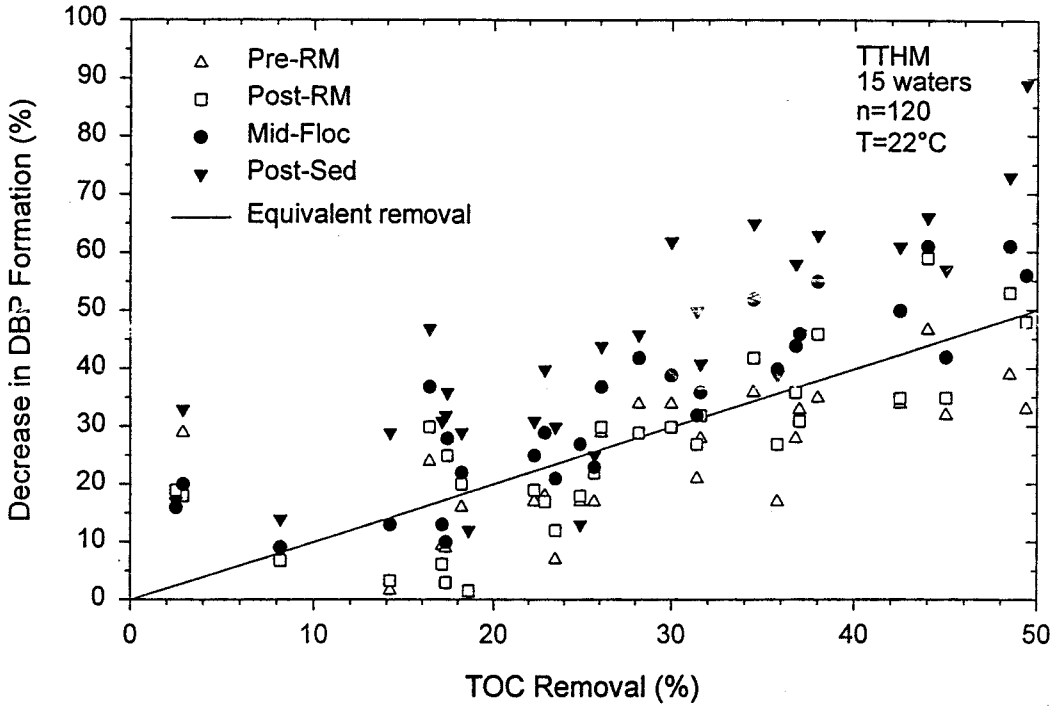

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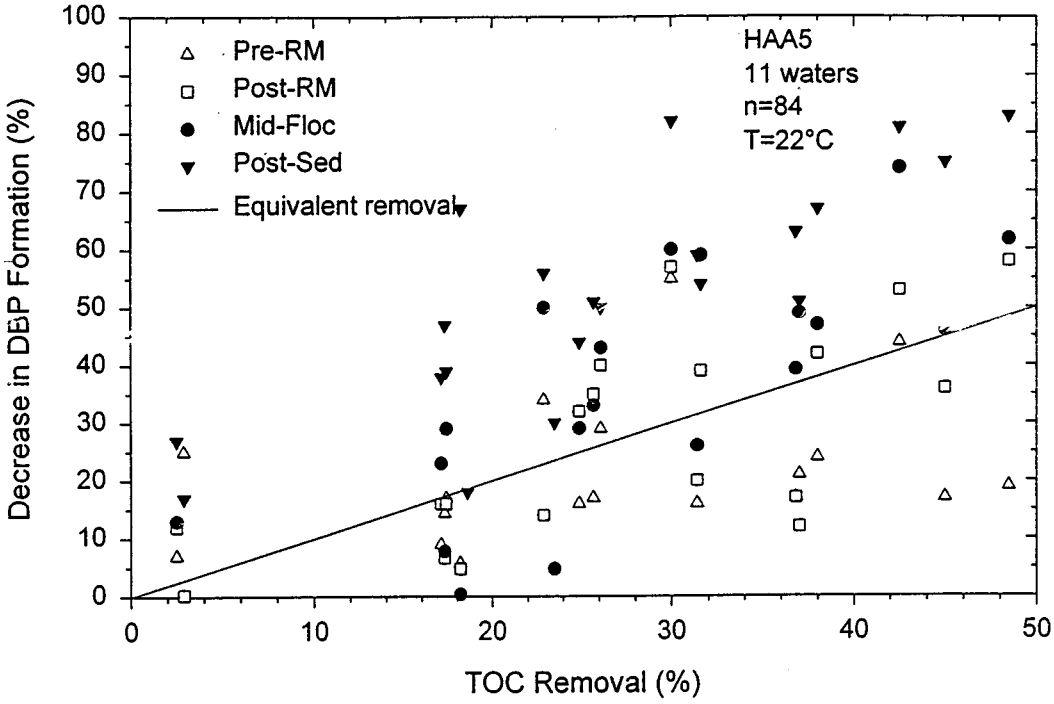
Figure IV.9: Impact of point of chlorination and percent TOC removal on percent reduction in HAA5 formation for all waters (compared to raw)



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The decrease in DBP formation was calculated by subtracting the DBP concentration formed upon chlorination at a given point in the jar test from that formed upon chlorination of the raw waters. Chlorinating 3 minutes prior to rapid mixing (Pre-RM) led to a median 32, 26 and 17 percent decrease in TOX, TTHM, and HAA5 concentrations, respectively, relative to those formed upon chlorination of the raw uncoagulated water. Prechlorinating more than 3 minutes prior to rapid mixing was shown to increase the DBP formation relative to Pre-RM.

For TOX, TTHM, and HAA5, moving the point of chlorination downstream in the coagulation, flocculation, and sedimentation process decreased DBP formation and the chlorine demand by providing additional time for NOM removal before chlorine could react with the NOM to form DBPs. While having only a small impact on average for TOX, TTHM, and HAA5 formation, moving the point of chlorination from Pre-RM to Post-RM was very beneficial for some waters. As expected, the largest benefit for all parameters investigated was observed by moving the point of chlorination to after sedimentation, which resulted in the lowest DBP formation. On average, the benefit of moving the point of chlorination downstream was greater for HAA5 than for TOX and TTHM.

The median, 10th and 90th percentile (shown in brackets) decrease in TOX formation as a result of moving the point of chlorination from Pre-RM to (1) post-RM was −5.4 percent (−17 and 16 percent); (2) mid-Floc was 6.1 percent (−6.8 and 19 percent); and (3) post-Sed was 17 percent (4.5 and 34 percent).

The median, 10th and 90th percentile (shown in brackets) decrease in TTHM formation as a result of moving the point of chlorination from Pre-RM to (1) post-RM was 1.9 percent (−5.9 and 18 percent); (2) mid-Floc was 13 percent (0.4 and 28 percent); and (3) post-Sed was 25 percent (6.5 and 43 percent).

The median, 10th and 90th percentile (shown in brackets) decrease in HAA5 formation as a result of moving the point of chlorination from Pre-RM to (1) post-RM was 5.3 percent (−11 and 23 percent); (2) mid-Floc was 19 percent (−5.7 and 53 percent); and (3) post-Sed was 40 percent (26 and 67 percent).

The impact of percent TOC removal and point of chlorination on TOX, TTHM, and HAA5 formation are shown in Figures IV.7, IV.8, and IV.9, respectively. Increased TOC removal resulted in decreased DBP formation. In general, moving the point of chlorination from raw water to Mid-Floc and Post-Sed resulted in a percent decrease in DBP formation that was equivalent to or greater than the percent TOC removal achieved. Thus, in this study, precursor removal was a more effective DBP control strategy when used in conjunction with delaying the point of chlorination until Mid-Floc or later.

Impact of Alum Dose

Coagulation conditions of the waters at baseline conditions were determined based on turbidity control. The median alum dose used for baseline coagulation conditions was 30 mg/L (10th and 90th percentile were 15 and 48 mg/L, respectively). Under these conditions, the median TOC removal was 24 percent (10th and 90th percentiles were 6.5 and 38 percent, respectively). For this study, the alum dose was increased from the baseline case by a median value of 22 mg/L (the 10th and 90th percentiles were 15 and 35 mg/L, respectively). Increasing the alum dose resulted in a median increase in TOC removal to 33 percent (10th and 90th percentile were 18 and 48 percent, respectively). Thus, at the higher alum doses, DBP formation was decreased. For nine of the waters studied, increasing the alum dose from baseline coagulation conditions resulted in TOC removal equivalent to or greater than those required by the 3×3 enhanced coagulation matrix. This yielded a median increase in the percent TOC removal of 14 percent. Table IV.1 summarizes the median benefit associated with moving the point of chlorination downstream under baseline coagulation and with increasing the alum dose to achieve enhanced coagulation on DBP formation. DBP formation resulting from chlorine addition at Pre-RM under baseline coagulation conditions was used as a point of reference. The data in the table indicates that even when prechlorination is practiced, TOX, TTHM, and HAA5 formation can be reduced by moving from conventional to enhanced coagulation. For TOX and TTHM, the benefits of moving to enhanced coagulation are greatest when Post-Sed chlorination is used. Furthermore, the benefits are greater for the control of HAA5 formation than for the control of TOX and TTHM formation.

TABLE IV.1.—IMPACT OF POINT OF CHLORINATION AND ENHANCED COAGULATION ON DBP FORMATION USING PRE-RM DBP FORMATION UNDER BASELINE COAGULATION CONDITIONS AS BASIS FOR COMPARISON

	Median benefit (%)					
	TOX (n=7)		TTHM (n=9)		HAA5 (n=6)	
	Baseline coagulation	Enhanced coagulation	Baseline coagulation	Enhanced coagulation	Baseline coagulation	Enhanced coagulation
Pre-RM	.....	11	.....	17	.....	4.7
Post-RM	0.3	10	1.6	21	5.3	21
Mid-Floc	3.9	23	8.7	36	14	36
Post-Sed	11	40	21	48	35	61

3-Hour DBP Formation Relative to Distribution System DBP Formation

Chlorination with a 3-hour holding time before quenching the reaction resulted in a significant formation of DBPs. The 3-hour period was chosen as it is typical of reaction times in conventional treatment plants. To get a general sense of short-term DBP formation kinetics, DBP formation for chlorinated settled water held for 3 hours was compared to DBP formation of settled water chlorinated under UFC (24 hour holding time). The data indicate that 3-hour chlorination resulted in a high percentage of DBP formation that would normally be measured in the distribution system. The median DBP concentrations formed in 3 hours were 61, 44, and 46 percent of distribution system formation for TOX, TTHM, and HAA5, respectively. This can be thought of as in-plant DBP formation relative to distribution system formation for systems with 3-hour post sedimentation contact.

Summary

The results of this study indicate that enhancing the coagulation process, while maintaining prechlorination, can result in decreased DBP formation (especially for TOX and TTHM) with greater benefits being realized by moving the point of chlorination to post rapid mixing or further downstream for HAA5 and to mid flocculation or post sedimentation for TOX and TTHM. Compared to prechlorinating three minutes before rapid mixing, the greatest DBP reduction was realized by moving the point of chlorination to post-sedimentation, with a median decrease of 17, 25, and 40 percent in TOX, TTHM, and HAA5 formation, respectively. However, operational and regulatory constraints may limit the extent to which the point of chlorination can be moved downstream in the process train, since one requirement in the IESWTR may be a disinfection benchmark; which would require some plants making significant changes in disinfection practice (including moving the point of disinfection) to design the change to maintain their level of Giardia inactivation at or above a site-specific level. This may limit the degree to which some plants can delay the point of chlorination without seeking State approval and potentially modifying their treatment train to make up lost Giardia inactivation later in the plant.

C. Summary of Key Observations

TWG analyses indicated that most PWSs, using enhanced coagulation or enhanced softening as required, would be able to meet MCLs of 0.080 mg/L and 0.060 mg/L for TTHM and HAA5, respectively, while maintaining existing disinfection practice. This analysis also indicated that significant precursor removal and DBP reduction can still be achieved with predisinfection left in place. Although in most cases the reduction in DBP formation is not as great as would be accomplished in moving the point of disinfection to after enhanced coagulation, the Advisory Committee recommended balancing the need to maximize precursor removal against the need to substantially maintain existing levels of microbial protection that is provided by many plants through predisinfection. However, as noted above, another key implication of Summers' work is that some PWSs that only add disinfectant just prior to coagulant addition (e.g., rapid mix), could achieve significant additional DBP reduction without sacrificing meaningful disinfection credit by moving the point of disinfectant addition from just before to just after the point of coagulant addition.

The Advisory Committee recommended that PWSs continue to receive credit for compliance with applicable disinfection requirements for disinfectants applied at any point prior to the first customer consistent with the existing provisions of the 1989 Surface Water Treatment Rule.

EPA will develop guidance on the uses and costs of oxidants that control water quality problems (e.g., Asiatic clams, zebra mussels, iron, manganese, algae, taste and odor) and whose use will reduce or eliminate the formation of DBPs of public health concern.

D. Request for Public Comments

EPA requests comment on continued disinfection credit for all disinfectant use prior to the first customer.

V. Analytical Methods

EPA is requesting comment on the addition, and in one case the deletion, of analytical methods for the disinfectants and DBPs listed below. These potential changes are based on information received during the public comment period or on new information that has become available since the July 1994 proposed rule.

A. Chlorine Dioxide

The proposed DBP rule included the same three methods for analyzing chlorine dioxide (ClO_2) that are approved under the SWTR and ICR regulations. Two of these methods, Standard Methods 4500.ClO_2 C (APHA 1992) and 4500.ClO_2 E (APHA 1992), are amperometric methods. The third method proposed was Standard Method 4500.ClO_2 D (APHA 1992), a colorimetric method using the color indicator N,N-diethyl-p-phenylenediamine (DPD).

EPA received several comments stating that these methods to calculate ClO_2 concentration are intrinsically inaccurate because free chlorine, chloramines and chlorite are subtracted from the measurement, causing a propagation of errors. However, they stated that the DPD method is sufficiently accurate for monitoring ClO_2 residuals in drinking water and is relatively easy to perform.

Method 4500.ClO_2 C was cited as an outdated, inaccurate and time consuming method, subject to interferences from oxidants commonly found in drinking water (Dietrich, 1992). Significant, positive interferences have been described by Gates (1988), and attributed to mono-and dichloramines by Haller and Listek (1948). Method 4500.ClO_2 E is a better method because it utilizes differences in the physical properties of ClO_2, as opposed to chemical detection of anionic oxychlorocompounds (Aieta et al., 1984). Therefore, EPA requests comments on omitting Method 4500.ClO_2 C from the list of approved methods for the analysis of chlorine dioxide for compliance with the MRDL for chlorine dioxide. Comments on omitting it from 40 CFR 141.74 (SWTR analytical methods) are also requested.

B. Haloacetic Acids

In 1994, EPA proposed two methods for the analysis of five haloacetic acids—Method 552.1 (USEPA, 1992b) and Standard Method 6233B (APHA 1992). Both methods use capillary column gas chromatographs equipped with electron capture detectors. The two methods differ in the sample preparation steps. Method 552.1 uses solid phase extraction disks followed by an acidic methanol derivitization. Method 6233B is a small volume liquid-liquid (micro) extraction with methyl-t-butyl ether, followed by a diazomethane derivitization. Standard Method 6233B was revised (and renumbered 6251B (APHA 1995)) to include bromochloroacetic acid, for which a standard was not commercially available in 1994. Recognizing these improvements, EPA approved Method 6251B for analysis under the 1996 Information Collection Rule (40 CFR Part 141 or USEPA, 1996b). Several commenters requested that the revised and renumbered method, Method 6251B, also be approved for the analysis of haloacetic acids under the Stage 1 DBP regulations.

In 1995 EPA published a third method for HAAs, Method 552.2 (EPA 1995), and subsequently approved it for HAA analysis under the 1996 Information Collection Rule (40 CFR Part 141 or USEPA, 1996b). Method 552.2 is an improved method, combining the micro extraction procedure of Standard Method 6233B with the acidic methanol derivitization procedure of Method 552.1. It is capable of analyzing nine HAAs. EPA received comments requesting approval of Method 552.2 for HAA5 analyses required under this section.

EPA requests comment on the technical adequacy of using Methods 552.2 and 6251B (formerly 6233B) for analyzing haloacetic acids. Method 552.1 would continue to be approved for the analysis of haloacetic acids.

C. Total Trihalomethanes (TTHMs)

Three methods are approved for the analysis of total trihalomethanes

(TTHMs) under 40 CFR 141.24(e). These same methods were proposed under the 1994 Stage I DBP proposal. One of the three methods, EPA Method 551, was revised to Method 551.1, rev. 1.0 (EPA 1995). Method 551.1 is approved for ICR monitoring under 40 CFR 141.142.

Method 551.1 has several improvements upon Method 551. The use of sodium sulfate is strongly recommended over sodium chloride for the MTBE extraction of DBPs. This change was in response to a report indicating elevated recoveries of some brominated DBPs due bromide impurities in the sodium chloride (Xie, 1995). EPA's NERL laboratories confirmed this finding in samples that were not extracted immediately after the sodium chloride was added.

Other changes to Method 551.1 include a buffer addition to stabilize chloral hydrate, elimination of the preservative ascorbic acid, and modification of the extraction procedure to minimize the loss of volatile analytes. The revised method requires the use of surrogate and other quality control standards to improve the precision and accuracy of the method.

D. Bromate

The proposed rule required systems that use ozone to monitor for bromate ion. EPA proposed Method 300.0 (Determination of Inorganic Anions by Ion Chromatography)(USEPA, 1993a) for the analysis of bromate and chlorite ions. Method 300.0 is used in many laboratories because it can analyze bromide, chloride, fluoride, nitrate, nitrite, orthophosphate, sulfate, bromate, chlorite and chlorate ions. The cost of bromate ion analysis was estimated to range from $50 to $100 per sample.

At the time of the proposal, EPA was aware that Method 300.0 was not sensitive enough to measure bromate ion concentration at the proposed MCL of 0.010 mg/L (10 µg/L). EPA recognized that modifications to the method would be necessary to increase the method sensitivity. Studies at that time indicated that changes to the injection volume and the eluent chemistry would decrease the detection limit below the MCL. There was also an issue concerning whether bromate formation could be reliably controlled to levels below 10 µg/L when ozone is used as part of the treatment process. Most commenters agreed that Method 300.0 was not sensitive enough to determine compliance with a MCL of 10 µg/L bromate ion, given that MCLs are set no less than 5 times the MDLs. One commenter did achieve a MDL for bromate ion in the 1–2 µg /L range under research laboratory conditions.

Since the proposal, EPA has improved Method 300.0 and renumbered it as Method 300.1. EPA intends to approve this method for use in the final rule; it is available for review in the Docket. Method 300.1 specifies a new, high capacity ion chromatography (IC) column that is used for the analysis of all anions listed in method instead of requiring two different columns as specified in Method 300.0. The new column has a higher ion exchange capacity that improves chromatographic resolution and minimizes the potential for chromatographic interferences from common anions at concentrations typically 10,000 times greater than bromate ion. For example, quantification of 5.0 µg/L bromate is feasible in a matrix containing 50 mg/L chloride. Minimizing the interferences permits the introduction of a larger sample volume to yield a method detection limit of 2 µg/L. Sample analysis time is approximately 30 minutes per sample.

An IC column's capacity is directly proportional to its operating back pressure at a given flow rate and the older IC systems may not be able to tolerate the higher back pressures required when using these new IC columns. Consequently, in order to perform this analysis, some laboratories with IC systems over 15 years old may need to upgrade their instrumentation to current technology. Newer instruments can easily be operated under these conditions.

As in Method 300.0, Part A of the revised method contains procedures for measuring the common anions of bromide, nitrate, nitrite, fluoride, chloride, sulfate and phosphate. Part B contains procedures for measuring the disinfection byproduct anions of bromate, chlorite and chlorate. Bromide ion is also included in Part B to determine its potential presence as a disinfection byproduct precursor.

The anions are split into two distinct parts due to the disparity in the relative concentrations expected in drinking water. Method 300.1 analyzes mg/L levels of the Part A common anions and µg/L levels of the Part B inorganic disinfection byproducts and bromide ion. To accommodate this, the recommended sample volume injected for Part A is 10 µL and for Part B is 50 µL, when using a 2 mm diameter column. The lower injected sample volume for Part A is required to compensate for their higher (mg/L) concentrations. If this injected volume is not reduced, poor analyte response characteristics are observed and the integrity of the data is compromised. The higher injected sample volume for Part B is required to yield low detection limits for the inorganic disinfection byproducts, specifically bromate. Analysis for Part A and Part B cannot be concurrent without sacrificing analytical integrity and therefore a separate 30 minute analysis must be done for each concentration range.

To preserve samples for chlorite, chlorate, and bromate analyses, the method requires the addition of ethylenediamine (EDA) at a final sample concentration of 50 mg/L. EDA is primarily used as a preservative for chlorite. Chlorite is susceptible to degradation both through catalytic reactions with dissolved iron salts and reactivity towards free chlorine which exists as hypochlorous acid/hypochlorite ion in most drinking water as a residual disinfectant. EDA serves a dual purpose as a preservative for chlorite by chelating iron as well as any other catalytically destructive metal cations and removing hypochlorous acid/hypochlorite ion by forming an organochloramine. EDA also preserves the integrity of bromate concentrations by binding with hypobromous acid/hypobromite which is an intermediate formed as a byproduct of the reaction of ozone or free chlorine with bromide ion. If hypobromous acid/hypobromite is not removed from the matrix, further reactions may form bromate ion.

Method 300.1 was validated for the inorganic DBPs and bromide by conducting nine replicate analyses at two different fortified levels of seven water matrices including reagent water, simulated high ionic strength water, untreated surface water, untreated ground water, chlorinated drinking water, chlorine dioxide treated drinking water, and ozonated drinking water. Holding time studies have been incorporated into these validation studies with aliquots of each fortified matrix currently being stored as unpreserved and EDA preserved at 4°C. These stored sample matrices will be monitored out to 30 days to determine appropriate holding times. MDL determinations have been completed in both reagent water and high ionic strength water. Results of these validation studies are included in the method.

With Method 300.1, EPA projects that more laboratories will achieve lower detection limits for bromate and report data having better precision and accuracy. Compliance monitoring for low levels of bromate ion will require an appropriate certification process to ensure that the measurements are accurate. Although there may be a

limited number of laboratories that will be qualified to do such analyses, there should be adequate laboratory capacity for bromate ion compliance monitoring. EPA estimates that 250 treatment plants utilizing ozone will be monitored for bromate once per month, for a total of 3,000 samples per year.

E. Chlorite

The proposed rule required monitoring for the chlorite ion for those systems using chlorine dioxide for disinfection. The proposed rule included Method 300.0 (ion chromatography) for chlorite analysis. Other methods using amperometric and potentiometric techniques were considered, but EPA decided that only the ion chromatography method (300.0) would produce results with the precision needed for compliance determinations. Several commenters suggested that EPA permit other methods for chlorite.

Since the proposed rule, Method 300.1, which uses ion chromatography, was developed for bromate ion (as discussed above). Since Method 300.1 can also be used to analyze for chlorite ion, EPA requests comment on allowing both Methods 300.0 and 300.1 as approved methods for the analysis of chlorite ion.

F. Total Organic Carbon (TOC)

The proposed rule included two methods for analyzing TOC: Standard Method 5310 C and 5310 D (APHA 1992). These methods were selected because they cite a detection limit ≤0.5 mg/L and a precision of ± 0.1 mg/L TOC. Standard Method 5310 B (18th edition) was considered, but not proposed because the method had a detection limit of 1 mg/L. The proposal stated that if planned improvements to the instrumentation in 5310 B were successful, the next version would be considered for promulgation.

Improvements were made to method 5310B and were included in a revised method in the 19th edition of Standard Methods (APHA 1995). Based on these improvements, method 5310B (19th edition) was approved for TOC analyses under the Information Collection Rule. Several commenters requested that Standard Methods 5310B also be approved for TOC analysis under this rule because the newer instrumentation achieves a detection limit of 0.5 mg/L TOC.

Since the ICR was promulgated, another revision of 5310 B was published in the supplement to the Standard Methods 19th Edition (APHA 1996). EPA intends to approve this method for the analysis of TOC. EPA requests comments on the technical equivalency of Methods 5310 B, C, and D in the Supplement to Standard Methods 19th Edition and those same methods in the 19th Edition.

G. Specific Ultraviolet Absorbance (SUVA)

Specific Ultraviolet Absorbance at 254 nm (SUVA) is an indicator of the humic content of a water. Waters with low SUVA values contain primarily non-humic matter and are not amenable to enhanced coagulation. As discussed in section III, systems may demonstrate that enhanced coagulation or enhanced softening is unnecessary if the raw water after being filtered through a 0.45 μm filter has a SUVA below 2 L/mg-m.

SUVA is a calculated parameter obtained by dividing a sample's ultraviolet light absorbance at a wavelength of 254 nm (UV_{254}), by the dissolved organic carbon (DOC), and multiplying by 100:

$$SUVA = 100\ (cm/m)\ [\ UV_{254}\ (cm^{-1})/DOC\ (mg/L)]$$

Two separate analytical methods are necessary to make this measurement: 1) UV_{254} and 2) DOC.

1. UV_{254}. EPA approved Standard Methods 5910 (APHA 1995) for measuring UV_{254} under the Information Collection Rule and intends to approve its use under the disinfection byproducts rule. EPA requests comments on this and other methods for measuring UV_{254}.

2. DOC. Standard Methods (19th Edition-Supplement)(APHA 1996) defines DOC as the fraction of TOC that passes through a 0.45 μm-pore-diameter filter. DOC is measured by performing an analysis for TOC on the sample filtrate. Filtration eliminates particulate organic matter but may contaminate the sample if carbon-containing compounds leach from the filter. Standard Methods 5310 B, 5310 C and 5310 D require that filters be rinsed before use and checked for their contribution to DOC by analyzing a filtered blank. Contact with organic material such as plastic containers, rubber tubing, etc. must be kept to a minimum to prevent contamination. EPA requests comments on the approval of Standard Methods 5310 B, 5310 C and 5310 D for measuring DOC for the SUVA calculation.

EPA is aware of several issues relating to the measurement of SUVA that are not addressed in the methods above. In determining SUVA, DOC and UV_{254} are both to be measured from the same sample filtrate, which is prepared by filtering a raw water sample through a pre-washed 0.45 μm filter paper. Standard Methods 5910 (UV) recommends to wash the filter with 50 mL of organic-free water to avoid contamination, however, more rinsate may be necessary to eliminate the DOC.

Because disinfectants/oxidants (chlorine, ozone, chlorine dioxide, potassium permanganate) can destroy UV but not DOC, SUVA needs to be determined on water prior to the application of disinfectants/oxidants. In the raw water, this is usually not a problem. If disinfectants/oxidants are applied in raw-water transmission lines upstream of the plant, then raw-water SUVA should be based on a sample collected upstream of the point of disinfectant/oxidant addition.

For determining settled-water SUVA, if the plant applies disinfectants/oxidants prior to the settled water sample tap, then settled-water SUVA should be determined in jar testing. Finally, the use of iron-base coagulants can interfere with UV measurements, as dissolved iron can penetrate the filter paper.

To address these issues in more detail, EPA intends to provide guidance on SUVA measurements in the Guidance Manual for Enhanced Coagulation (USEPA, 1997d). The manual will include guidance on sampling, sample preparation, filter type, pH, interferences to UV, high turbidity waters, quality control, etc. EPA requests comment on other issues that should be addressed in the guidance, as well as any recommendations on how the above issues should be addressed.

H. Summary of Key Observations

Since the 1994 proposal, improvements have been made to the analytical methods for trihalomethanes, haloacetic acids, total organic carbon, bromate ion and chlorite ion. EPA received comments to include Method 552.2 and 6251B for HAAs, and Method 5310B for TOC. Commenters made a general suggestion to approve methods promulgated under the ICR rule in the Stage 1 DBP rule. EPA intends to approve these methods and if appropriate, promulgate their most recent versions. EPA also intends to approve Method 300.1, the revised method for bromate ion, and permit its use for chlorite ion.

I. Request for Public Comments

1. EPA requests additional comments on omitting Method 4500.ClO_2 C from the list of approved methods for the analysis of chlorine dioxide.

2. EPA requests additional comments on the approval of EPA Method 552.2

and Standard Method 6251B for analyzing haloacetic acids.

3. EPA requests comment on replacing Method 300.0 with Method 300.1 for the analysis of bromate ion.

4. EPA requests comment on allowing both Method 300.0 and 300.1 as approved methods for the analysis of chlorite ion.

5. EPA requests comments on the technical equivalency of Methods 5310 B, C and D in the Supplement to Standard Methods, 19th edition and those same methods in the 19th edition of Standard Methods for measuring TOC and DOC.

6. EPA requests comments on the methods and filtration procedures for measuring SUVA.

VI. MCLs for TTHM, HAAs, Chlorite and Bromate

A. 1994 Proposal

The 1994 proposal for Stage 1 of the DBPR included MCLs for total trihalomethanes (TTHMs), the sum of five haloacetic acids (HAA5), bromate and chlorite at 0.080, 0.060, 0.010 and 1.0 mg/L, respectively (EPA, 1994b). In addition to the proposed MCLs, Subpart H systems—utilities treating either surface water or groundwater under the direct influence of surface water—that use conventional treatment (i.e., coagulation, sedimentation, and filtration) or precipitative softening would be required to remove DBP precursors by enhanced coagulation or enhanced softening. The removal of total organic carbon (TOC) would be used as a performance indicator for DBP precursor control.

As part of the proposed rule, EPA estimated that 17% of PWSs would need to change their treatment process to alternative disinfectants (ozone or chlorine dioxide) or advanced precursor removal (GAC or membranes) in order to comply with the Stage 1 requirements. This evaluation was important to assist in determining whether the proposed MCLs were achievable and at what cost. This evaluation required an understanding of the baseline occurrence for the DBPs and TOC being considered in the Stage 1 DBPR, an understanding of the baseline treatment in-place, and an estimation of what treatment technologies systems would use to comply with the Stage 1 DBPR requirements.

For systems switching to ozone or chlorine dioxide, separate MCLs were proposed for inorganic DBPs associated with their usage: bromate and chlorite, respectively. Although the theoretical 10^{-4} risk level for bromate is 5 μg/L, an MCL of 0.010 mg/L (10 μg/L) was proposed (because available analytical detection methods for bromate were reliable only to the projected practical quantification limit (PQL) of 10 μg/L (USEPA, 1994b). For chlorite, the MCL goal (MCLG) was 0.08 mg/L, due (in part) to data gaps that required higher uncertainty factors in the MCLG determination. The Chemical Manufacturer's Association (CMA) agreed to fund new health effects research on chlorine dioxide and chlorite—with EPA approval of the experimental plan—to resolve these data gaps.

In the preamble to the proposed rule, EPA requested comment on several issues related to the MCLs and requested any new information that may influence the MCLs. For bromate, EPA requested comment on whether there were ways to set (or achieve) a lower MCL (i.e., 0.005 mg/L [5 μg/L]) and whether the PQL for bromate could be lowered to 5 μg/L in order to allow compliance determinations for a lower MCL in Stage 1 of the proposed rule.

For chlorite, EPA requested comment on the appropriate MCL (i.e., at the MCLG, at the proposed MCL, or above the MCLG but below the proposed MCL), the feasibility of achieving a particular MCL, and whether there were other benefits to chlorine dioxide disinfection that should be considered when balancing the health risks associated with chlorite.

B. New Information Since 1994 Proposal

1. TTHM and HAA5 MCLs

At the direction of the Advisory Committee, the Technologies Working Group (TWG) reviewed MCL compliance predictions developed for the 1994 proposal because of concern by several Committee members that modifications to the rule would result in more PWSs not being able to meet the TTHM and HAA MCLs without installation of higher cost technologies such as ozone or GAC. The members were particularly concerned that allowing disinfection inactivation credit prior to precursor removal (by enhanced coagulation or enhanced softening) in order to prevent significant reductions in microbial protection would result in higher DBP formation and force systems to install alternative disinfectants, or advanced precursor removal to meet TTHM and HAA5 MCLs. As discussed earlier in today's Notice in Section IV. (Disinfection Credit), PWSs can achieve significant reduction in DBP formation through the combination of enhanced coagulation (or enhanced softening) and moving the point of disinfection downstream from coagulant addition, while preventing significant reduction in microbial protection. The TWG's analysis of the cumulative effect of these changes was that there would be no significant increase in the percentage of PWSs that would need to install higher cost technologies to meet TTHM and HAA5 MCLs and no significant reduction in microbial protection. The TWG estimated that 6.4% (based on WIDB data) to 15% (based on AWWSCo data) of PWSs would install alternative disinfectants or advanced precursor removal technologies based on the new information presented in this Notice, which is less than estimated in the 1994 proposal. It is now estimated that these other systems will either switch to chloramines or move the point of predisinfection, which are low cost means of compliance. EPA has included a detailed discussion of the TWG's prediction of technology choices in Section VIII of this Notice. EPA continues to believe the proposed MCLs are achievable without large-scale technology shifts. EPA requests comment on the new information and related analysis outlined in Section VIII.

2. Bromate

The proposed MCL of 0.010 mg/L for bromate was based on a projected practical quantitation level (PQL) that would be achieved by improved methods. The PQL of the revised method is approximately 0.010 mg/L for bromate, as discussed in Section V (Analytical Methods). EPA is not aware of any new information that would lower the PQL for bromate and thus allow lowering the MCL. As a result, EPA concluded that the proposed bromate MCL is appropriate and requests comment on this position.

3. Chlorite

The proposed chlorite MCL of 1.0 mg/L was supported by the Regulatory Negotiation Committee because 1.0 mg/L is the lowest level practicably achievable by typical systems using chlorine dioxide, from both treatment and monitoring perspectives. Since the proposed MCLG of 0.08 mg/L contained several uncertainty factors because of data gaps, i.e., lack of two-generation reproductive study, CMA funded a 2-generation reproductive study with chlorite, with EPA approval of the study design. CMA has submitted this study for EPA review. EPA has not completed its review of the study at the time of this Notice. EPA intends to publish the results of its review in a future Notice of Data Availability, along with any possible modifications to regulatory requirements that its review may justify.

EPA has included a more complete discussion of this issue earlier in this Notice (Section II. Health Effects) and the CMA study is available for review in the Docket. In addition, an EPA sponsored peer-review of the CMA study is included in the Docket. EPA is requesting comments on the conclusions of this peer review report.

VII. Regulatory Compliance Schedule and Other Compliance-Related Issues

A. Regulatory Compliance Schedule

Background

During the 1992 Disinfectants/Disinfection Byproducts Regulatory Negotiation (reg-neg) that resulted in the 1994 proposed Stage 1 DBPR and proposed IESWTR, there was extensive discussion of the compliance schedule and applicability to different groups of systems and coordination of timing with other regulations.

In addition to the Stage 1 DBPR, the Negotiating Committee agreed that EPA would a) propose an interim ESWTR which would apply to surface water systems serving 10,000 or more people, and b) at a later date, propose a long-term ESWTR applying primarily to small systems under 10,000. Both of these microbial rules would be proposed and promulgated so as to be in effect at the same time that systems of the respective size categories would be required to comply with new regulations for disinfectants and DBPs. Finally, although the GWDR was not specifically addressed during the reg-neg, EPA anticipated that it would be promulgated at about the same time as the IESWTR and Stage 1 DBPR.

EPA proposed a staggered compliance schedule, based on the reg-neg results. The Negotiating Committee and EPA believed that such a process was needed for the rules to be properly implemented by both States and PWSs. Also, EPA proposed a staggered schedule to achieve the greatest risk reduction by providing that larger water systems were to come into compliance earlier than small systems (to cover more people earlier), and surface water systems were to come into compliance earlier than ground water systems (since the potential risks of both pathogens and DBPs were considered generally higher for surface water systems). Large and medium size surface water PWSs (serving at least 10,000 people) constitute less than 25% of community water systems using surface water and less than 3% of the total number of community water systems, but serve 90% of the population using surface water and over 60% of the population using water from community water systems. These large PWSs are also those with experience in simultaneous control of DBPs and microbial contaminants. EPA proposed that these systems be required to comply with the Stage 1 DBPR and IESWTR 18 months after promulgation of the rules and that States would be required to adopt the rules no later than 18 months after promulgation. These 18 month periods were prescribed in the 1986 SDWA Amendments.

Surface water PWSs serving fewer than 10,000 people were to comply with the Stage 1 DBPR requirements 42 months after promulgation, to allow such systems to simultaneously come into compliance with the LTESWTR. This compliance date reflected a schedule that called for the LTESWTR to be promulgated 24 months after the IESWTR was promulgated and for PWSs then to have 18 months to come into compliance. Such a simultaneous compliance schedule was intended to provide the necessary protection from any downside microbial risk that might otherwise result when systems of this size attempted to achieve compliance with the Stage 1 DBPR.

Ground water PWSs serving at least 10,000 people would also be required to achieve compliance with the Stage 1 DBPR 42 months after promulgation. A number of these systems, due to recently installing or upgrading to meet the GWDR (which EPA planned to promulgate at about the same time as the Stage 1 DBPR), were expected to need some period of monitoring for DBPs in order to adjust their treatment processes to also meet the Stage 1 DBPR standards.

1996 Safe Drinking Water Act Amendments

The SDWA 1996 Amendments affirmed several key principles underlying the M-DBP compliance strategy developed by EPA and stakeholders as part of the 1992 Regulatory Negotiation process. First, under Section 1412(b)(5)(A), Congress recognized the critical importance of addressing risk/risk tradeoffs in establishing drinking water standards and gave EPA the authority to take such risks into consideration in setting MCL or treatment technique requirements. Second, Congress explicitly adopted the staggered M-DBP regulatory development schedule developed by the Negotiating Committee. Section 1412(b)(2)(C) requires that the standard setting intervals laid out in EPA's proposed ICR rule be maintained even if promulgation of one of the M-DBP rules was delayed. As noted above, this staggered regulatory schedule was specifically designed as a tool to minimize risk/risk tradeoff. A central component of this approach was the concept of ''simultaneous compliance'' which provides that a PWS must comply with new microbial and DBP requirements at the same time to assure that in meeting a set of new requirements in one area, a facility does not inadvertently increase the risk (i.e., the risk ''tradeoff'') in the other area.

The SDWA 1996 Amendments also changed two statutory provisions that elements of the 1992 Negotiated Rulemaking Agreement were based upon. As outlined above, the 1994 Stage 1 DBPR and ICR proposals provided that 18 months after promulgation large PWSs would comply with the rules and States would adopt and implement the new requirements. Section 1412(b)(10) of the SDWA as amended now provides that drinking water rules shall become effective 36 months after promulgation (unless the Administrator determines that an earlier time is practicable or that additional time for capital improvements is necessary—up to two years). In addition, Section 1413(a)(1) now provides that States have 24 instead of the previous 18 months to adopt new drinking water standards that have been promulgated by EPA.

Discussion

In light of the 1996 SDWA amendments, developing a compliance deadline strategy that encompasses both the Stage 1 DBPR and IESWTR, as well the related LTESWTR and Stage 2 DBPR, is a complex challenge. On the one hand, such a strategy needs to reflect new statutory provisions. On the other, it needs to continue to embody key reg-neg principles reflected in both the 1994 ICR and Stage 1 DBPR proposals; principles that both Congressional intent and the structure of the new Amendments, themselves, indicate must be maintained.

An example of the complexity that must be addressed is the relationship between the principles of risk/risk tradeoff, simultaneous compliance, and the staggered regulatory schedule adopted by Congress. Under the 1996 SDWA amendments, the staggered regulatory deadlines under Section 1412(b)(2)(C) call for the IESWTR and Stage 1 DBPR to be promulgated in November 1998 and the LTESWTR in November of 2000. However, a complicating factor reflected in the Negotiated Rulemaking Agreement of 1992 and contained in the 1994 ICR, IESWTR, and Stage 1 DBPR proposals, is that Stage 1 applies to all PWSs, while IESWTR applies only to PWSs over 10,000, and the LTESWTR covers

remaining surface water systems under 10,000.

One approach might be to simply provide that each M-DBP rule becomes effective 3 years after promulgation in accordance with the new SDWA provisions. For surface water systems over 10,000, each plant would be required to comply with related microbial and DBP requirements at the same time thereby minimizing potential risk/risk tradeoffs. For surface water systems under 10,000, however, this approach would result in a very large number of smaller plants complying with DBP requirements two years before related LTESWTR microbial provisions became effective, thereby creating an unbalanced risk tradeoff situation that the Negotiating Committee, EPA, and Congress each sought to avoid.

As this example suggests, given the staggered regulatory development schedule developed by stakeholders in the reg-neg process and adopted by Congress, there is a difficult inconsistency between the principle of avoiding risk tradeoffs, simultaneous compliance, and simply requiring all facilities to comply with applicable M-DBP rules three years after their respective promulgation. The challenge, then, is to give the greatest possible meaning to each of the new SDWA provisions while adhering to the fundamental principles also endorsed by Congress of addressing risk-risk tradeoffs and assuring simultaneous compliance.

A further question that must be factored into this complex matrix is how to address the relationship between promulgation of a particular rule, its effective date, and its adoption by a primacy State responsible for implementing the Safe Drinking Water Act. Under the 1994 IESWTR and Stage 1 DBPR proposals, the rule's 18 month effective date was the same as the 18 month date by which a State was required to adopt it. This approach reflected the 18 month SDWA deadlines applicable during reg-neg negotiations and at the time of proposal.

The difficulty with requiring PWS compliance and State implementation by the same date is that States may not have enough lead time to adopt rules, train their own staff, and develop policies to implement and enforce new rules by the deadline for PWS compliance. In situations where the new rules are complex and compliance requires state review and ongoing interaction with PWSs, successful implementation can be very difficult, particularly for States with many small systems that have smaller staffs and fewer resources to anticipate the requirements of final rules. As noted above, Congress addressed this issue by extending the time for States to put their own rules in place from 18 months to two years after federal promulgation and, then, by generally providing for a one year interval before PWSs must comply (three years after promulgation). As a result, the 18 month interval contemplated by the 1994 proposals is no longer applicable, and the approach of setting the same date for PWS compliance and State rule implementation is no longer consistent with the phased approach laid out in the new SDWA amendments.

A final set of issues that must be addressed in connection with the Stage 1 DBPR proposal are compliance deadlines for ground water systems that currently disinfect. Reflecting the Negotiated Rulemaking Agreement, the 1994 proposal provided that ground water systems serving at least 10,000 that disinfect must comply three and one half years (42 months) after Stage 1 DBPR promulgation. Small ground water systems serving fewer than 10,000 that disinfect would be required to come into compliance five years (60 months) after Stage 1 DBPR promulgation. Again, the challenge here is to reconcile new statutory compliance provisions with the principles of simultaneous compliance, avoiding risk/risk tradeoffs, and deference to Congress' clear intent to preserve the ''delicate balance that was struck by the parties in structuring the negotiated rulemaking agreement''. (Joint Explanatory Statement of the Committee on Conference on S.1316, p2). An additional factor that must be considered in this context is that Congress affirmed the need for microbial ground water regulations but also clearly contemplated that such standards might not be promulgated until issuance of Stage 2 DBPR (no later than May, 2002).

Alternative Approaches

In light of the 1996 SDWA amendments and their conflicting implications for different elements of the compliance strategy agreed to by the Negotiating Committee and set forth in the 1994 IESWTR and Stage 1 DBPR proposals, EPA is today requesting comment on four alternative compliance approaches. The Agency also requests comment on any other compliance approaches or modifications to these options that commenters believe may be appropriate.

OPTION 1.—IMPLEMENT 1994 PROPOSAL SCHEDULE

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	5/00	5/02	5/02	11/03
IESWTR (11/98)	5/00	NA	NA	NA
LTESWTR (11/00)	5/02 (if required)	5/02	NA	NA
GWDR (11/00)	NA	NA	(1)	(1)

1 Not addressed.

Option 1 (schedule as proposed in 1994) simply continues the compliance strategy laid out in the 1994 Stage 1 DBPR and IESWTR proposals. This would provide that medium and large surface water PWSs (those serving at least 10,000 people) comply with the final Stage 1 DBPR and IESWTR within 18 months after promulgation, and that surface water systems serving fewer than 10,000 comply within 42 months of Stage 1 DBPR promulgation. This option also would provide that ground water systems serving at least 10,000 and that disinfect comply within 42 months, while ground water systems serving fewer than 10,000 comply within 60 months.

This approach was agreed to by EPA and other stakeholder members of the 1992 Negotiating Committee. However, it has been at least in part superseded by both the general 36 month PWS compliance period and the 24 month State adoption and implementation period provided under the 1996 SDWA amendments. If the proposed 1994 compliance schedule were to be retained, EPA would need to make a determination that the statutory compliance provision of 36 months was

not necessary for large and medium surface systems because compliance within 18 months is ''practicable''. To maintain simultaneous compliance, the Agency would also have to make the same practicability determination for small surface water systems in complying with the LTESWTR and for ground water systems serving at least 10,000 in complying with the GWDR. In addition, the Agency would need to justify 42 months for small surface water systems and 60 months for small ground water systems with disinfection by making a national determination that the additional time was required due to the need for capital improvements at each of these small systems. EPA also would need to articulate a rationale for why States should not be provided the statutorily specified 24 months to implement new complex regulatory provisions before PWSs are required to comply. Finally, to implement this approach, the Agency would be required to modify the timing associated with the microbial backstop provision agreed to on July 15, 1997 by the M–DBP Advisory Committee (since a 18 month schedule would not allow time after promulgation for medium surface water systems (10,000–99,999) to collect HAA data prior to having to determine whether disinfection benchmarking is necessary).

EPA requests comment on the issues outlined above in connection with this option. In particular, the Agency requests comment and information to support a finding that compliance by specified systems in 18 months is practicable for some rules, and that extensions to 42 or 60 months for other systems are required to allow for capital improvements.

OPTION 2.—ADD 18 MONTHS TO 1994 PROPOSAL SCHEDULE

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/03	11/03	5/05
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	11/03 (if required)	11/03	NA	NA
GWDR (11/00)	NA	NA	(1)	(1)

[1] Not addressed.

Option 2 (each date in proposed 1994 compliance strategy extended by 18 months) reflects the fact that the 1996 SDWA amendments generally extended the previous statutory deadlines by 18 months (to three years) and established an overall compliance period not to extend beyond 5 years. This second approach would result in simultaneous compliance for surface water systems. Large surface water systems (those serving at least 10,000) would have three years to comply in accordance with the baseline 3 year compliance period established under Section 1412(b)(10) of the 1996 Amendments.

Small surface water systems (under 10,000) would be required to comply with Stage 1 D/DBPR requirements within five years and applicable LTESWTR requirements within three years. Since the LTESWTR will be promulgated two years after Stage 1 DBPR (in accordance with the new SDWA M–DBP regulatory deadlines discussed above), the net result of this approach is that small surface water systems would be required to comply with both Stage 1 DBPR and IESWTR requirements by the same end date of November 2003, thus assuring simultaneous compliance. This meets the objective of both the reg-neg process and Congress to address risk-risk tradeoffs in implementing new M–DBP requirements.

USEPA believes that providing a five year compliance period for small surface water systems under the Stage 1 DBPR is appropriate and warranted under section 1412(b)(10), which expressly allows five years where necessary for capital improvements. Of necessity, capital improvements require preliminary planning and evaluation. Such planning requires, perhaps most importantly, identification of final compliance objectives. This then is followed by an evaluation of compliance alternatives, site assessments, consultation with appropriate state and local authorities, development of final engineering and construction designs, financing, and scheduling. In the case of the staggered M–DBP regulatory schedule established as part of the 1996 SDWA amendments, LTESWTR microbial requirements for small systems are required to be promulgated two years after the establishment of Stage 1 DBPR requirements. Under these circumstances, small systems will not even know what their final combined M–DBP compliance obligations are until **Federal Register** publication of the final LTESWTR. As a result, an additional two year period reflecting the two year Stage 1 DBPR/LTESWTR regulatory development interval established by Congress is required to allow for preliminary planning and evaluation which is an inherent component of any capital improvement process. EPA believes this approach is consistent with both the objective of assuring simultaneous compliance and not exceeding the overall statutory compliance period of five years. This same logic would also apply to ground water systems serving at least 10,000, since such systems would need the final GWDR to determine and implement a compliance strategy.

With regard to extended compliance schedules, EPA notes that the economic analysis developed as part of the M–DBP Advisory Committee indicates that there will be capital costs associated with implementation of both the IESWTR as well as the Stage I DBP rules. As outlined above, the 1996 SDWA amendments provide that a two year extension may be provided by EPA at the national level or by States on a case-by-case basis if either EPA or a State determines that additional time is necessary for capital improvements. EPA does not believe there is data presently in the record for either of these rulemakings to support a national determination by the Agency that a two-year extension is justified. EPA requests comment on this issue and, if a commenter believes such an extension is warranted, requests that the comments provide data to support such a position.

Adding 18 months to the 1994 proposed compliance strategy would result in 78 month (six and a half year) compliance period for small ground water systems. This is beyond the overall five year compliance period established by Congress under Section 1412(b)(10). EPA is not aware of a rationale to support this result that is consistent with both the objectives of the reg-neg process and the new SDWA amendments; however, the Agency

requests comment on this issue. As discussed below, EPA believes there is a reasonable compliance strategy for addressing ground water systems that reflects the requirements of the SDWA amendments as well as the intent of the reg-neg process.

OPTION 3.—REQUIRE COMPLIANCE WITH ALL RULES WITHIN THREE YEARS OF PROMULGATION

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/01	11/01	11/01
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	11/03 (if required)	11/01	NA	NA
GWDR (11/00)	NA	NA	11/03	11/03

Under this approach, all systems would be required to comply with Stage 1 DBPR, IESWTR, and LTESWTR within three years of final promulgation. This approach reflects the baseline three year compliance period included as part of the new SDWA compliance provisions. Unlike option 2 outlined above which simply adds an 18 month extension to the 1994 proposed compliance approach, this option is not tied to the 1994 proposal. Rather it applies the new baseline three year compliance period to the staggered M–DBP regulatory development schedule which was also established as part of the 1996 SDWA amendments.

This approach would result in simultaneous compliance for large surface water systems. However, it would eliminate the possibility of simultaneous compliance for small surface water systems and all ground water systems. Contrary to reg-neg objectives and Congressional intent, it would create an incentive for risk/risk tradeoffs on the part of small surface water systems who would be required to take steps to comply with Stage 1 DBPR provisions two years before coming into compliance with the LTESWTR, and for all ground water systems who would be required to take steps to comply with Stage 1 DBPR provisions two years before coming into compliance with the GWDR.

OPTION 4.—MERGE SDWA PROVISIONS WITH NEGOTIATED RULEMAKING OBJECTIVES

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/03	11/03	11/03
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	11/03 (if required)	11/03	NA	NA
GWDR (11/00)	NA	NA	11/03	11/03

This option combines the principle of simultaneous compliance with the revised compliance provisions reflected in the 1996 SDWA amendments. Large surface water systems would be required to comply with Stage 1 DBPR and IESWTR within 3 years of promulgation, thus assuring simultaneous compliance and consistency with the baseline statutory compliance period of 3 years. Small surface water systems under 10,000 would comply with the provisions of the Stage 1 DBPR at the same time they are required to come into compliance with the analogous microbial provisions of the LTESWTR. This would result in small surface water systems simultaneously complying with both the LTESWTR and Stage 1 DBPR requirements. Under this approach, small systems would comply with LTESWTR requirements three years after promulgation and Stage 1 DBPR requirements five years after promulgation. For the reasons articulated under option two above, EPA believes providing a five year compliance period under Stage 1 DBPR is appropriate and necessary to provide for capital improvements.

For ground water systems, the 1994 proposed Stage 1 DBPR compliance schedules provided for only one half of the risk-risk tradeoff balance. They did not include a companion rule development and compliance schedules for the analogous microbial provisions of a Ground Water Disinfection Rule. The 1996 SDWA amendments provide an outside date for promulgation of ground water microbial requirements of ''no later than'' May 2002, but leave to EPA the decision of whether an earlier promulgation is more appropriate. In light of the reg-neg emphasis and Congressional affirmation of the principal of simultaneous compliance to assure no risk-risk tradeoffs, EPA has developed a ground water disinfection rule promulgation schedule that will result in a final GWDR by November 2000, the same date as the Congressional deadline for the LTESWTR. Ground water systems would be required to comply with the GWDR by November 2003, three years after promulgation, and to assure simultaneous compliance with DBP provisions, such systems would be required to comply with Stage 1 DBPR requirements by the same date. Again, for the reasons outlined under option 2, USEPA believes a five year compliance period for ground water systems is necessary and appropriate.

Option 4 assures that ground water systems will be required to comply with Stage 1 DBPR provisions at the same time that they comply with the microbial provisions of the Ground Water Disinfection Rule (GWDR). Successful implementation of this option requires that EPA develop and promulgate the GWDR by November 2000 as indicated above. The Agency recognizes that this is an ambitious schedule, but believes it is necessary to meet the twin objectives of simultaneous implementation and consistency with the new statutory compliance provisions of the 1996 SDWA. In evaluating this option, the Agency also considered the possibility of meeting these twin objectives in a somewhat different fashion by delaying final promulgation of the Stage I DBP

rule as it applies ground water systems until the promulgation of the GWDR. This alternative possibility would assure simultaneous compliance and also provide a ''safety net'' in the event that the GWDR November 2000 promulgation schedule is delayed. EPA is concerned, however, that this approach may not meet or be consistent with new SDWA requirements which provide that the Stage I DBPR be promulgated by November 1998. The Agency requests comment on this issue.

Recommendation

EPA has evaluated each of the considerations identified in Options 1 through 4. On balance, the Agency believes that Option 4 is the preferred option. The primary reasons are 1) to allow States at least two years to adopt and implement M–DBP rules consistent with new two year time frame provided for under the 1996 SDWA amendments, 2) to match the compliance schedules for the LTESWTR and Stage 1 DBPR for small (<10,000 served) surface water systems to allow time for capital improvements and addressing risk-risk tradeoff issues, and 3) to assure that all ground water systems simultaneously comply with newly applicable microbial and Stage 1 DBPR requirements on the same compliance schedule provided for small surface water systems.

Request for Comments

EPA requests comment on both the compliance schedule options discussed above and on any other variations or combinations of these options. EPA also requests comment on its preferred option 4 and on the underlying rationale for allowing a five year compliance schedule for ground water and small surface water systems under the Stage 1 DBPR.

B. Compliance Violations and State Primacy Obligations

A public water system that fails to comply with any applicable requirement of the SDWA (as defined in 1414 (i)) is subject to an enforcement action and a requirement for public notice under the provisions of section 1414. Applicable requirements include, but are not limited to, MCLs, treatment techniques, monitoring and reporting. These regulatory requirements are set out in 40 CFR l41.

The SDWA also requires States that would have primary enforcement responsibility for the drinking water regulations (''primacy'') to adopt regulations that are no less stringent than those promulgated by EPA. States must also adopt and implement adequate procedures for the enforcement of such regulations, and keep records and make reports with respect to these activities in accordance with EPA regulations. 5 U.S.C. 1413. EPA may promulgate regulations that require States to submit reports on how they intend to comply with certain requirements (e.g., how the State plans to schedule and conduct sanitary surveys required by the IESWTR), how the State plans to make certain decisions or approve PWS-planned actions (e.g., approve significant changes in disinfection under the IESWTR or approve Step 2 DBP precursor removals under the enhanced coagulation requirements of the Stage I DBPR), and how the State will enforce its authorities (e.g., correct deficiencies identified by the State during a sanitary survey within a specified time). The primacy regulations are set out in 40 CFR 142.

EPA drafted requirements for both the PWSs (part 141) and the primacy States (part 142) in the proposed rules. EPA is requesting comments on whether there are elements of the Advisory Committee's recommendations in this Notice that should be treated as applicable requirements for the PWS and included in part l41 as enforceable requirements. Similarly, EPA requests comments on whether there are elements of the Advisory Committee's recommendations in this Notice that should be treated as requirements for States and included in part 142 as primacy requirements.

C. Compliance With Current Regulations

EPA reaffirms its commitment to the current Safe Drinking Water Act regulations, including those related to microbial pathogen control and disinfection. Each public water system must continue to comply with the current rules while new microbial and disinfectants/disinfection byproducts rules are being developed.

VIII. Economic Analysis of the M–DBP Advisory Committee Recommendations

The Regulatory Impact Analysis (RIA) for the 1994 proposed rule (USEPA, 1994b) was based on information generated from the Disinfection Byproducts Regulatory Analysis Model (DBPRAM) and modified by a Technologies Working Group (TWG), which consisted of technical representatives of members of the regulatory negotiation committee. The regulatory impact analysis (RIA), which provided information on the costs and benefits of the proposed rule, was developed using the DBPRAM in conjunction with the TWG. Since the proposal, new information has become available which EPA has used to modify the estimated costs and benefits. This new information is discussed below. EPA requests comments on the adequacy of the new data, how the new data have been used, and any additional data that would improve the assessment of costs and benefits.

A. Plant-Level DBP Treatment Effectiveness and Cost

The 1994 RIA analysis was supported by modeling apparatus known as the DBPRAM. The DBPRAM, which was actually a collection of analytical models, utilized Monte Carlo simulation techniques to produce national forecasts of compliance and resulting exposure reductions for different regulatory scenarios. For a complete discussion of the DBPRAM model, see the RIA from the proposed rule (USEPA, 1994b).

Initially, the TWG revisited the modeling tools to re-examine the results with new assumptions regarding the effectiveness of enhanced coagulation in the presence of predisinfection. A central component of the DBPRAM apparatus is the Water Treatment Plant model (WTP). Initial investigations by Malcolm Pirnie, Inc., concluded that the manner in which predisinfection is characterized in the WTP model makes it impossible to distinguish the effects of the proposed change in the Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR). The model makes simplifying assumptions about the point of predisinfection and does not permit marginal analysis of shifting this point. In the 1994 RIA analysis, the point of predisinfection did not matter since the proposal called for elimination of Enhanced Surface Water Treatment Rule (ESWTR) credit for predisinfection and the analyses or models developed for the RIA assumed predisinfection would be eliminated.

Based on TWG analysis, the cost and effectiveness of enhanced coagulation (as captured in the 3-by-3 matrix) was made more consistent with the assumptions made in the DBPRAM for the 1994 RIA analysis. The TWG believed that the changes in the enhanced coagulation matrix should not therefore affect the decision tree.

The major role of the DBPRAM modeling apparatus in the 1994 RIA analysis was to help the TWG verify assumptions for a compliance decision tree forecast that is suitable as the basis for national cost calculations. The driving factor in the 1994 RIA analysis became the degree to which water systems would have to cross over the threshold from standard treatment technologies to more expensive technologies such as GAC, ozone,

chlorine dioxide, and membranes. Keying on this feature, the TWG formed in 1997 to provide technical support to the M–DBP Advisory Committee designed an approach to re-evaluating the 1994 national cost analysis by re-evaluating the manner in which newly available information and changes in the proposed rules would affect this advanced technology threshold in the compliance decision tree forecast.

The TWG evaluated two sets of data that documented levels of TOC, TTHM, HAA5, and predisinfection practices for groups of water systems. The 1996 Water Industry Data Base (WIDB) data set provided data for 308[1] water systems nationwide. The American Waterworks Service Company (AWWSCo.) data set provided two years of data (1991 and 1992) for 52 plants, located primarily in the Northeast and Midwest.

Using these two data sets and experience and personal knowledge of many of these particular plants, the 1997 TWG was able to undertake a plant-by-plant assessment of the prospective compliance choices of the plants likely to have to change treatment in order to comply with the Advisory Committee recommendations for the Stage 1 DBPR. By computing the percentage of systems forecast to require the more expensive advanced treatments, it was possible to see if results were in the same range as that projected in the 1994 RIA analysis. This decision tree analysis is detailed below.

B. Decision Tree Analysis—Compliance Forecasts

A sub-group of the 1997 TWG consisting of individuals familiar with the 1994 DBPRAM analyses, and also familiar with the WIDB and AWWSCo. data sets, performed the re-evaluation of the compliance decision tree forecast based upon the Advisory Committee recommendations. This was performed by making case-by-case evaluations of each water system in the data set for which total trihalomethane (TTHM) or haloacetic acids (HAAs) exceeded 64 μug/L or 48 μg/L, respectively. These numbers are design targets for maximum contaminant levels (MCLs) of 80 μg/L and 60 μg/L, reflecting the variation in DBP levels from year to year.

Table VIII–1 presents a side-by-side comparison of compliance forecasts developed for the 1994 RIA and analyses of the 1996 WIDB data and the 1991 and 1992 AWWSCo. data.

TABLE VIII–1.—STAGE 1 DBP COMPLIANCE FORECAST

Treatment technology to be implemented	1993 stage 1 RIA (percent)	Analysis of 1996 WIDB data	Analysis of AWWSCo 1991–1992 data (percent)
Maintain Current Treatment	28	39.0	22
Chlorine/Chloramine	3	16.6	28
Enhanced Coagulation + Cl_2/NH_2Cl	10	19.0	35
Enhanced Coagulation + Cl_2	43	19.0	.....
Ozone/Chloramine	5	2.2	7.5
Enhanced Coagulation + O_3/NH_2Cl	6	2.2	7.5
Enhanced Coagulation + GAC10/GAC20	6	0.3	.....
Chlorine Dioxide	.....	1.6	.....
Membrane	0	0.3	.....

The compliance forecast developed for the 1994 RIA using the DBPRAM (column 2 of Table VIII–1) predicted that 17 percent of systems would adopt advanced treatments (ozone, chlorine dioxide, GAC, or membranes) in order to comply with the Stage 1 MCLs. In many instances, the adoption of advanced technologies was forecast as a result of the companion requirements of the proposed IESWTR to increase disinfection to assure a 10^{-4} risk level for *Giardia.*

Since the 1994 proposal, the IESWTR requirement to achieve a 10^{-4} risk level for *Giardia* has been replaced with a ''disinfection benchmark'' requirement intended to preserve the status quo of disinfection practices. As a result, the TWG predicted fewer systems to adopt advanced technologies. In addition, probable compliance choices can be evaluated based on the existing treatment configuration and performance rather than having to first predict the effects of changes in disinfection, as was done with the DBPRAM previously.

The 1997 TWG reviewed the data for the 73 of 308[2] systems in the 1996 WIDB data set (23.7%) that had either TTHM ≥64 μg/l or HAA(5) ≥48 μg/l. The systems were evaluated at a plant-by-plant level, incorporating multiple plant compliance strategies where applicable and other data, such as that available from the ICR plant schematics. Results are tabulated in Table VIII–1. Based on the case-by-case analysis of this sample, the TWG predicted that 20 of the 73 systems would require advanced technologies in order to comply with the proposed MCLs. This equates to a decision tree percentage of 6.4% (20/308) based on WIDB data to 15% (based on AWWSCo data). The TWG assigned another 51 systems (16.6%) to a compliance category consisting of various combinations of relatively low cost strategies, such as moving the point of predisinfection and using chloramines. Only two of the 73 systems were projected to install enhanced coagulation purely for purposes of meeting the MCLs.

The 1997 TWG did not forecast the number of systems in the WIDB data set that would have to install enhanced coagulation in compliance with the treatment technique requirements in the Stage 1 proposal. Because several years have passed since the negotiated rulemaking process, some water systems have probably already moved ahead with implementation of enhanced coagulation. Indeed, some systems were achieving enhanced coagulation standards even before it was given its name during the negotiated rulemaking

[1] Percentages reported here differ from those computed earlier by members of the TWG due to a correction in the denominator. Previous calculations used 399 systems as a denominator, but since 91 of them did not report TTHM or HAA data, they were not included in these computations.

[2] Percentages reported here differ from those computed earlier by members of the TWG due to a correction in the denominator. Previous calculations used 399 systems as a denominator, but since 91 of them did not report TTHM or HAA data, they were not included in these computations.

process. In order to complete a compliance forecast (decision tree analysis) for the final Stage 1 Rule, the Agency needs to know what proportion of the universe is already achieving enhanced coagulation and what proportion will have to install enhanced coagulation. The 1996 WIDB data is the best available source of information from which to develop these estimates.

The 1996 WIDB provides data on influent total organic carbon (TOC), effluent TOC, and alkalinity by plant, as well as TTHM and HAA5 data by system. Using this information, the 1997 TWG developed an assessment of the extent to which enhanced coagulation is already in place. The resulting decision tree percentages are summarized in Table VIII–1. These percentages are used to estimate national cost.

The 1997 TWG performed a parallel case-by-case analysis using the AWWSCo. 1991–92 data representing 52 systems; results are in Table VIII–1. The AWWSCo. and WIDB results are clearly different, and potentially reflect a number of factors: (1) more adverse DBP control conditions in the waters represented in this data set; (2) greater use of chloramines as a residual disinfectant by AWWSCo. plants, and (3) the influence of having 2 years of data illustrates how TTHM and HAA5 values threshold exceedances can change from year to year for a given system. (These features of the AWWSCo. data are discussed in Chapter 4 of the Economic Analysis of the M-DBP Advisory Committee Recommendations document).

The compliance decision tree analyses discussed above and summarized in Table VIII–1 pertain to large systems serving more than 10,000 persons. The small systems (less than 10,000 population served) decision tree is likely to be different. As a default, EPA assumed that the small systems decision tree would be exactly the same as that used in the 1994 RIA. The small systems face a different set of compliance choices because the current TTHM standard of 0.10 mg/L (100 μg/L) does not apply to them; they are therefore applying DBP controls for the first time.

C. National Cost Estimates

A national cost analysis, based on the TWG's decision tree analyses discussed above, is summarized in this section. The analysis incorporates updated unit cost estimates for alternative treatment technologies.

A national cost model has been developed to evaluate modified Stage 1 decision trees. The total annual cost for surface water systems in the 1994 RIA was $645 million per year (in 1992 dollars) or $728 million (in 1997 dollars). These data are presented in Table VIII–2.

EPA initially assessed the proportion of the total national cost in the 1994 RIA that was attributable to enhanced coagulation. While enhanced coagulation by itself is not very expensive in terms of the cost per household, national costs are large when it is broadly implemented and its inexpensive cost per-thousand-gallon is multiplied by many billions of gallons. Enhanced coagulation accounted for $272 million of the total $645 million per year (42 percent) documented in the 1994 RIA.

When EPA applied the decision tree predictions derived from the 1996 WIDB data (Table VIII–1) to the large surface water system portion of the cost model, while holding the 1994 decision tree assumptions constant for small systems, results indicated a reduction in total national cost to surface water systems from $728 million per year to $453 million, of which $135 million is for enhanced coagulation. Two major factors cause this drop in costs: (1) the halving of the number of systems estimated to employ advanced technologies, and (2) some systems are assumed to have already implemented enhanced coagulation.

The decision tree predictions derived from the AWWSCo. data were also run through the national cost model. The results indicate a total national cost for surface water systems of $399 million per year, of which $222 million is enhanced coagulation. In this scenario, there are twice as many systems as in the 1996 WIDB data adopting advanced technologies, and only half as many able to comply with no action. The cost reductions are, however, comparable to those observed in the scenario based on the WIDB decision tree. The reasons this scenario has comparable cost advantages relate to the emphasis placed on ozone and chloramines. The alternate disinfectants are less costly than the precursor removal strategies (e.g., GAC, membranes).

The above compliance scenarios and cost estimates are subject to considerable uncertainty. Although there is no better forecasting method available than case-by-case analysis, the data employed here consist only of a few snapshots of each situation. EPA believes that national costs are lower than those estimated in the 1994 RIA, due to Advisory Committee Recommendations for significant modifications in the IESWTR and in the Stage 1 DBPR that would result in reductions in total national costs. EPA believes that the order of magnitude indicated by the WIDB and AWWSCo. decision tree analyses is reasonable.

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Table VIII-2: A Comparison of 1992 Disinfection By-Product Compliance Cost Forecast in 1992 and 1997 Dollars (in thousands of $s)

Costs	In December 1992 Dollars	In April 1997 Dollars
Utility Cost	**All Water Systems (Surface Water & Ground Water)**	**All Water Systems (Surface Water & Ground Water)**
Treatment Costs		
Total Capital	$4,400,000	$4,967,600
Total Annual Cost	$1,035,000	$1,168,515
Annualized Capital	$546,000	$616,434
Annual O&M	$489,000	$552,081
Monitoring & Reporting Cost		
Start-up/One-time Activities	$8,841	$9,981
Annual Monitoring	$54,924	$62,009
State Costs		
Annual Implementation	$80,224	$90,572
Total Annualized DBPR Costs[1]	**$1,170,148**	**$1,321,096**

Note:

(1) The start-up/one-time activities cost is not included in the total annualized DBPR cost.

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TABLE VIII-3: 1997 Disinfection By-Product Compliance Cost Forecast

(annual costs in thousands of $, based on Advisory Committee recommendations)

	Ground Water Systems			Surface Water Systems			All Water Systems		
	Small < 10,000	Large ≥ 10,000	Total	Small < 10,000	Large ≥ 10,000	Total	Small <10,000	Large ≥ 10,000	Total
Utility Costs									
Treatment Costs									
Total Capital[1]	1,486,078	920,101	$2,406,179	930,900	528,148	$1,459,048	2,416,978	1,448,249	$3,865,227
Total Annual Cost[2]	226,756	223,031	$489,787	162,983	290,186	$453,169	429,739	513,217	$942,956
Monitoring & Reporting Cost									
Start-up/One-time Activities	8,184	371	$8,555	897	530	$1,426	9,081	901	$9,981
Annual Monitoring	17,722	16,696	$34,419	12,603	14,987	$27,590	30,325	31,684	$62,009
Total Annualized Utility Cost	284,478	239,727	$524,206	175,586	305,173	$480,759	460,064	544,901	$1,004,965
State Annual Implementation Costs									$90,572
Total Annualized DBPR Cost									**$1,095,537**

Notes:

(1) Total Capital Cost (1991 June dollars) is the cost of installing required equipment; the amount to be financed.

(2) Total Annual Cost is the sum of annual debt service payments and annual operation and maintenance costs.

1. System Level Costs

The unit cost estimates in the proposal were developed for each of the different treatment technologies in each system size category. The unit cost estimates were derived from a cost model described in the Cost and Technology Documents (USEPA, 1992c) and adjusted after discussion among TWG members to reflect site-specific factors (USEPA, 1994b). For systems in six categories serving greater than 10,000 people, the estimated system-level costs for achieving compliance ranged from $0.01/1000 gallons (chlorine/chloramines) to $1.87/1000 gallons (membrane technology). For systems in size categories serving less than 10,000 people the estimated system level costs for achieving compliance ranged from $0.03/1000 gallons (chlorine/chloramines) to $3.49/1000 gallons (membranes). Although some technologies cost more than $3.49/1000 gallons in the smallest size categories, such technologies would not be used because the systems would be able to achieve compliance with membrane technology.

Revised unit costs were not available during the deliberations of the M-DBP Advisory Committee. Table VIII–4 is an analysis of the implications of the revised decision tree for national costs using the updated unit cost assumptions.

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Table VIII-4: Total Annualized Costs of Compliance ($/Year)

Treatment Technologies	Total Annualized Cost	
	Surface Water Systems	Ground Water Systems
Cl_2/NH_2Cl	8,680,504	14,046,091
Enhanced Coagulation	109,488,776	0
EC/NH_2Cl	106,221,902	-----
Oz/NH_2Cl	26,455,305	7,125,032
$EC+Oz/NH_2Cl$	41,836,288	-----
EC+GAC10	2,932,837	0
EC+GAC20	8,027,006	0
Chlorine Dioxide	3,497,116	-----
Membranes	146,029,198	468,615,599
TOTALS	**$453,168,933**	**$489,786,721**

Table VIII-5: Total Annualized Enhanced Coagulation Costs ($/Year)

Treatment Technology	Surface Water Systems	Surface Water Systems AWWSCo Data
Enhanced Coagulation	109,488,776	0.00
EC/NH_2Cl	11,762,811	183,105,479
$EC+Oz/NH_2Cl$	12,175,334	39,236,888
EC+GAC10	717,683	0.00
EC+GAC20	717,683	0.00
TOTALS	**$135,682,949**	**222,342,367**

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2. Household Costs

In the 1994 proposal, EPA estimated that about 45 million households would incur no additional treatment costs for compliance with the Stage 1 DBPR. Of the 49 million households incurring treatment costs for compliance with Stage 1, EPA estimated that about 99% (48.6 million households) would incur costs ranging between $10 per year to $300 per year and 1% (0.2 million households) would incur costs of more than $300 per year. Annual household costs above $200 are projected predominantly for small systems that may be required to install membrane treatment. Some of these systems could find that there are less expensive options available, such as connecting into a larger regional water system. See Table VIII–6.

TABLE VIII–6.—AVERAGE COST PER HOUSEHOLD FOR COMPLIANCE TECHNOLOGIES ($/YEAR)

Treatment technology	Total surface water systems		Total ground water systems	
	<10,000	>10,000	<10,000	>10,000
Cl_2/NH_2Cl	$4.36	$0.69	$9.39	$1.10
Enhanced coagulation	10.48	6.70	0.00	0.00
EC/NH_2Cl	14.84	7.39	0.00	0.00
Oz/NH_2Cl	69.10	8.36	0.00	14.74
$EC+Oz/NH_2Cl$	79.58	15.06	0.00	0.00
EC+GAC10	0.00	27.39	0.00	0.00
Chlorine dioxide	0.00	74.97	0.00	0.00
EC+GAC20	0.00	3.06	0.00	0.00
Membranes	413.10	193.02	379.91	220.82

Monitoring and State Implementation Costs

Since the Advisory Committee made no recommendations that affected monitoring or State implementation, there are no changes to the cost analysis presented in the 1994 RIA accompanying the proposed Stage 1 DBPR. The estimates of monitoring and reporting costs to utilities and implementation costs to states have been adjusted for inflation and included in the total national cost summary presented in Table VIII–3.

D. DBP Exposure Estimates

The proposed rule included estimates of the baseline exposures and exposure after the Stage 1 DBPR for influent bromide levels; influent and effluent TOC levels; percent TOC removal; TTHM levels; and HAA5 levels (Table VIII–7). These data were applicable only to large surface water systems which filter but did not soften. Quantitative changes in exposure for TOC and DBPs were not predicted for ground water systems because of insufficient data.

Table VIII–7 presents profiles of exposure reflecting the baseline condition and the Stage 1 DBPR. The change in exposure is characterized in terms of TOC, TTHM, and HAA5. These data are applicable only to large systems (>10,000 population) which filter but do not soften.

TABLE VIII–7.—BASELINE COMPARISONS

	Influent TOC (mg/L)	% removal of TOC (%)	TTHM s (µg/L)	HAA5s (µg/L)
DBPRAM Baseline:				
Median	3.9	30	46	28
90th	8.4	57	90	65
DBPRAM Stage 1:				
Median	3.9	45	31	20
90th	8.4	67	52	40
WIDB 1996:				
Median	3.2	32	40	29
90th	6.1	62	70	60
AWWSCo 1991:				
Median	3.9	26	59	42
90th	7.8	58	83	88
AWWSCo 1992:				
Median	3.9	26	65	34
90th	7.8	58	87	79

Table VIII–7 presents a tabular comparison of distributional parameters for influent TOC, TOC removal, and distribution system TTHM and HAA5 levels from several different data sets. The table compares the DBPRAM baseline assumptions used in the 1994 Stage 1 RIA to the 1996 WIDB data and the 1991 and 1992 AWWSCo. data.

- The influent TOC levels assumed in the DBPRAM baseline are similar to those of the AWWSCo. data set. The median in both data sets is 3.9 mg/L. The 1996 WIDB data set, in contrast, has a median influent TOC of 3.2 mg/L.
- The DBPRAM assumed a baseline distribution of TOC removal of 30 percent at the median. This is comparable to a median TOC removal of 32 percent in the 1996 WIDB data. Median TOC removal in the 1991–92 AWWSCo. data is only 26 percent.
- The DBPRAM baseline assumptions are roughly similar to the 1996 WIDB data at the medians for TTHMs (46 vs. 40 µg/l) and HAA5 (28 vs 29 µg/l). The 1991 and 1992 AWWSCo. data are higher for both TTHM (59 and 65 µg/l)

and HAA5 (42 and 34 μg/l) at the medians.

AWWSCo. data consists of higher influent TOC levels and higher levels of DBPs than the 1996 WIDB data. Another conclusion to be drawn from Table VIII–7 is that the two different years of data provided by AWWSCo. are rather different from each other, illustrating year-to-year variability.

E. National Benefits Estimates

EPA developed a complete regulatory impact analysis (May 25, 1994) in support of the Negotiated Rulemaking process that ended with the proposed Stage 1 D/DBP Rule. Since the proposed rule, new data have become available that can be used to evaluate the impact forecasts made in the 1994 RIA. In addition, Advisory Committee recommendations, if incorporated into the rule (and into the companion IESWTR), would have effects on national benefit estimates.

The Advisory Committee recommendations that were evaluated for possible effects on the national benefit estimates include: allowance of ESWTR credit for disinfection prior to the point of coagulant addition; re-definition of TOC removal requirements for enhanced coagulation; and modification of disinfection requirements for an ESWTR.

The major new sources of information that were evaluated included: 1996 data from the WIDB on TOC, TTHM, HAA5, and disinfection practices; 1991 and 1992 data on TTHM and HAA5 from the AWWSCo.; as well as TOC data; plant schematics for ICR utilities; research data from numerous sources regarding the efficacy of enhanced coagulation (Krasner, 1997); and new research results produced in jar tests by TWG members documenting the effect of moving the point of predisinfection under varying conditions (Krasner, 1997).

1. Recap of Previous Benefits Analysis

The 1992–93 Regulatory Negotiation Committee, formed under the FACA, considered the full range of information and expert opinion available on the short-and long-term health risks associated with the complete catalogue of disinfection byproducts. Committee members had very different views. Some believed that cancer risks account for less than one case of cancer per year, while others believed that 10,000 cases per year was the correct order of magnitude. The lower bound baseline risk estimate was based on the maximum likelihood estimates of toxicological risk (best case estimates as opposed to upper 95% confidence bound estimates) associates with TTHM levels predicted by the DBPRAM (USEPA, 1994b). Not included in the lower bound estimate were any risks resulting from exposure to haloacetic acids (HAA5), bromate, or chloral hydrate. The upper bound estimated risk was based upon a study by Morris et al. (1992) in which the results from ten previously published epidemiology studies were combined. As discussed above, the use of the Morris study was questioned by some members of the negotiating committee.

In the end, the assessment of health risks was left in this broad range. Based on the DBPRAM modeling work, however, the 1994 RIA concludes that the proposed rule would have reduced median TTHM and HAA5 exposures by 33 and 29 percent, respectively. TOC exposure would be reduced by 12 percent at the median (*DBP RIA*, EPA, 1994. and Table VIII–7). In addition, this was achieved without triggering massive shifts to alternative disinfectants (ozone, chlorine dioxide, and chloramines), the health effects of which are not fully understood.

EPA received a comment addressing the concern for increasing the risk to the bromate exposure due to the increased number of systems that will switch to ozone. The compliance decision tree that was developed for the 1994 RIA using the DBPRAM indicated that 17 percent of systems would adopt advanced treatments (ozone, chlorine dioxide, GAC, or membranes) in order to comply with the Stage 1 MCLs. After a case-by-case reevaluation of the 1996 WIDB and AWWSCo. data sets by the members of the TWG, it was decided that fewer systems would require to shift to advanced technologies (6.5%). The TWG reevaluated the 1994 decision tree by considering the bromide levels for some systems. The TWG assumed that systems with high raw water bromide levels will not pick ozonation as their advanced technology and will choose other treatments like chlorine dioxide or GAC; therefore, there is no expected increase in bromate risk.

2. Current Benefits Analysis

When USEPA considered modifications to both the IESWTR and Stage 1 DBPR, the Stage 1 DBPR could result in reductions in TTHM and HAA5 exposures at the medians that are in a comparable range to these forecast in the original Stage 1 proposal. The extent of TOC removal may be somewhat less than forecast for the proposed rule, but not by as much as the difference in the proposed rule and NODA decision trees, because some of the previously estimated use of advanced technology may have been driven by increased IESWTR disinfection requirements. Also, it is possible that the use of chloramines will be greater under Advisory Committee recommendations than under the proposal. Based on this, USEPA estimates the level of benefits to be the same.

F. Cost-Effectiveness

The central requirement of regulatory impact analyses under Executive Order 12866 is to perform an analysis of net benefits and to consider the regulatory alternatives in light of a criterion of maximizing net benefits. This section summarizes the problem of regulating disinfection byproducts in terms of this economic perspective.

The understanding of net benefits in DBP control is complicated by the fact that there is a wide gulf in the scientific understanding of the health risks. During the 1992–93 Regulatory Negotiation, various Negotiating Committee members believed that cancer risks due to DBPs ranged from less than 1 case per year to over 10,000 cases per year. Reflecting this uncertainty, the 1994 RIA computed an implied cost per statistical case of cancer avoided in a range of $400,000 to $8 billion, fully bracketing—and underscoring—the range of uncertainty.

In the face of these uncertainties, most of the analyses undertaken by the 1992–93 Negotiation Committee, and the subsequent 1997 M-DBP Advisory Committee that developed the recommendations in this Notice, have used cost-effectiveness and household costs as a decision framework. In the 1994 RIA, EPA estimated that only 17 percent of systems would have to adopt expensive advanced treatments to comply. In the current analysis, that percentage is projected to be as low as 6.4 percent.

The household cost impacts based on the M-DBP Advisory Committee Recommendations and the revised national cost analysis, are summarized in Table VIII–6. The results show that 49 million of the 52 million households affected by the rule will pay about $10 or less per year for compliance. In the small proportion of systems where household costs are much greater (up to several hundreds of dollars per year), costs are driven by the assumption that membrane technology will be the selected treatment. However many of these systems may find less expensive means of compliance (e.g., purchased water). If systems do install membranes, they may realize additional water quality and compliance benefits beyond those associated with DBPs, such as

additional pathogen and turbidity removal.

IX. National Technology Transfer and Advancement Act

Under section 12(d) of the National Technology Transfer and Advancement Act (''NTTAA''), the Agency is required to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices, etc.) that are developed or adopted by voluntary consensus standards bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires the Agency to provide Congress, through the Office of Management and Budget, an explanation of the reasons for not using such standards.

The analytical methods that are discussed in this Notice were, with two exceptions, developed and proposed prior to the enactment of the NTTAA. Since EPA is now requesting public comment on potential changes to the methods for the Stage 1 DBPR, the Agency felt it would be appropriate to also explain the requirements of the NTTAA and seek comment on these methods and possible modifications to these methods in that context as well.

EPA's process for developing the analytical test methods in the proposal and the potential modifications to those methods is similar to the requirements of the NTTAA. EPA performed literature searches to identify analytical methods from industry, academia, voluntary consensus standards bodies, and other parties that could be used to measure disinfectants, disinfection byproducts, and other parameters. In addition, EPA's development of the methods benefited from the recommendations of an Advisory Committee established under the Federal Advisory Committee Act to assist the Agency with the Stage 1 DBPR. The Committee made available additional technical experts who were well-versed in both existing analytical methods and new developments in the field. The results of these efforts formed the basis for the analytical methods in the 1994 proposed rule in which EPA included: six methods for measuring different disinfection byproducts, of which five are EPA methods and one is a voluntary consensus standard; nine methods for measuring disinfectants, all of which are voluntary consensus standards; two voluntary consensus methods for measuring total organic carbon (TOC); an EPA method for measuring bromide; and both governmental and voluntary consensus methods for measuring alkalinity. See proposed DBP regulations (USEPA 1994b) at 38751–38752 (July 29, l994). Where the only method proposed is an EPA method, there were either no voluntary consensus standards available or the standards did not meet EPA's data quality objectives.

In this Notice, as discussed in section V, above, EPA is requesting comment on possible changes to the proposed analytic methods, These possible changes are based on information received during public comment on the proposed regulations, or on new information that has become available since the l994 proposal. In general, the suggested modifications to the proposed methods are the result of improvements in both voluntary consensus methods and EPA methods, or the addition of methods that have been approved for other regulatory uses and might be used for the DBPR (e.g., Specific Ultraviolet Absorbance (SUVA) and TOC).

In this Notice, EPA discusses potential changes to the proposed methods and the reasons for the changes, and requests public comment on the possible modifications. The Agency also solicits comments on whether there are voluntary consensus standards that have not been addressed and should be considered for addition to the list of approved analytical methods in the final Stage 1 DBPR.

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Dated: October 22, 1997.

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Assistant Administrator.

Appendix 1—U.S. Environmental Protection Agency; Microbial Disinfection By-Products (M/DBP), Federal Advisory Committee

Agreement in Principle

1.0 Introduction

Pursuant to requirements under the Safe Drinking Water Act (SDWA), the Environmental Protection Agency (EPA) is developing interrelated regulations to control microbial pathogens and disinfectants/disinfection byproducts (D/DBPs) in drinking water. These rules are collectively known as the microbial/disinfection byproducts (M/DBP) rules.

The regulations are intended to address complex risk trade-offs between the two different types of contaminants. In keeping with the agreement reached during the 1992–93 negotiated rulemaking on these matters, EPA issued a Notice of Proposed Rulemaking for Disinfection By-Products Stage I on July 29, 1994. EPA also issued a Notice of Proposed Rulemaking for an Interim Enhanced Surface Water Treatment Rule (IESWTR) on July 29, 1994. Finally, in May 1996, EPA promulgated a final Information Collection Rule (ICR), to obtain data on source water quality, byproduct formation and drinking water treatment plant design and operations.

As part of recent amendments to the SDWA, Congress has established deadlines for all the M/DBP rules, beginning with a November 1998 deadline for promulgation of both the IESWTR and the Stage I D/DBP Rule. To meet this new deadline, EPA initiated an expedited schedule for development of these two rules. Building on the 1994 proposals, EPA intends to issue a Notice of Data Availability (NODA) in November 1997 for public comment. EPA also decided to establish a committee under the Federal Advisory Committee Act (FACA) for development of the rules.

The M/DBP Advisory Committee is made up of organizational members (parties) named by EPA (see Attachment A). The immediate task of the Committee has been to discuss, evaluate and provide advice on data, analysis and approaches to be included in the NODA to be published in November 1997. This Committee met four times from March through June 1997, with the initial objective to reach consensus, where possible, on the elements to be contained in the D/DBP Stage I and IESWTR NODA. Where consensus was not reached, the Committee sought to develop options and/or to clarify key issues and areas of agreement and disagreement. This document is the Committee's statement on the points of agreement reached.

2.0 Agreement in Principle

The Microbial and Disinfection By-Products Federal Advisory Committee considered the technical and policy issues involved in developing a DBP Stage I rule and an IESWTR under the Safe Drinking Water Act and recommends that the Environmental Protection Agency base the

applicable sections of its anticipated M/DBP Notice of Data Availability (NODA) on the elements of agreement described below.

This agreement in principle represents the consensus of the parties on the best conceptual principles that the Committee was able to generate within the allocated time and resources available.

The USEPA, a party to the negotiations, agrees that:

1. The person signing this agreement is authorized to commit this party to its terms.

2. EPA agrees to hold a meeting in July 1997 following circulation of a second draft of the NODA to obtain comments from the parties and the public on the extent to which the applicable sections of the draft NODA are consistent with the agreements below.

3. Each party and individual signatory that submits comments on the NODA agrees to support those components of the NODA that reflect the agreements set forth below. Each party and individual signatory reserves the right to comment, as individuals or on behalf of the organization he or she represents, on any other aspect of the Notice of Data Availability.

4. EPA will consider all relevant comments submitted concerning the Notice(s) of Proposed Rulemaking and in response to such comments will make such modifications in the proposed rule(s) and preamble(s) as EPA determines are appropriate when issuing a final rule.

5. Recognizing that under the Appointments Clause of the Constitution governmental authority may be exercised only by officers of the United States and recognizing that it is EPA's responsibility to issue final rules, EPA intends to issue final rules that are based on the provisions of the Safe Drinking Water Act, pertinent facts, and comments received from the public.

6. Each party agrees not to take any action to inhibit the adoption of final rule(s) to the extent it and corresponding preamble(s) have the same substance and effect as the elements of this agreement in principle.

2.1 MCLs

MCLs should remain at the levels proposed: 0.080 mg/l for TTHMs, 0.060 mg/l for HAA5, and 0.010 mg/l for bromate.

2.2 Enhanced Coagulation

The proposed enhanced coagulation provisions should be revised as follows:

a. The top row of the TOC removal table (3x3 matrix) should be modified for systems that practice enhanced coagulation by lowering the TOC removal percentages by 5 percent across the top row, while leaving the other rows the same.

b. SUVA (specific UV absorbance) should be used for determining whether systems would be required to use enhanced coagulation. The use of a raw water SUVA < 2.0 liter/mg-m as a criterion for not requiring a system to practice enhanced coagulation should be added to those proposed in § 141.135(a)(1) (i)–(iv).

c. For a system required to practice enhanced coagulation or enhanced softening, the use of a finished water SUVA < 2.0 liter/mg-m should be added as a step 2 procedure. Such a criterion would be in addition to the proposed step 2 procedure, not in lieu of it.

d. The proposed TOC removals for softening systems should be modified by lowering the value for TOC removal in the matrix at alkalinity > 120 mg/l and TOC between 2–4 mg/l by 5 percent (which would make it equal to the value for non-softening systems) and leaving the remaining values as proposed.

e. If a system is required to practice enhanced softening, lime softening plants would not be required to perform lime soda softening or to lower alkalinity below 40–60 mg/l as part of any step 2 procedure.

f. There is no need to separately address softening systems in the 3x3 matrix or the Step 1 regulatory language, which was identical to enhanced coagulation regulatory language in the proposed D/DBPR. The revised matrix should appear as follows:

	Alkalinity (mg/l)		
TOC (mg/l)	0 – <60	60 – <120	≥120
2–4	35	25	15
4–8	45	35	25
>8	50	40	30

2.3 Microbial Benchmarking/Profiling

A microbial benchmark to provide a methodology and process by which a PWS and the State, working together, assure that there will be no significant reduction in microbial protection as the result of modifying disinfection practices in order to meet MCLs for TTHM and HAA5 should be established as follows:

A. *Applicability.* The following PWSs to which the IESWTR applies must prepare a disinfection profile:

(1) PWSs with measured TTHM levels of at least 80% of the MCL (0.064 mg/l) as an annual average for the most recent 12 month compliance period for which compliance data are available prior to November 1998 (or some other period designated by the State),

(2) PWSs with measured HAA5 levels of at least 80% of the MCL (0.048 mg/l) as an annual average for the most recent 12 month period for which data are available (or some other period designated by the State)—In connection with HAA5 monitoring, the following provisions apply:

(a) PWSs that have collected HAA5 data under the Information Collection Rule must use those data to determine the HAA5 level, unless the State determines that there is a more representative annual data set.

(b) For those PWSs that do not have four quarters of HAA5 data 90 days following the IESWTR promulgation date, HAA5 monitoring must be conducted for four quarters.

B. *Disinfection profile.* A disinfection profile consists of a compilation of daily *Giardia lamblia* log inactivations (or virus inactivations under conditions to be specified), computed over the period of a year, based on daily measurements of operational data (disinfectant residual concentration(s), contact time(s), temperature(s), and where necessary, pH(s)). The PWS will then determine the lowest average month (critical period) for each 12 month period and average critical periods to create a ''benchmark'' reflecting the lower bound of a PWS's current disinfection practice. Those PWSs that have all necessary data to determine profiles, using operational data collected prior to promulgation of the IESWTR, may use up to three years of operational data in developing those profiles. Those PWSs that do not have three years of operational data to develop profiles must conduct the necessary monitoring to develop the profile for one year beginning no later than 15 months after promulgation, and use up to two years of existing operational data to develop profiles.

C. *State review.* The State will review disinfection profiles as part of its sanitary survey. Those PWSs required to develop a disinfection profile that subsequently decide to make a significant change in disinfection practice (i.e., move point of disinfection, change the type of disinfectant, change the disinfection process, or any other change designated as significant by the State) must consult with the State prior to implementing such a change. Supporting materials for such consultation must include a description of the proposed change, the disinfection profile, and an analysis of how the proposed change will affect the current disinfection.

D. *Guidance.* EPA, in consultation with interested stakeholders, will develop detailed guidance for States and PWSs on how to develop and evaluate disinfection profiles, identify and evaluate significant changes in disinfection practices, and guidance on moving the point of disinfection from prior to the point of coagulant addition to after the point of coagulant addition.

2.4 Disinfection Credit

Consistent with the existing provisions of the 1989 Surface Water Treatment Rule, credit for compliance with applicable disinfection requirements should continue to be allowed for disinfection applied at any point prior to the first customer.

EPA will develop guidance on the use and costs of oxidants that control water quality problems (e.g., zebra mussels, Asiatic clams, iron, manganese, algae) and whose use will reduce or eliminate the formation of DBPs of public health concern.

2.5 Turbidity

Turbidity Performance Requirements. For all surface water systems that use conventional treatment or direct filtration, serve more than 10,000 people, and are required to filter: (a) the turbidity level of a system's combined filtered water at each plant must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month and, (b) the turbidity level of a system's combined filtered water at each plant must at no time exceed 1 NTU. For both the maximum and the 95th percentile requirements. Compliance shall be determined based on measurements of the combined filter effluent at four-hour intervals.

Individual Filter Requirements. All surface water systems that use rapid granular filtration, serve more than 10,000 people, and are required to filter shall conduct continuous monitoring of turbidity for each individual filter and shall provide an exceptions report to the State on a monthly

basis. Exceptions reporting shall include the following: (1) any individual filter with a turbidity level greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart; and (2) any individual filter with a turbidity level greater than 0.5 NTU at the end of the first 4 hours of filter operation based on 2 consecutive measurements fifteen minutes apart. A filter profile will be produced if no obvious reason for the abnormal filter performance can be identified.

If an individual filter has turbidity levels greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of 3 consecutive months, the system shall conduct a self-assessment of the filter utilizing as guidance relevant portions of guidance issued by the Environmental Protection Agency for Comprehensive Performance Evaluation (CPE). If an individual filter has turbidity levels greater than 2.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of two consecutive months, the system will arrange for the conduct of a CPE by the State or a third party approved by the State.

State Authority. States must have rules or other authority to require systems to conduct a Composite Correction Program (CCP) and to assure that systems implement any follow-up recommendations that result as part of the CCP.

2.6 Cryptosporidium MCLG

EPA should establish an MCLG to protect public health. The Agency should describe existing and ongoing research and areas of scientific uncertainty on the question of which species of *Cryptosporidium* represents a concern for public health (e.g. *parvum, muris, serpententious*) and request further comment on whether to establish an MCLG on the genus or species level.

In the event the Agency establishes an MCLG on the genus level, EPA should make clear that the objective of this MCLG is to protect public health and explain the nature of scientific uncertainty on the issue of taxonomy and cross reactivity between strains. The Agency should indicate that the scope of MCLG may change as scientific data on specific strains of particular concern to human health become available.

2.7 Removal of Cryptosporidium

All surface water systems that serve more than 10,000 people and are required to filter must achieve at least a 2 log removal of *Cryptosporidium*. Systems which use rapid granular filtration (direct filtration or conventional filtration treatment—as currently defined in the SWTR), and meet the turbidity requirements described in Section 2.5 are assumed to achieve at least a 2 log removal of *Cryptosporidium*. Systems which use slow sand filtration and diatomaceous earth filtration and meet existing turbidity performance requirements (less than 1 NTU for the 95th percentile or alternative criteria as approved by the State) are assumed to achieve at least a 2 log removal of *Cryptosporidium*.

Systems may demonstrate that they achieve higher levels of physical removal.

2.8 Multiple Barrier Concept

EPA should issue a risk-based proposal of the Final Enhanced Surface Water Treatment Rule for *Cryptosporidium* embodying the multiple barrier approach (e.g. source water protection, physical removal, inactivation, etc.), including, where risks suggest appropriate, inactivation requirements. In establishing the Final Enhanced Surface Water Treatment Rule, the following issues will be evaluated:

- Data and research needs and limitations (e.g. occurrence, treatment, viability, active disease surveillance, etc.);
- Technology and methods capabilities and limitations;
- Removal and inactivation effectiveness;
- Risk tradeoffs including risks of significant shifts in disinfection practices;
- Cost considerations consistent with the SDWA;
- Reliability and redundancy of systems;
- Consistency with the requirements of the Act.

2.9 Sanitary Surveys

Sanitary surveys operate as an important preventive tool to identify water system deficiencies that could pose a risk to public health. EPA and ASDWA have issued a joint guidance dated 12/21/95 on the key components of an effective sanitary survey. The following provisions concerning sanitary surveys should be included.

I. Definition

(A) A sanitary survey is an onsite review of the water source (identifying sources of contamination using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(B) Components of a sanitary survey may be completed as part of a staged or phased state review process within the established frequency interval set forth below.

(C) A sanitary survey must address each of the eight elements outlined in the December 1995 EPA/STATE Guidance on Sanitary Surveys.

II. Frequency

(A) Conduct sanitary surveys for all surface water systems (including groundwater under the influence) no less frequently than every three years for community systems except as provided below and no less frequently than every five years for noncommunity systems.

—May ''grandfather''sanitary surveys conducted after December 1995, if they address the eight sanitary survey components outlined above.

(B) For community systems determined by the State to have outstanding performance based on prior sanitary surveys, successive sanitary surveys may be conducted no less than every five years.

III. Follow Up

(A) Systems must respond to deficiencies outlined in a sanitary survey report within at least 45 days, indicating how and on what schedule the system will address significant deficiencies noted in the survey.

(B) States must have the appropriate rules or other authority to assure that facilities take the steps necessary to address significant deficiencies identified in the survey report that are within the control of the PWS and its governing body.

Agreed to by:

_____

Name, Organization

_____

Date

Signed By:

Peter L. Cook, National Association of Water Companies
Michael A. Dimitriou, International Ozone Association
Cynthia C. Dougherty, US Environmental Protection Agency
Mary J.R. Gilchrist, American Public Health Association
Jeffrey K. Griffiths, National Association of People with AIDS
Barker Hamill, Association of State Drinking Water Administrators
Robert H. Harris, Environmental Defense Fund
Edward G. Means III, American Water Works Association
Rosemary Menard, Large Unfiltered Systems
Erik D. Olson, Natural Resources Defense Council
Brian L. Ramaley, Association of Metropolitan Water Agencies
Charles R. Reading Jr., Water and Wastewater Equipment Manufacturers Association
Suzanne Rude, National Association of Regulatory Utility Commissioners
Ralph Runge, Chlorine Chemistry Council
Coretta Simmons, National Association of State Utility Consumer Advocates
Bruce Tobey, National League of Cities
Chris J. Wiant, National Association of City and County Health Officials; National Environmental Health Association

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federal register

Monday
November 3, 1997

Part III

Environmental Protection Agency

40 CFR Parts 141 and 142
National Primary Drinking Water Regulations: Interim Enhanced Surface Water Treatment Rule Notice of Data Availability; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 141 and 142

[WH–FRL–5915–4]

National Primary Drinking Water Regulations: Interim Enhanced Surface Water Treatment Rule Notice of Data Availability

AGENCY: U.S. Environmental Protection Agency (USEPA).

ACTION: Notice of Data Availability; request for comments; reopening of comment period.

SUMMARY: USEPA proposed in 1994 to amend the Surface Water Treatment Rule to provide additional protection against disease-causing organisms (pathogens) in drinking water (59 FR 38832: July 29, 1994). This Notice of Data Availability summarizes the 1994 proposal; describes new data and information that the Agency has obtained and analyses that have been developed since the proposal; provides information concerning recommendations of the Microbial-Disinfectants/Disinfection Byproducts (M-DBP) Advisory Committee (chartered in February 1997 under the Federal Advisory Committee Act) on key issues related to the proposal; and requests comment on these recommendations as well as on other regulatory implications that flow from the new data and information. USEPA solicits comment on all aspects of this Notice and the supporting record. The Agency also solicits additional data and information that may be relevant to the issues discussed in the Notice. USEPA is particularly interested in public comment on the Committee's recommendations and whether the Agency should reflect these recommendations in the final rule. In addition, USEPA is hereby providing notice that the Agency is re-opening the comment period for the 1994 proposal for 90 days beginning on the date of publication of today's Notice in the **Federal Register**. USEPA also requests that any information, data or views submitted to the Agency since the close of the comment period on the 1994 proposal that members of the public would like the Agency to consider as part of the final rule development process be resubmitted during this current 90-day comment period unless already in the underlying record in the Docket for this Notice.

The Interim Enhanced Surface Water Treatment Rule (IESWTR) would apply to surface water systems serving 10,000 or more people. USEPA intends to promulgate the final rule in November 1998 as required by the 1996 Amendments to the Safe Drinking Water Act. The Agency plans subsequently to address surface water systems serving fewer than 10,000 people as part of a ''long-term'' Enhanced Surface Water Treatment Rule which may also include additional refinements for larger systems.

Key issues related to the IESWTR that are addressed in this Notice include the establishment of a Maximum Contaminant Level Goal for *Cryptosporidium;* removal of *Cryptosporidium* by filtration; revised turbidity provisions; disinfection benchmark provisions to assure continued levels of microbial protection while facilities take the necessary steps to comply with new disinfection byproduct standards; sanitary surveys; inclusion of *Cryptosporidium* in the definition of ground water under the direct influence of surface water; and inclusion of *Cryptosporidium* in the watershed control requirements for unfiltered public water systems. Other issues that are discussed include inactivation of *Cryptosporidium*, viruses and *Giardia lamblia;* uncovered finished water reservoirs; cross connection control; and recycling of filter backwash water and filter-to-waste.

Today's **Federal Register** also contains a related Notice of Data Availability for the Stage 1 Disinfectants/Disinfection Byproducts Rule (DBPR). USEPA proposed this rule at the same time as the IESWTR and plans to promulgate it along with the IESWTR in November 1998.

DATES: Comments should be postmarked or delivered by hand on or before February 3, 1998. Comments must be received or post-marked by midnight February 3, 1998.

ADDRESSES: Send written comments to IESWTR NODA Docket Clerk, Water Docket (MC-4101); U.S. Environmental Protection Agency; 401 M Street, SW; Washington, DC 20460. Please submit an original and three copies of your comments and enclosures (including references). If you wish to hand-deliver your comments, please call the Docket between 9:00 a.m. and 4 p.m., Monday through Friday, excluding legal holidays, to obtain the room number for the Docket. Comments may be submitted electronically to ow-docket@epamail.epa.gov.

FOR FURTHER INFORMATION, CONTACT: The Safe Drinking Water Hotline, Telephone (800) 426–4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding Federal holidays, from 9:00 am to 5:30 pm Eastern Time. For technical inquiries, contact Elizabeth Corr or Paul S. Berger, Ph.D.(Microbiology), Office of Ground Water and Drinking Water (MC 4607), U.S. Environmental Protection Agency, 401 M Street SW, Washington DC 20460; telephone (202) 260–8907 (Corr) or (202) 260–3039 (Berger).

Regional Contacts

Region I. Kevin Reilly, Water Supply Section, JFK Federal Bldg., Room 203, Boston, MA 02203, (617) 565–3616
II. Michael Lowy, Water Supply Section, 290 Broadway, 24th Floor, New York, NY 10007–1866, (212) 637–3830
III. Jason Gambatese, Drinking Water Section (3WM41), 841 Chestnut Building, Philadelphia, PA 19107, (215) 566–5759
IV. David Parker, Water Supply Section, 345 Courtland Street, Atlanta, GA 30365, (404)562–9460
V. Kimberly Harris (micro), Miguel Del Toral (DBP), Water Supply Section, 77 W. Jackson Blvd., Chicago, IL 60604, (312) 886–4239 (Harris), (312) 886–5253 (Del Toral)
VI. Blake L. Atkins, Team Leader, Water Supply Section, 1445 Ross Avenue, Dallas, TX 75202, (214) 665–2297
VII. Stan Calow, State Programs Section, 726 Minnesota Ave., Kansas City, KS 66101, (913) 551–7410
VIII. Bob Clement, Public Water Supply Section (8WM-DW), 999 18th Street, Suite 500, Denver, CO 80202–2466, (303) 312–6653
IX. Bruce Macler, Water Supply Section, 75 Hawthorne Street, San Francisco, CA 94105, (415) 744–1884
X. Wendy Marshall, Drinking Water Unit, 1200 Sixth Avenue (OW–136), Seattle, WA 98101, (206) 553–1890.

SUPPLEMENTARY INFORMATION:

Regulated entities. Entities potentially regulated by the IESWTR are public water systems that use surface water and serve at least 10,000 people. Regulated categories and entities include:

Category	Examples of regulated entities
Public Water System	PWSs that use surface water and serve at least 10,000 people.
State Governments	State government offices that regulate drinking water.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the IESWTR. This table lists the types of entities that USEPA is now aware could potentially be regulated by the rule. Other types of entities not listed in this table could also be regulated. To determine whether your facility may be regulated by this action, you should carefully examine the applicability criteria outlined under Alternatives A and B in § 141.70 of the proposed rule (59 FR 38832, July 29, 1994).

If you have questions regarding the applicability of the IESWTR to a particular entity, contact one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Additional Information for Commenters. The Agency requests that commenters follow the following format: type or print comments in ink, and cite, where possible, the paragraph(s) in this Notice to which each comment refers. Commenters should use a separate paragraph for each method or issue discussed. Electronic comments must be submitted as a WP5.1 or WP6.1 file or as an ASCII file avoiding the use of special characters and any form of name or title of the **Federal Register**. Comments and data will also be accepted on disks in WordPerfect in 5.1 or WP6.1 or ASCII file format. Electronic comments on this Notice may be filed online at many Federal Depository Libraries. Commenters who want EPA to acknowledge receipt of their comments should include a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted.

Availability of Record. The record for this Notice, which includes supporting documentation as well as printed, paper versions of electronic comments, is available for inspection from 9 to 4 p.m., Monday through Friday, excluding legal holidays at the Water Docket, U.S. EPA Headquarters, 401 M. St., S.W. Washington, D.C. 20460. For access to docket materials, please call 202/260–3027 to schedule an appointment and obtain the room number.

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List of Abbreviations Used in This Document

ASCE—American Society of Civil Engineers
ASTM—American Society for Testing Materials
AWWA—American Water Works Association
C—the residual concentration of disinfectant, mg/L
CDC—Centers for Disease Control
CFE—Combined Filter Effluent
CFR—Code of Federal Regulations
CPE—Comprehensive Performance Evaluation
CT—the residual concentration of disinfectant multiplied by the contact time
DOC—dissolved organic carbon
ESWTR—Enhanced Surface Water Treatment Rule
FACA—Federal Advisory Committee Act
gpm/sf—gallons per minute per square foot
HAA5—Haloacetic acids (monochloroacetic, dichloroacetic, trichloroacetic, monobromoacetic, and dibromoacetic acids)
HAV—hepatitis A virus
hrs—hours
ICR—Information Collection Rule
IESWTR—Interim Enhanced Surface Water Treatment Rule
IFA—Individual Filter Assessment
IFE—Individual Filter Effluent
ISO—International Standards Organization
k—the pseudo first-order reaction rate constant
L—liter
Log Inactivation—logarithm of (N_o/N_T)
Log—logarithm (common, base 10)
LTESWTR—Long Term Enhanced Surface Water Treatment Rule
MCL—Maximum Contaminant Level
MCLG—Maximum Contaminant Level Goal
M-DBP—Microbial and Disinfectants/Disinfection Byproducts
mg/L—milligram per liter
mg-min/L—milligram minutes per liter
MMWR—Morbidity and Mortality Weekly Report
mW-s/cm²—milliwatt seconds per square centimeter
N_o—the initial viable concentration of microorganisms
NPDWR—National Primary Drinking Water Regulation
N_T—the concentration of surviving microorganisms at time T
NTU—nephelometric turbidity unit
°C—degrees centigrade
PE—Performance Evaluation
pH—negative logarithm of the effective hydrogen-ion concentration
PV1—poliovirus 1
PV3—poliovirus 3
PWS—Public Water System
RSD—Relative Standard Deviation
SAB—Science Advisory Board
SDWA—Safe Drinking Water Act
T—the contact time, second or minute
TOC—total organic carbon
TTHM—Total Trihalomethanes
TWG—Technical Work Group
UV—ultraviolet
x—log removal Reduction by 1/10**x

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I. Introduction and Background

A. Existing Regulations

1. Surface Water Treatment Rule

Under the Surface Water Treatment Rule (SWTR)(54 FR 27486, June 29, 1989), USEPA set maximum contaminant level goals of zero for *Giardia lamblia*, viruses, and *Legionella*; and promulgated national primary drinking water regulations for all public water systems (PWSs) using surface water sources or ground water sources under the direct influence of surface water. The SWTR includes treatment technique requirements for filtered and unfiltered systems that are intended to protect against the adverse health effects of exposure to *Giardia lamblia*, viruses, and *Legionella*, as well as many other pathogenic organisms. Briefly, those requirements include (1) removal or inactivation of 3 logs (99.9%) for *Giardia* and 4 logs (99.99%) for viruses; (2) combined filter effluent performance of 5 NTU as a maximum and 0.5 NTU at 95th percentile monthly, based on 4-hour monitoring for treatment plants using conventional treatment or direct filtration (with separate standards for other filtration technologies); and (3) watershed protection and other requirements for unfiltered systems.

2. Total Trihalomethane MCL

USEPA set an interim Maximum Contaminant Level (MCL) for total trihalomethanes (TTHM) of 0.10 mg/l as an annual average in November 1979 (44 FR 68624). This standard was based on the need to balance the requirement for continued disinfection of water to reduce exposure to pathogenic microorganisms while simultaneously lowering exposure to disinfection byproducts which might be carcinogenic to humans.

The interim TTHM standard only applies to any PWSs (surface water and/or ground water) serving at least 10,000 people that add a disinfectant to the drinking water during any part of the treatment process. At their discretion, States may extend coverage to smaller PWSs. However, most States have not exercised this option. About 80 percent of the PWSs, serving populations of less than 10,000, are served by ground water that is generally low in THM precursor content (USEPA, 1979) and which would be expected to have low TTHM levels even if they disinfect.

3. Total Coliform Rule

The Total Coliform Rule (54 FR 27544; June 29, 1989), revised in June 1989 and effective on December 31, 1990 applies to all public water systems (USEPA, 1989b). This regulation sets compliance with the Maximum Contaminant Level (MCL) for total coliforms as follows. For systems that collect 40 or more samples per month, no more than 5.0% of the samples may be total coliform-positive; for those that collect fewer than 40 samples, only one sample may be total coliform-positive. If a system exceeds the MCL for a month, it must notify the public using mandatory language developed by the USEPA. The required monitoring frequency for a system ranges from 480 samples per month for the largest systems to once annually for certain of the smallest systems. All systems must have a written plan identifying where samples are to be collected. In addition, systems are required to conduct repeat sampling after a positive sample.

The Total Coliform Rule also requires each system that collects fewer than five samples per month to have the system inspected every 5 years (10 years for certain types of systems using only protected and disinfected ground water.) This on-site inspection (referred to as a sanitary survey) must be performed by the State or by an agent approved by the State.

4. Information Collection Rule

The Information Collection Rule (ICR) is a monitoring and data reporting rule that was promulgated on May 14, 1996 (61 FR 24354) (USEPA, 1996b). The purpose of the ICR is to collect occurrence and treatment information to evaluate the need for possible changes to the current Surface Water Treatment Rule and existing microbial treatment practices and to evaluate the need for future regulation for disinfectants and DBPs. The ICR will provide USEPA with additional information on the national occurrence in drinking water of (1) chemical byproducts that form when disinfectants used for microbial control react with compounds already present in source water and (2) disease-causing microorganisms, including *Cryptosporidium*, *Giardia*, and viruses. The ICR will also collect engineering data on how PWSs currently control such contaminants. This information is being collected because the regulatory negotiation on disinfectants and DBPs concluded that additional information was needed to assess the potential health problem created by the presence of DBPs and pathogens in drinking water and to assess the extent and severity of risk in order to make sound regulatory and public health decisions. The ICR will also provide information to support regulatory impact analyses for various regulatory options, and to help develop monitoring strategies for cost effectively implementing regulations.

B. Public Health Concerns To Be Addressed

In 1990, USEPA's Science Advisory Board (SAB), an independent panel of experts established by Congress, cited

drinking water contamination as one of the most important environmental risks and indicated that disease-causing microbial contaminants (i.e., bacteria, protozoa and viruses) are probably the greatest remaining health risk management challenge for drinking water suppliers (USEPA/SAB 1990). This view was prompted by the SAB's concern about the number of waterborne disease outbreaks in the U.S. Between 1980 and 1994, 379 waterborne disease outbreaks were reported, with over 500,000 cases of disease. During this period, a number of agents were implicated as the cause, including protozoa, viruses and bacteria, as well as several chemicals. Most of the cases (but not outbreaks) were associated with surface water, and specifically with a single outbreak of cryptosporidiosis in Milwaukee (over 400,000 cases) (Craun, Pers. Comm. 1997a).

The number of waterborne disease outbreaks and cases is, however, probably much greater than that recorded because the vast majority of waterborne disease is probably not reported. Few States have an active outbreak surveillance program and disease outbreaks are often not recognized in a community or, if recognized, are not traced to the drinking water source. This situation is complicated by the fact that the vast majority of people experiencing gastrointestinal illness (predominantly diarrhea) do not seek medical attention. For those who do, physicians generally cannot attribute gastrointestinal illness to any specific origin such as a drinking water source. An unknown but probably significant portion of waterborne disease is endemic, i.e., not associated with an outbreak, and thus is even more difficult to recognize.

One of the key regulations USEPA has developed and implemented to counter pathogens in drinking water is the SWTR. Among its provisions, the rule requires that a public water system have sufficient treatment to reduce the source water concentration of *Giardia* and viruses by at least 99.9% (3 logs) and 99.99% (4 logs), respectively.

The goal of the SWTR is to reduce risk to less than one infection per year per 10,000 people (10^{-4}). However, one of the SWTR's shortcomings is that the source waters of some systems have high pathogen concentrations that, when reduced by the levels required under the rule, still may not meet a common health goal (e.g., 10^{-4}).

Another shortcoming of the SWTR is that the rule does not specifically control for the protozoan *Cryptosporidium*. The first report of a recognized outbreak caused by *Cryptosporidium* was published during the development of the SWTR (D'Antonio et al., 1985). Other outbreaks caused by this pathogen have since been reported both in the United States and other countries (Smith et al.,1988; Hayes et al., 1989; Levine and Craun, 1990; Moore et al., 1993; Craun, 1993). A particular public health challenge is that simply increasing existing disinfection levels above those most commonly practiced in the United States today does not appear to be an effective strategy for controlling *Cryptosporidium*.

In addition to these issues, there is another potentially counter-balancing public health concern. The disinfectants used to control microbial pathogens may produce toxic or carcinogenic disinfection byproducts (DBPs) when they react with organic chemicals in the source water. Thus, an important question facing water supply professionals is how to minimize the risk from both microbial pathogens and DBPs simultaneously.

At the time the SWTR was promulgated, USEPA had limited data concerning *Giardia* and *Cryptosporidium* occurrence in source waters and treatment efficiencies. The 3-log removal/inactivation of *Giardia lamblia* and 4-log removal/inactivation of enteric viruses required by the SWTR were developed to provide protection from most pathogens in source waters. However, additional data has become available since promulgation of the SWTR concerning source water occurrence and treatment efficiencies for *Giardia*, as well as for *Cryptosporidium* (LeChevallier et al. 1991 a,b). A major concern is that if systems currently provide four or more logs of removal/inactivation for *Giardia*, such systems might reduce existing levels of disinfection to more easily meet new DBP regulations, and thus only marginally meet the three-log removal/inactivation requirement for *Giardia lamblia* specified in the current SWTR. Depending upon source water *Giardia* concentrations, such treatment changes could lead to significant increases in microbial risk (Regli et al., 1993; Grubbs et al., 1992; USEPA, 1994b).

C. Statutory Provisions

1. SDWA and 1986 Provisions

The Safe Drinking Water Act (SDWA or the Act), as amended in 1986, requires USEPA to publish a ''maximum contaminant level goal'' (MCLG) for each contaminant which, in the judgement of the USEPA Administrator, ''may have any adverse effect on the health of persons and which are known or anticipated to occur in public water systems'' (Section 1412(b)(3)(A)). MCLGs are to be set at a level at which ''no known or anticipated adverse effect on the health of persons occur and which allows an adequate margin of safety'' (Section 1412(b)(4)).

The Act also requires that at the same time USEPA publishes an MCLG, which is a non-enforceable health goal, it also must publish a National Primary Drinking Water Regulation (NPDWR) that specifies either a maximum contaminant level (MCL) or treatment technique (Sections 1401(1) and 1412(a)(3)). USEPA is authorized to promulgate a NPDWR ''that requires the use of a treatment technique in lieu of establishing a MCL,'' if the Agency finds that ''it is not economically or technologically feasible to ascertain the level of the contaminant''.

Section 1414 (c) of the Act requires each owner or operator of a public water system to give notice to the persons served by the system of any failure to comply with an MCL or treatment technique requirement of, or testing procedure prescribed by, a NPDWR and any failure to perform monitoring required by section 1445 of the Act.

Section 1412(b)(7)(C) of the SDWA requires the USEPA Administrator to publish a NPDWR ''specifying criteria under which filtration (including coagulation and sedimentation, as appropriate) is required as a treatment technique for public water systems supplied by surface water sources''. In establishing these criteria, USEPA is required to consider ''the quality of source waters, protection afforded by watershed management, treatment practices (such as disinfection and length of water storage) and other factors relevant to protection of health''. This section of the Act also requires USEPA to promulgate a NPDWR requiring disinfection as a treatment technique for all public water systems and a rule specifying criteria by which variances to this requirement may be granted.

2. Changes to Initial Provisions and New Mandates

In 1996, Congress reauthorized the Safe Drinking Water Act. Several of the 1986 provisions discussed above were renumbered and augmented with additional language, while other sections mandate new drinking water requirements. These modifications, as well as new provisions, are detailed below.

As part of the 1996 amendments to the Safe Drinking Water Act (the Amendments), USEPA's general

authority to set a MCLG and NPDWR was modified to apply to contaminants that may ''have an adverse effect on the health of persons'', that are ''known to occur or there is a substantial likelihood that the contaminant will occur in public water systems with a frequency and at levels of public health concern'', and for which ''in the sole judgement of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems' (1986 SDWA Section 1412 (b)(3)(A) stricken and amended with 1412(b)(1)(A)).

The Amendments also require that USEPA, when proposing a NPDWR that includes an MCL or treatment technique, publish and seek public comment on health risk reduction and cost analyses. The Amendments also require USEPA to take into consideration the effects of contaminants upon sensitive subpopulations (i.e. infants, children, pregnant women, the elderly, and individuals with a history of serious illness), and other relevant factors. (Section 1412 (b)(3)(C)).

The 1996 Amendments also newly require USEPA to promulgate an Interim Enhanced SWTR and a Stage I Disinfectants and Disinfection Byproducts Rule by November 1998. In addition, the 1996 Amendments require USEPA to promulgate a Final Enhanced SWTR and a Stage 2 Disinfection Byproducts Rule by November 2000 and May 2002, respectively (Section 1412(b)(2)(C)).

Under the Amendments of 1996, recordkeeping requirements were modified to apply to ''every person who is subject to a requirement of this title or who is a grantee'' (Section 1445 (a)(1)(A)). Such persons are required to ''establish and maintain such records, make such reports, conduct such monitoring, and provide such information as the Administrator may reasonably require by regulation . . .''.

D. Regulatory Negotiation Process

In 1992 USEPA initiated a negotiated rulemaking to develop a disinfectants/disinfection byproducts rule. The negotiators included representatives of State and local health and regulatory agencies, public water systems, elected officials, consumer groups and environmental groups. The Committee met from November 1992 through June 1993.

Early in the process, the negotiators agreed that large amounts of information necessary to understand how to optimize the use of disinfectants to concurrently minimize microbial and DBP risk on a plant-specific basis were unavailable. Nevertheless, the Committee agreed that USEPA propose a disinfectants/disinfection byproducts rule to extend coverage to all community and nontransient noncommunity water systems that use disinfectants. This rule proposed to reduce the current TTHM MCL, regulate additional disinfection byproducts, set limits for the use of disinfectants, and reduce the level of organic compounds in the source water that may react with disinfectants to form byproducts.

One of the major goals addressed by the Committee was to develop an approach that would reduce the level of exposure from disinfectants and DBPs without undermining the control of microbial pathogens. The intention was to ensure that drinking water is microbiologically safe at the limits set for disinfectants and DBPs and that these chemicals do not pose an unacceptable risk at these limits.

Following months of intensive discussions and technical analysis, the Committee recommended the development of three sets of rules: a two-staged Disinfectants/Disinfection Byproduct Rule (proposal: 59 FR 38668, July 29, 1994) (USEPA, 1994a), an ''interim'' ESWTR (proposal: 59 FR 38832, July 29, 1994) (USEPA, 1994b), and an Information Collection rule (proposal: 59 FR 6332, February 10, 1994) (USEPA, 1994c). The IESWTR would only apply to systems serving 10,000 people or more. The Committee agreed that a ''long-term'' ESWTR (LTESWTR) would be needed for systems serving fewer than 10,000 people when the results of more research and water quality monitoring became available. The LTESWTR could also include additional refinements for larger systems.

The approach in developing these proposals considered the constraints of simultaneously treating water to control for both microbial contaminants and DBPs. As part of this effort, the Negotiating Committee concluded that the SWTR may need to be revised to address health risk from high densities of pathogens in poorer quality source waters and from the protozoan, *Cryptosporidium*. The Committee also agreed that the schedules for IESWTR and LTESWTR should be ''linked'' to the schedule for the Stage 1 DBP Rule to assure simultaneous compliance and a balanced risk-risk based implementation. The Committee agreed that additional information on health risk, occurrence, treatment technologies, and analytical methods needed to be developed in order to better understand the risk-risk tradeoff, and how to accomplish an overall reduction in risk.

Finally the Negotiating Committee agreed that to develop a reasonable set of rules and to understand more fully the limitations of the current SWTR, additional field data were critical. Thus, a key component of the regulation negotiation agreement was the promulgation of the Information Collection Rule (ICR) noted above and described in more detail below.

E. Information Collection Rule

As stated above, the ICR established monitoring and data reporting requirements for large public water systems serving populations over 100,000. About 350 PWSs operating 500 treatment plants are involved in the data collection effort. Under the ICR, these PWSs monitor their source water for bacteria, viruses, and protozoa (surface water sources only); water quality factors affecting DBP formation; and DBPs within the treatment plant and in the distribution system. In addition, PWSs must provide operating data and a description of their treatment plan design. Finally, a subset of PWSs perform treatment studies, using either granular activated carbon or membrane processes, to evaluate DBP precursor removal. Monitoring for treatment study applicability began in September 1996. The remaining occurrence monitoring began in July 1997.

The initial intent of the ICR was to collect monitoring data and other information for use in developing the Stage 2 DBPR and IESWTR and to estimate national costs for various treatment options. However, because of delays in promulgating the ICR and technical difficulties associated with laboratory approval and review of facility sampling plans, most ICR monitoring did not begin until July 1, 1997. As a result of this delay and the new Stage 1 DBPR and IESWTR deadlines specified in the 1996 SDWA amendments, ICR data will not be available for analysis in connection with these rules. In place of the ICR data, the Agency has worked with stakeholders to identify additional data developed since 1994 that can be used in components of these rules. USEPA intends to continue to work with stakeholders in analyzing and using the comprehensive ICR data and research for developing subsequent revisions to the SWTR and the Stage 2 DBP Rule.

F. Formation of 1997 Federal Advisory Committee

In May 1996, the Agency initiated a series of public informational meetings to exchange information on issues

related to microbial and disinfectants/disinfection byproducts regulations. To help meet the deadlines for the IESWTR and Stage 1 DBPR established by Congress in the 1996 SDWA Amendments and to maximize stakeholder participation, the Agency established the Microbial and Disinfectants/Disinfection Byproducts (M-DBP) Advisory Committee under the Federal Advisory Committee Act (FACA) on February 12, 1997, to collect, share, and analyze new information and data, as well as to build consensus on the regulatory implications of this new information. The Committee consists of 17 members representing USEPA, State and local public health and regulatory agencies, local elected officials, drinking water suppliers, chemical and equipment manufacturers, and public interest groups.

The Committee met five times, in March through July 1997, to discuss issues related to the IESWTR and Stage 1 DBPR. Technical support for these discussions was provided by a Technical Work Group (TWG) established by the Committee at its first meeting in March 1997. The Committee's activities resulted in the collection, development, evaluation, and presentation of substantial new data and information related to key elements of both proposed rules. The Committee reached agreement on the following major issues discussed in this Notice and the Notice for the Stage 1 DBPR published elsewhere in today's **Federal Register**: (1) MCLs for TTHMs, HAA5 and bromate; (2) requirements for enhanced coagulation and enhanced softening (as part of DBP control); (3) microbial benchmarking/profiling to provide a methodology and process by which a PWS and the State, working together, assure that there will be no significant reduction in microbial protection as the result of modifying disinfection practices in order to meet MCLs for TTHM and HAA5; (4) disinfection credit; (5) turbidity; (6) *Cryptosporidium* MCLG; (7) removal of *Cryptosporidium*; (8) role of *Cryptosporidium* inactivation as part of a multiple barrier concept and (9) sanitary surveys. The Committee's recommendations to USEPA on these issues were set forth in an Agreement In Principle document dated July 15, 1997. This document is included with this notice as Appendix 1.

G. Overview of IESWTR 1994 Proposal

1. Summary of Major Elements

As part of the IESWTR July 29, 1994, **Federal Register** notice (59 FR 38832), USEPA proposed to revise the SWTR to provide additional protection against pathogens in drinking water. USEPA proposed to set the MCLG for *Cryptosporidium* at zero based on animal studies and human epidemiology studies of waterborne outbreaks of cryptosporidiosis. The proposal also focused on treatment requirements for the waterborne pathogens *Giardia lamblia*, *Cryptosporidium*, Legionella and viruses that would apply to all public water systems that use surface water or ground water under the influence of surface water and serve 10,000 people or more. Major features of the proposal included a stricter watershed control requirement for systems using surface water that wish to avoid filtration; a change in the definition of ground water under the influence of surface water to include the presence of *Cryptosporidium*; a periodic sanitary survey requirement for all systems using surface water or ground water under the influence of surface water; and several alternative requirements, described below, for augmenting treatment control of *Giardia lamblia*, *Cryptosporidium*, and viruses. USEPA also requested comment on several supplemental provisions and on other related issues, described below.

2. Alternative Treatment Requirements

USEPA proposed five treatment alternatives for controlling *Giardia lamblia*, *Cryptosporidium*, and viruses. Each alternative included several options. Alternative A addressed enhanced treatment for *Giardia lamblia* only. Alternatives B and C addressed treatment for *Cryptosporidium* only. Alternative D addressed enhanced treatment for viruses only. Alternative E would maintain existing levels of treatment for *Giardia lamblia* and viruses.

a. *Alternative A. Enhanced treatment for Giardia lamblia.* The SWTR currently requires a 99.9 percent (3-log) removal/inactivation of *Giardia lamblia* for all surface waters, regardless of *Giardia lamblia* cyst concentrations in the source water. Under Alternative A, the minimum level of treatment a system would be required to provide (e.g., 3, 4, 5 or 6 log removal/inactivation) would depend on the *Giardia lamblia* density in the source water as determined by monitoring over some specified interval of time. The level of prescribed treatment for a particular system would correspond to providing water below an annual risk level for *Giardia lamblia* infections (e.g. 10^{-4}).

b. *Alternative B. Specific Treatment for Cryptosporidium.* USEPA also proposed a treatment technique for *Cryptosporidium* similar to the proposal for *Giardia* under Alternative A, such that the required level of *Cryptosporidium* treatment for any particular system would depend on the density of *Cryptosporidium* in the source water.

c. *Alternative C. 99% (2-log) removal of Cryptosporidium.* Under this alternative, USEPA would require systems to achieve at least a 99% (2-log) removal of *Cryptosporidium* by filtration (with pretreatment). The 2-log level was based on the premise that a 3-log level (as currently required for *Giardia* removal/inactivation) is not economically or technologically possible, since data suggests that *Cryptosporidium* is consistently more resistant to disinfection than is *Giardia.* USEPA indicated that it would continue to assess new field and laboratory data to control *Cryptosporidium* by physical removal and disinfection for consideration in subsequent microbial regulations.

d. *Alternative D. Specific disinfection treatment for viruses.* The SWTR required systems to achieve a four-log removal/inactivation of viruses. This is to be achieved through a combination of filtration and disinfection or, for systems not required to filter their source waters, by disinfection alone. However, this level of treatment may not be adequate to achieve a particular health risk (e.g., 10^{-4} infections/yr/person) for viruses. Viruses are of particular concern, given that one or several virus particles may be infectious (Regli et al.,1991) and that several enteric viruses are associated with relatively high mortality rates (Bennett et al., 1987). Failure or impairment of filtration performance could allow substantial pathogen contamination of drinking water, particularly if the disinfection barrier following filtration is minimal.

Alternative D would require that systems provide sufficient disinfection such that disinfection alone would achieve at least a 0.5-log inactivation of *Giardia lamblia* or, alternatively, a 4-log inactivation of viruses. This proposed approach would be independent of the level of physical removal or the source water density of viruses. If the filtration process was able to remove three logs of *Giardia lamblia*, a system would still have to provide at least an additional 0.5-log inactivation of *Giardia lamblia* or 4-log inactivation of viruses by disinfection.

e. *Alternative E. No change to existing SWTR treatment requirements for Giardia lamblia and viruses.* Alternative E maintains existing SWTR levels of

treatment for *Giardia lamblia* and viruses. USEPA could regulate *Cryptosporidium* directly (e.g., Alternative C above) or make a finding that existing SWTR filtration and disinfection requirements are adequate to control this organism.

3. Possible Supplemental Treatment Requirements

USEPA also requested comment on three supplemental requirements regarding uncovered finished water reservoirs, cross connection control and State notification of turbidity levels.

a. Uncovered Finished Water Reservoirs. As part of the 1994 proposal, USEPA requested comment on possible supplemental requirements for uncovered finished water reservoirs. The Agency noted that USEPA guidelines recommend that all finished water reservoirs be covered (USEPA, 1991a) and that the American Water Works Association (AWWA) also has issued a policy statement that strongly supports the covering of such reservoirs (AWWA, 1993).

b. Cross Connection Control Program. USEPA requested comment on whether to require States or public water systems to have cross connection control programs. Plumbing cross-connections are actual or potential connections between a potable and non-potable water supply (USEPA, 1989a). According to Craun (1991), 24% of the waterborne disease outbreaks that occurred during 1981–1990 were caused by water contamination in the distribution system, primarily as the result of cross-connections and main repairs.

c. State Notification of High Turbidity Levels. USEPA also requested comment on whether to require systems to notify the State as soon as possible for persistent turbidity levels above the performance standards or for any other situation that is not now a violation of the turbidity standards. Under the SWTR, any time the turbidity of a treatment plant's combined filter effluent exceeds 5 NTU the system must notify the State as soon as possible, but no later than the end of the next business day. In addition, the system must notify the public as soon as possible, but in no case later than 14 days after the violation.

USEPA indicated in the proposal that it was considering broadening the requirement for State notification. The Agency suggested it might, for example, require systems to notify the State as soon as possible if at any point during the month it becomes apparent that a system will violate the monthly 95th percentile turbidity performance standard specified in the SWTR, rather than wait to the end of the month.

USEPA outlined a number of public health reasons for requiring swift State notification for persistent turbidity levels. Pathogens may accompany the turbidity particles that exit the filters, especially with poor quality source waters. High turbidity levels in the filtered water, even for a limited time, may represent a significant risk to the public. USEPA's proposed approach was intended to allow States to respond in controlling a potentially serious problem more quickly.

4. Other related issues. The Agency also requested comments on other issues related to possible IESWTR options. A number of these are listed below.

(a) To what extent should the ESWTR address the issue of recycling filter backwash, given its potential for increasing the densities of *Giardia lamblia* and *Cryptosporidium* on the filter?

(b) Should the ESWTR define minimum certification criteria for surface water treatment plant operators? Currently the SWTR (40 CFR 141.70) requires such systems to be operated by ''qualified personnel who meet the requirements specified by the State.''

(c) What criteria, if any, should the ESWTR include to ensure that systems optimize treatment plant performance?

(d) Should turbidity performance criteria be modified? Should criteria pertain to individual filters?

(e) Should the rule include a performance standard for particle removal?

(f) Should the rule include a requirement for an early warning for high turbidity?

(g) Under what conditions could systems be allowed different log removal credits than is currently recommended in the SWTR Guidance Manual?

(h) How should USEPA decide, in developing a Notice of Data Availability, what treatment approach(es) is most suitable for additional public comment?

II. New Information and Key Issues to be Addressed

A. MCLG for Cryptosporidium

1. Summary of 1994 Proposal and Public Comments

The July 29, 1994, **Federal Register** notice proposed to set the MCLG for Cryptosporidium at zero. The purpose of the MCLG is to protect public health. The reasons for this determination were based upon animal studies and human epidemiology studies of waterborne outbreaks of cryptosporidiosis.

Most commenters supported an MCLG of zero for *Cryptosporidium*. Those who provided reasons stated that (1) a single cell could infect, and data do not support a threshold dose below which an outbreak or disease will not occur, (2) the organism is present in water and has caused major waterborne disease outbreaks, and (3) it is consistent with the goals set under the SWTR and Total Coliform Rule. Commenters who opposed the proposed MCLG stated that USEPA needed more health risk and organism/disease transmission data and better analytical methods before setting an MCLG and regulating *Cryptosporidium*.

2. New data and Perspectives

Since publication of the proposed rule, results of a human feeding study have become available. Dupont et al. (1995) fed 29 healthy volunteers single doses ranging from 30 to 1 million *C. parvum* oocysts obtained from a calf. Of the 16 volunteers who received 300 or more oocysts, 88% became infected. Of the five volunteers who received the lowest dose (30 oocysts), one became infected. The median infective dose was 132 oocysts. According to a mathematical model based upon the Dupont et al. data, 0.5% of a population exposed to an average dose of one oocyst, would be expected to become infected. (Haas et al., 1996).

An important concern is that certain populations are at greater risk of waterborne disease infection than others. These vulnerable populations include the immunocompromised; children, especially the very young; the elderly; and pregnant women (Gerba et al. 1996; Fayer and Ungar 1986). The most significant segment within these vulnerable populations with regard to cryptosporidiosis is people who are immunocompromised. In patients with severely weakened immune systems, (e.g cancer, AIDS patients), cryptosporidiosis can be serious, long-lasting and sometimes fatal. There is concern about cryptosporidiosis in immunocompromised individuals because currently there is no cure for the disease.

C. parvum is the only *Cryptosporidium* species known for certain to infect humans. One controversial report (the only one of its kind) found evidence that *C. baileyi,* which infects birds, was present in the stools and other autopsied organs of an immunodeficient patient (Ditrich et al., 1991). There was no indication that *Cryptosporidium* had been responsible in this instance for any adverse health effects. *C. parvum* also infects many other mammals. While *C. parvum* is a

well-documented human pathogen, strain variation may occur and one strain may cause infection and/or disease at a higher or lower concentration than other strains. USEPA is currently funding research [*Cryptosporidium* virulence study using different strains, Herbert Dupont] to examine this issue.

There is some question about the taxonomy (i.e., classification) of species within the genus *Cryptosporidium*. Up until 1980, classification was based on the assumption that a particular species only infected one type of animal. This assumption appears to be incorrect; hence other appropriate taxonomy schemes have been suggested.

An important issue not directly related to the MCLG involves the measurement of *C. parvum* in water. With current technology, it is often very difficult to distinguish between viable and non-viable oocysts. When *Cryptosporidium* is identified it is often not clear whether it is *C. parvum* or another species. Several *Cryptosporidium* species look similar to *C. parvum* and react to ''specific'' *C. parvum* stains in a like manner (cross-reactions). In addition, it can be difficult to distinguish *Cryptosporidium* from alga and invertebrate eggs (Clancy et al. 1994)

3. Advisory Committee Recommendations and Related Issues

The M-DBP Federal Advisory Committee supported the proposed establishment of a *Cryptosporidium* MCLG at zero. However, a key issue identified by the Committee and public commenters is whether the MCLG should be set at the genus level (i.e., *Cryptosporidium*), as proposed, or at the more specific species level (i.e., *C. parvum*). Setting the MCLG at the genus level would automatically include any *Cryptosporidium* species other than *C. parvum* that is later found to be pathogenic to humans. In contrast, setting an MCLG at the species level would indicate that only *C. parvum* infects humans, and would also be consistent with the approach taken under the SWTR for *Giardia* where the MCLG is set at the species level (i.e., *G. lamblia*). USEPA has not decided which approach is most appropriate and seeks public comment on this issue.

As indicated above, USEPA's intent in establishing this MCLG at zero is to protect public health. The Agency believes there is adequate research data to support this determination. However, as noted above, the Agency recognizes that there is scientific uncertainty on the issue of *Cryptosporidium* taxonomy and on the question of cross reactions between species. USEPA expects further clarification on this issue as research continues, *Cryptosporidium* analytical methods improve, and more is learned about the circumstances under which cross-reactivity between species occurs. The Agency also wishes to emphasize that the scope or specificity of the MCLG may be modified in the future to reflect new research and additional information about particular species that represent a significant risk to human health.

As part of this notice, USEPA requests comment on whether to establish a *Cryptosporidium* MCLG at the genus level as proposed or at the species level (i.e., *Cryptosporidium* vs. *Cryptosporidium parvum*). USEPA also requests copies of any additional research, data or other information related to this issue.

B. Removal of Cryptosporidium by Filtration

1. Summary of 1994 Proposal and Public Comments Received

One of USEPA's proposed treatment Alternatives (Alternative C) would require filtered systems to achieve at least a 2 log removal of *Cryptosporidium* oocysts. USEPA recognized that the proposed removal level was based on limited data and therefore solicited comment on whether other minimum removal levels might be appropriate.

Most commenters addressing the issue of treatment alternatives supported Alternative C. Some commenters opposed any treatment requirement greater than a 2 log removal due to a lack of better understanding of dose-response, effectiveness of treatment, and analyses to justify the higher treatment costs involved.

Other commenters referred to specific studies (Nieminski 1995; Patania et al., 1995) that provided additional information on *Cryptosporidium* removal. One commenter cited a study (Parker and Smith, 1993), where oocyst damage was observed after agitation with sand. This study postulated that oocysts may be damaged as they pass through the filtration media. This commenter also pointed to the lack of data on cyst removal by full-scale plants and recommended that additional research be conducted. Some commenters recognized the need to regulate *Cryptosporidium*, but opposed having the level of treatment based upon source water pathogen density (alternative B). One commenter indicated that further implementation and evaluation of the adequacy of the SWTR needs to occur before modifying it.

2. New Data and Perspectives

a. Rapid Granular Filtration. Table 1 summarizes research pertinent to *Cryptosporidium* and *Giardia lamblia* removal efficiencies by rapid granular filtration. Brief descriptions of these studies and a summary of key points follow.

TABLE 1.—CRYPTOSPORIDIUM AND GIARDIA LAMBLIA REMOVAL EFFICIENCIES BY RAPID GRANULAR FILTRATION

Type of treatment plant	Log removal	Experimental design	Researcher
Conventional filtration plants	*Crypt* 2.7–5.9	Pilot Plants	Patania et al. 95.
Do	*Giardia* 3.4–5.8	.....do	Do.
Do	*Crypt* 2.3–3.0	Pilot scale plant	Nieminski/Ongerth 95.
Do	*Giardia* 3.3–3.4	+full scale plant with seeded cysts/ oocysts.	Do.
Do	*Crypt* 2.7–3.1	Pilot Plants	Ongerth/Pecaroro 95.
Do	*Giardia* 3.1–3.5	.....do	Do.
Do	*Crypt* 2–2.5	Full scale plants	LeChevallier et al. 91b.
Do	*Giardia* 2–2.5	Full scale plants	LeChevallier et al. 91b.
Do	*Crypt* 2.3–2.5	Full scale plants	LeChevallier/Norton 92.
Do	*Giardia* 2.2–2.8	.....do	Do.
Do	*Crypt* 2–3	Pilot scale plant	Foundation for Water. Research 94.
Do	*Giardia* and	Full scale plant	Kelley et al. 95.
Do*Crypt 1.5–2*	operation considered ot optimized).		
Direct filtration plants	*Crypt* 1.5–4.0	Pilot Plants	Patania et al. 1995.
Do	*Giardia* 1.5–4.8	.....do	Do.

TABLE 1.—CRYPTOSPORIDIUM AND GIARDIA LAMBLIA REMOVAL EFFICIENCIES BY RAPID GRANULAR FILTRATION—Continued

Type of treatment plant	Log removal	Experimental design	Researcher
Do	*Crypt* 2.8–3.0	.....do	Nieminski/Ongerth 95.
Do	*Giardia* 3.3–3.9	.....do	Do.
Do	*Crypt* 2–3	.....do	West et al. 1994.

Patania, Nancy L; et al. 1995

Raw water turbidities were between 0.2 and 13. When treatment conditions were optimized for turbidity and particle removal at four different sites, *Cryptosporidium* removal ranged from 2.7 to 5.9 log and *Giardia* removal ranged from 3.4 to 5.1 log during stable filter operation. The median turbidity removal was 1.4 log, whereas the median particle removal was 2 log. Median oocyst and cyst removal was 4.2 log. A filter effluent turbidity of 0.1 NTU or less resulted in the most effective cyst removal, by up to l log greater than when filter effluent turbidities were greater than 0.1 NTU (within the 0.1 to 0.3 NTU range) (see Figures 1 and 2 below). *Cryptosporidium* removal rates of less than 2.0 log (indicated in Figures 1 and 2) occurred at the end of the filtration cycle.

Blackened data points in these figures represent data in which oocysts were not detected in the filtered water. The log removal values shown would be greater than indicated had the influent oocyst concentration been sufficiently high to show oocyst detection in the filtered water. The researchers also noted that removal of *Cryptosporidium* was 0.4 to 0.9 log lower during filter ripening than during stable filter operation; *Giardia* removal was generally 0.4 to 0.5 log lower during ripening. *Cryptosporidium* removal was 1.4 to 1.8 log higher for conventional treatment (including sedimentation) as compared to direct filtration. Similarly, *Giardia* removal was 0.2 to 1.8 log higher. Figures 1 and 2 below show the log removal rates discussed above.

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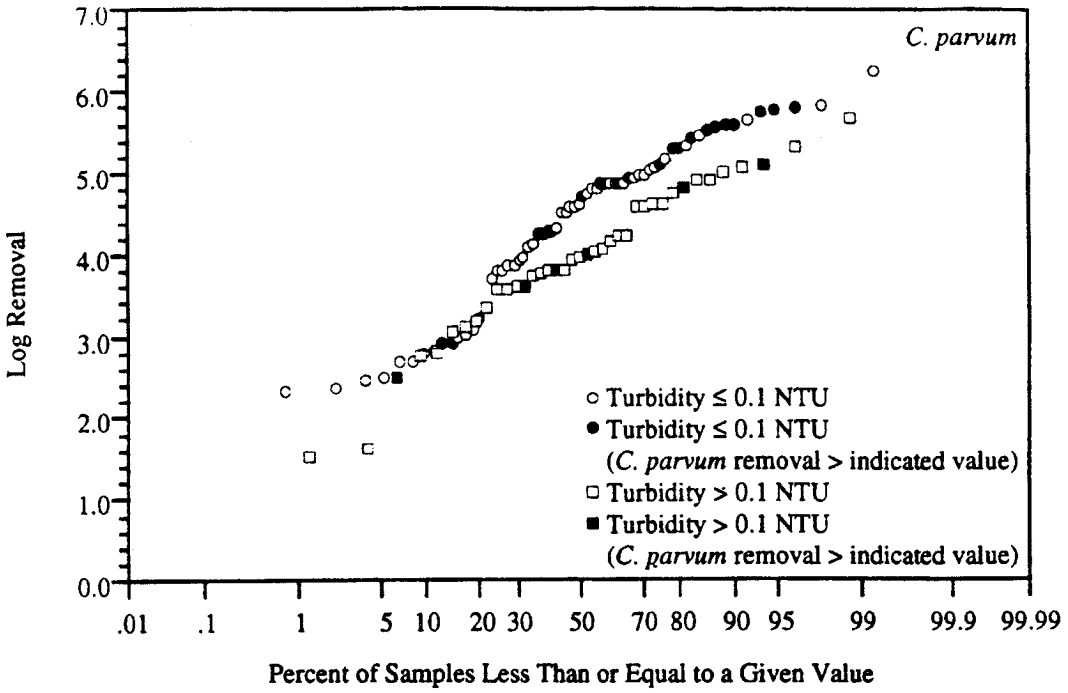

Figure 1: Cumulative probability distribution of aggregate pilot plant data for *C. parvum* removal when filtered water turbidity was ≤ 0.1 NTU and > 0.1 NTU (extracted from Patania et al. 1995). Reprinted from *Optimization of Filtration for Cyst Removal*, by permission.

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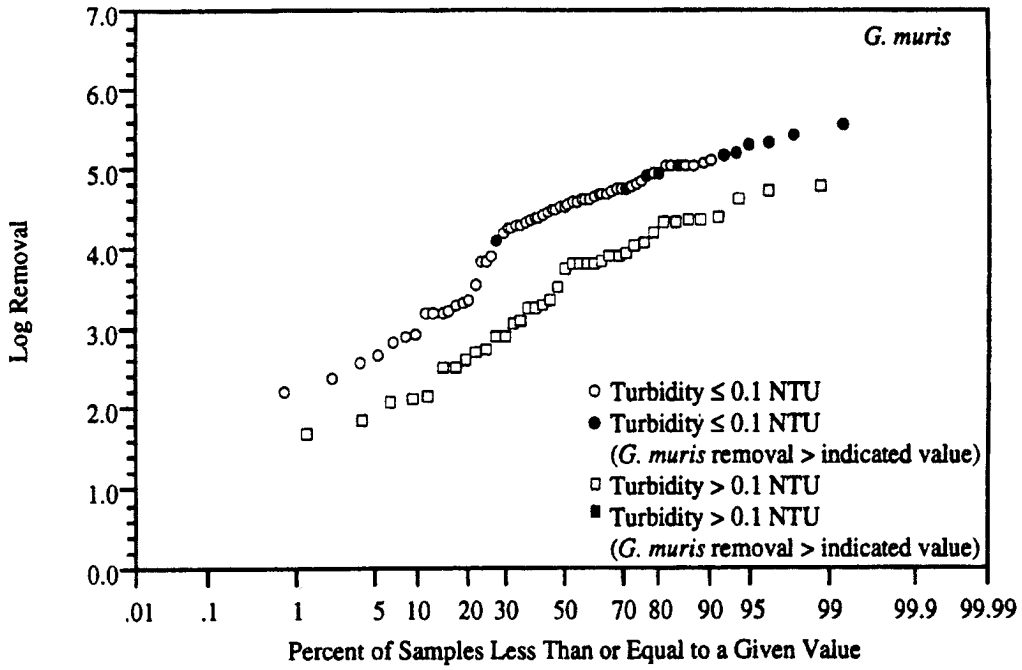

Figure 2: Cumulative probability distribution of aggregate pilot plant data for *G. muris* removal when filtered water turbidity was ≤ 0.1 NTU and > 0.1 NTU (extracted from Patania et al. 1995). Reprinted from *Optimization of Filtration for Cyst Removal*, by permission.

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Nieminski, Eva C. and Ongerth, Jerry E. 1995

This study evaluated performance in a pilot plant and in a full scale plant (not in operation during the time of the study) and considered two treatment modes: direct filtration and conventional treatment. The source water of the full scale plant had turbidities typically between 2.5 and 11 NTU with a peak level of 28 NTU. The source water of the pilot plant typically had turbidities of 4 NTU with a maximum of 23 NTU. For the pilot plant, achieving filtered water turbidities between 0.1–0.2 NTU, *Cryptosporidium* removals averaged 3.0 log for conventional treatment and 3.0 log for direct filtration, while the respective *Giardia* removals averaged 3.4 log and 3.3 log. For the full scale plant, achieving similar filtered water turbidities, *Cryptosporidium* removal averaged 2.25 log for conventional treatment and 2.8 log for direct filtration, while the respective *Giardia* removals averaged 3.3 log for conventional treatment and 3.9 log for direct filtration. Differences in performance between direct filtration and conventional treatment by the full scale plant were attributed to different source water quality during the filter runs.

Ongerth, Jerry E. and Pecoraro, J.P. 1995

This project used very low turbidity source waters (0.35 to 0.58 NTU). With optimal coagulation, 3 log removal for both cysts were obtained. In one test run, where coagulation was intentionally suboptimal, the removals were only 1.5 log for *Cryptosporidium* and 1.3 log for *Giardia.* This emphasized the importance of proper coagulation for cyst removal even though the effluent turbidity was less than 0.5 NTU.

LeChevallier, Mark W. and Norton, William D. 1992

Source water turbidities ranged from less than 1 to 120 NTU. Removals of *Giardia* and *Cryptosporidium* (2.2–2.8 log) were slightly less than those reported by other researchers, possibly because full scale plants were studied, under less ideal conditions than the pilot plants. The participating treatment plants were in varying stages of treatment optimization. Removal achieved a median of 2.5 log for *Cryptosporidium* and *Giardia.*

LeChevallier, Mark W.; Norton, William D.; and Lee, Raymond G. 1991b

This study evaluated removal efficiencies for *Giardia* and *Cryptosporidium* in 66 surface water treatment plants in 14 States and 1 Canadian province. Most of the utilities achieved between 2 and 2.5 log removals for both *Giardia* and *Cryptosporidium*. When no cysts were detected on the finished water below detection protozoan levels were set at the detection limit for calculating removal efficiencies.

Foundation for Water Research 1994

Raw water turbidity ranged from 1 to 30 NTU. *Cryptosporidium* oocyst removal was between 2 and 3 log. Investigators concluded that any measure which reduced filter effluent

turbidity should reduce risk from *Cryptosporidium*. The importance in selecting coagulants, dosages, and pH should not be overlooked. Apart from turbidity, indicators of possible reduced efficiency for oocyst removal would be increased color and dissolved metal ion coagulant concentration in the effluent, for these are indications of reduced efficiency of coagulation/ flocculation.

Kelley, M.B. et al. 1995

Protozoa removal was between 1.5 and 2 log. The authors speculated that this low *Cryptosporidium* removal occurred because the coagulation process was not optimized, though the finished water turbidity was less than 0.5 NTU. Also, when cysts were not detected in the finished water below detection values were assumed as filtered water concentration levels.

West, Thomas; et al. 1994

Pilot scale direct filtration was used with anthracite mono-media at filtration rates of 6 and 14 gpm/sq ft. Raw water turbidity was 0.3 to 0.7 NTU. Removal efficiencies for *Cryptosporidium* at both filtration rates were 2 log during filter ripening (despite turbidity exceeding 0.2 NTU), and 2 to 3 log for the stable filter run, declining significantly during particle breakthrough. When effluent turbidity was less than 0.1 NTU, removal typically exceeded 2 log. Log removal of *Cryptosporidium* generally exceeded that for particle removal.

Summary of Studies

The studies described above indicate that rapid granular filtration, when operated under appropriate coagulation conditions and optimized to achieve a filtered water turbidity level of less than 0.3 NTU, should achieve at least 2 log of *Cryptosporidium* removal. Removal rates vary widely, up to almost 6 log, depending upon water matrix conditions, filtered water turbidity effluent levels, and where and when removal efficiencies are measured within the filtration cycle. The highest log pathogen removal rates occurred in those pilot plants and systems which achieved very low finished water turbidities (less than 0.1 NTU).

Members of the M–DBP Advisory Committee discussed that tighter turbidity performance criteria would increase the likelihood of systems achieving higher oocyst removal rates. As a general principle, members of the M–DBP Advisory Committee indicated that if a utility were required to achieve less than 0.3 NTU 95% of the time, it would target substantially lower turbidity levels in order to have confidence that it will not exceed the 0.3 level. This principle was also recognized by the M–DBP Advisory Committee's Technical Work Group and served as a technical basis for much of the Committee's discussion of turbidity (i.e., that if the performance standard is 0.3 NTU systems would target achieving less than 0.2 NTU 95 percent of the time).

The Patania and Nieminski/Ongerth studies as they relate to finished water turbidity levels and log removal are particularly relevant to this point. These particular studies involve finished water turbidity at low levels in the same range as the finished water target identified by the Committee. The associated removal of *Cryptosporidium* at these turbidity levels was reliably in the range of 2 log or greater.

Other key points discussed during the Advisory Committee's deliberations related to the studies include:

- As turbidity performance improves for treatment of a particular water, there tends to be greater removal of *Cryptosporidium*.
- Pilot plant study data in particular indicate high likelihood of achieving at least 2 log removal when plant operation is optimized to achieve low turbidity levels. Moreover, pilot studies represented in the table tend to be for low-turbidity waters, which are considered to be the most difficult to treat regarding particulate removal and associated protozoan removal. Since high removal rates have been demonstrated in pilot studies using lower-turbidity source waters, it is likely that similar or higher removal rates would be achieved for higher-turbidity source waters.
- The evaluation of *Cryptosporidium* removal in full-scale plants can be difficult in that this data includes many non-detects in the finished water. In these cases, values assigned at the detection limit will likely result in over-estimation of oocysts in the finished water. This in turn means that removal levels will tend to be under-estimated.
- Another factor that contributes to differences among the data is that some of the full-scale plant data comes from plants that are not optimized, but that still meet existing SWTR requirements. In such cases, oocyst removal may be less than 2 log. In those studies that indicate that full-scale plants are achieving greater than 2 log removal (LeChevallier studies in particular), the following characteristics pertain:

—Substantial numbers of filtered water measurements resulted in oocyst detections;

—Source water turbidity tended to be relatively high compared to some of the other studies;

—A significant percentage of these systems were also achieving low filtered water turbidities, substantially less than 0.5 NTU.

- Removal of *Cryptosporidium* can vary significantly in the course of the filtration cycle (i.e., at the start-up and end of filter operations versus the stable period of operation, which is the predominant period).

b. Other Filtration Technologies. Other filtration technologies include slow sand and diatomaceous earth filtration. ''Technologies and Costs for the Treatment of Microbial Contaminants in Potable Water Supplies, October 1988'' by USEPA (1988) listed research studies indicating that a well designed and operated plant using these technologies is capable of 3- to 4-log removal of *Giardia* and viruses. Recent findings appear in Table 2 below.

TABLE 2.—CRYPTOSPORIDIUM AND GIARDIA LAMBLIA REMOVAL EFFICIENCIES

Type of treatment plant	Log removal	Experimental design	Researcher
Slow Sand	*Giardia* >3	Pilot plant at 4.5 to	Schuller and Ghosh, 91.
	Crypt >3	16.5 degrees C.	
	Crypt 4.5	Full scale plant	Timms et al., 1995
Diatomaceous Earth	*Giardia* >3	Pilot plant, addition of	Schuler and Ghosh, 90.
	Crypt >3	coagulant increased.	
		removal beyond.	
		values shown.	

c. Multiple Barrier Approach.

The M–DBP Advisory Committee engaged in extensive discussion regarding the adequacy of relying solely on physical removal to control *Cryptosporidium* in drinking water supplies and on the need for inactivation. There was a substantial absence of technical consensus on how to or whether it is currently possible to adequately measure *Cryptosporidium* inactivation efficiencies for various disinfection technologies. This issue emerged as a significant impediment to addressing inactivation in the IESWTR.

As part of the original 1994 proposal, USEPA included control strategies that would entail the development of a map of inactivation efficiencies for *Cryptosporidium*. As discussed later in Section M. of this Notice, adequate information to develop such a map is not available at this time. The Advisory Committee discussion recognized, however, that inactivation requirements may be appropriate and necessary under future regulatory scenarios and that physical removal by filtration may not be sufficient under all circumstances or for all source waters.

As part of the development process for the long term ESWTR, the Advisory Committee recommended that USEPA request comment on a risk-based proposal for *Cryptosporidium* embodying the multiple barrier approach (e.g., source water protection, physical removal, inactivation, etc.), including, where risks suggest appropriate, inactivation requirements. In establishing the LTESWTR, the Committee recommended that the following issues be evaluated:

—Data and research needs and limitations (e.g., occurrence, treatment, viability, active disease surveillance, etc.);
—Technology and methods capabilities and limitations;
—Removal and inactivation effectiveness;
—Risk tradeoffs including risks of significant shifts in disinfection practices;
—Cost considerations consistent with the SDWA;
—Reliability and redundancy of systems; and
—Consistency with the requirements of the Act.

3. Advisory Committee Recommendations and Related Issues

USEPA reiterates its request for comment on the following recommendations of the M–DBP Advisory Committee.

All surface water systems that serve more than 10,000 people and are required to filter must achieve at least a 2-log removal of *Cryptosporidium*. Systems which use rapid granular filtration (direct filtration or conventional filtration treatment-as currently defined in the SWTR), and meet the turbidity requirements described in section II.C. are assumed to achieve at least a 2-log removal of *Cryptosporidium*. Systems which use slow sand filtration and diatomaceous earth filtration and meet existing turbidity performance requirements under the SWTR (less than 1 NTU for the 95th percentile or alternative criteria as approved by the State) are assumed to achieve at least 2-logs removal of *Cryptosporidium*.

Systems may demonstrate that they achieve higher levels of physical removal.

C. Turbidity Control

1. Summary of 1994 Proposal as it Relates to Turbidity Issues and Public Comments

Finished water turbidity levels are currently regulated by USEPA under the SWTR as a treatment technique to ensure removal of *Giardia* and viruses. The SWTR requires systems to monitor the turbidity of the combined filter effluent every four hours at each treatment plant. Systems using direct filtration or conventional treatment must achieve a combined filter effluent turbidity level of no more than 0.5 NTU in 95% of the measurements in each month and never exceed 5 NTU. Failure of individual filters may allow pathogens to enter the distribution system. However, the SWTR does not presently require systems to monitor the effluent of individual filters.

As a treatment technique, turbidity is an indicator of filtration performance. Treatment plants are, as noted above, required to meet certain turbidity levels to meet the removal requirements for Giardia. Although turbidity is not a direct indicator of health risk, a very low turbidity level of the treated water is in general a good indicator of effective *Cryptosporidium* and *Giardia* oocyst and cyst removal by rapid granular filtration. USEPA continues to believe that turbidity is the most readily measurable parameter to indicate filtration treatment effectiveness.

A primary focus of the 1994 proposal was the establishment of treatment requirements that would address public health risks from high densities of pathogens in poor quality source waters and from the waterborne pathogen *Cryptosporidium*. As discussed earlier in this Notice, waterborne pathogens have caused significant disease outbreaks in the United States. Approaches outlined in the 1994 proposal included treatment requirements based on site-specific concentrations of pathogens in source water and a proposed 2-log removal requirement for *Cryptosporidium* by filtration.

USEPA also specifically requested comment on what criteria, if any, should be included to ensure that systems optimize treatment plant performance and on whether any of the existing turbidity performance criteria should be modified (e.g., should systems be required to base compliance with the turbidity standards on individual filter effluent monitoring in lieu of or in addition to monitoring the confluence of all filters; and should any performance standard value be changed). In addition, the Agency requested comment in the 1994 proposal on possible supplemental requirements for State notification of persistent high turbidity levels (e.g., broadening the requirements for State notification of turbidity exceedances).

Some comments suggested and supported a revised approach to the IESWTR that would focus on optimizing existing water treatment processes to provide insurance against microbial disease outbreak in the absence of source water occurrence data. Another comment suggested that current levels of treatment, including filtration, have a sufficient degree of effectiveness in preventing transmission of *Cryptosporidium* in drinking water.

One commenter suggested that turbidity performance standards should not be modified until the SWTR has been further implemented. One commenter suggested that decreases in turbidity standards or monitoring after each filter should be voluntary unless scientific data demonstrate otherwise. Another commenter suggested that individual filters can be evaluated during sanitary surveys. Several commenters supported tighter turbidity standards and monitoring of individual filters. Suggested turbidity performance levels included 0.1 or less, or 0.2 NTU as revised standards. Several commenters supported monitoring of individual filters, with one suggesting backwashing of filters when turbidity levels increase.

2. New Data and Perspectives

As presented in detail below, the M-DBP Advisory Committee's recommendations to the Agency included tighter turbidity performance criteria and individual filter monitoring requirements as part of the IESWTR. These revised performance criteria, along with the individual filter monitoring requirements, would better enable systems to demonstrate that they meet a 2 log removal requirement for *Cryptosporidium*. Because *Cryptosporidium* is exceptionally

resistant to inactivation using chlorine, physical removal by filtration is extremely important in controlling this organism. Data presented in the previous section of this Notice support modifications to the existing turbidity requirements under the SWTR to enable systems to demonstrate that they meet the proposed 2 log requirement.

The revised turbidity performance criteria would also contribute to another of the IESWTR's key objectives, which is to establish a microbial backstop to prevent significant increases in microbial risk when systems implement new disinfection byproduct standards under the Stage 1 DBPR. As indicated by data presented below, tighter turbidity performance criteria would reflect actual current performance for a substantial percentage of systems nationally. Revising the turbidity criteria would effectively ensure that these systems continue to perform at these levels (in addition to resulting in improved performance by systems that currently meet the existing criteria but that operate at levels higher than those suggested in the Advisory Committee's recommendations). The other major component of a microbial backstop would be provisions for disinfection profiling and benchmarking, which are discussed in Section D. of this Notice.

The revisions to the turbidity provisions (including the individual filter provisions) recommended by the Committee would also contribute to the microbial backstop objective in direct relationship to the treatment process itself. The reliability of the disinfection barrier as a means for preventing waterborne disease should increase substantially as a result of these tighter turbidity provisions because:

—There would be fewer and shorter periods of elevated turbidity during which the disinfection barrier could be compromised; and

—The removal of particulate matter achieved by the filtration process will both be higher on average and more consistent throughout the treatment cycle, thus putting less burden on the disinfection barrier.

a. 95th Percentile and Maximum Turbidity Levels of Composite Filtered Water.

Three data sets, summarizing the historical turbidity performance of various filtration plants, were evaluated to assess the national impact of modifying existing turbidity requirements. This included turbidity information from the American Water Works Service Company (AWWSC, 1997), a multi-State data set (which was analyzed in two sets) (SAIC, 1997), and information from plants participating in the Partnership for Safe Water program (Bissonette, 1997). Only turbidity data from plants serving populations greater than 10,000 persons were used. The analyses also included only plants that met the current 95th percentile turbidity standard, 0.5 NTU, and the current maximum turbidity standard, 5 NTU, in all months. Each of the data sets was analyzed to assess the current performance of plants with respect to the number of months in which selected 95th percentile and maximum turbidity levels were exceeded.

The AWWSC is a privately-held company that owns and operates for profit about 70 water treatment facilities located across the country. For this analysis, the AWWSC data set (AWWSC, 1997) included one year's data for 45 plants in 10 States. The States, with number of plants in each state listed in parentheses, are as follows: California (1), Connecticut (3), Iowa (2), Indiana (6), Maryland (1), Missouri (2), Pennsylvania (24), Tennessee (1), Virginia (2), and West Virginia (3). USEPA analyzed the composite filtered effluent turbidity data obtained from the AWWSC plants measured every 4-hours.

The analyses examined two variations of turbidity data obtained from the multi-State data set (SAIC, 1997). The multi-State data set included 86 plants in 11 states. The States, with number of plants in each state listed in parentheses, are as follows: California (10), Georgia (5), Kansas (9), New Jersey (5), Ohio (12), Oregon (10), Rhode Island (6), Texas (9), Wisconsin (8), West Virginia (6), Wyoming (6). The State data was analyzed as two data sets, denoted as State 1 and State 2. The State 1 data set included only plant information with measurements every 4 hours, comprising slightly more than half of the State data (47 plants in CA (10), OR (10), TX (9), WI (6), WY (6), WV (6)). The State 2 data set was comprised of both the State 1 data and other data including plant information consisting of daily maximum turbidity values only, altogether 86 plants.

The State 1 data set was expected to provide a more accurate picture of typical plant performance among the plants in the entire State data set because there were more data points per plant. However, the State 2 data set increased regional coverage by incorporating data from five additional States (GA, KS, NJ, OH, RI) to reflect additional geographic variation that may not have been captured in the State 1 data set.

In order to determine how many of the systems met lower 95th percentile turbidity levels based on turbidity measurements every four hours, the data from those States in which systems only report maximum daily values had to be statistically adjusted. The adjustment is necessary to take into account the difference in the number of reported measurements in a month that can exceed a particular level (e.g., 0.3 NTU) without exceeding the monthly 95th percentile for that level. (Systems that report measurements every four hours can have up to 9 of 180 measurements (5%) that exceed the level in a month; however, there is no way to directly calculate an equivalent value for systems that only report daily maximum values without making some adjustment.) No adjustment was necessary for assessing monthly maximum turbidity levels.

The State 2 analyses adjusted the monthly 95th percentile turbidity levels for plants with only daily maximum data. This was done because the 95th percentile based on 31 daily turbidity maximums a month will overestimate the 95th percentile based on 186 daily measures (or measurements every 4 hours). To assess the magnitude of the bias, the State 1 data were used to examine the relationship between the 95th percentile of the daily maximums and the 95th percentile of the daily measurements.

The State 2 monthly 95th percentile analyses were obtained by dividing the estimated monthly 95th percentiles of those systems reporting only daily maximums by a factor of 1.2 to account for bias. This factor was derived as follows. The daily maximum was determined for each day in the State 1 data set and a monthly 95th percentile (of the 30 or 31 daily maximums) was determined, i.e., the second largest daily maximum. The corresponding monthly 95th percentile based on the daily data was also determined. The ratio of these two values was then calculated and summarized across months. The median ratio across all months was 1.2, with 90 percent of the ratios ranging between 1.0 and 1.9. The analysis used to derive the adjustment factor examined only plants that reported six values per day.

The remaining data set included in the turbidity analysis was of plants participating in the Partnership for Safe Water. The Partnership for Safe Water is a joint venture of several organizations, including the American Water Works Association, the Association of State Drinking Water Administrators, the Association of Metropolitan Water Agencies, the National Association of Water Companies, the American Water Works Association Research Foundation and USEPA. These organizations

entered into a voluntary ''partnership'' with the nation's drinking water filtration plants treating surface water to tighten treatment practices and operational controls to reduce the risk from *Cryptosporidium* and other waterborne pathogens. The Partnership approach, described in the ''Partnership for Safe Water Voluntary Water Treatment Plant Performance Improvement Program Self-Assessment Procedures'' (USEPA et al. 1995), is based on USEPA's Composite Correction Program (CCP). The CCP is a voluntary program which is described in detail in the handbook Optimizing Water Treatment Plant Performance Using the Composite Correction Program—USEPA/625/6–91/027. The Partnership for Safe Water utility membership consists of 199 utilities representing almost 280 water treatment plants. These plants serve approximately 80 million persons. The Partnership consists of four phases with each phase providing tools and methodologies to assist utilities in progressing toward a higher quality finished water. The following data summarizes turbidity performance based on 4-hour measurements reported by the Partnership utilities for 12 months overlapping 1995 and 1996. The data represents a composite of Partnership utilities that have completed varying phases of Partnership activities, ranging from having just joined to having progressed well into the self-assessment phase (phase 3). All data were derived from the 1997 Partnership for Safe Water Annual report (Bissonette, 1997).

The results of the analyses of all of the data sets are shown in Tables 3 and 4.

Tables 3 and 4 indicate the extent to which plants, as currently operated, are meeting different turbidity levels. Conversely the data indicate the portion of utilities which might need to alter existing practice in order to meet lower turbidity limits, if such limits were required through regulation.

Table 3 is organized to reflect the extent to which utilities are currently meeting monthly 95th percentile turbidity limits, assuming that compliance with such limits is determined as currently done under the existing monthly 95th percentile standard of < 0.5 NTU. For example, Table 3 indicates that 19.1 percent (based on the Partnership data set) and 34.9 percent (based on the State 2 data set) exceed a monthly 95th percentile turbidity limit of 0.3 NTU at least one month during the year for which data were collected. Table 3 also indicates the extent to which utilities meet a particular limit for multiple months of the year (i.e., for at least 3 months and for at least 6 months). The frequency in months by which utilities exceed a particular monthly turbidity limit could influence the extent of treatment that might be needed to achieve compliance through out the year.

The Technical Work Group (TWG) which provided technical advice to the Advisory Committee made the following recommendations for estimating national compliance forecasts.

(1) The State 2 data set could be used as a reference point for estimating potential compliance burdens for systems serving less than 100,000 people. The Partnership data could be used as a reference point for estimating potential compliance burdens for systems serving greater than 500,000 people. For systems serving between 100,000 and 500,000 people, the average of the percentages of systems not meeting a particular limit reflected by the Partnership and State 2 data could be used for estimating compliance burdens.

(2) Estimates for systems needing to make changes to meet a turbidity performance limit of < 0.3 NTU should be based on the ability of systems currently being able to meet a 0.2 NTU as reflected in Table 3. This assumption would also take into account a utility's concern with possible turbidity measurement error.

For example, for systems serving less than 100,000 people, the TWG assumed that 51.7 percent of the systems could be expected to make treatment changes to consistently comply with a monthly 95th percentile limit of 0.3 NTU. Similarly, for systems serving over 500,000 people, the TWG assumed that 41.7 percent could be expected to make treatment changes to comply with a 0.3 NTU regulatory limit.

Table 4 is organized to reflect the extent to which utilities meet different monthly maximum turbidity limits (i.e., all measurements taken during the month must be below the indicated limit). For example, Table 4 indicates that 6 percent of the plants (based on State 2 Partnership data) are currently exceeding a monthly maximum limit of 1.0. The data in Table 4 were considered for evaluating possible national impacts of lowering the current maximum limit of 5 NTU to some lower value.

Regarding maximum turbidity levels, the Advisory Committee also discussed filtered water turbidity levels with respect to the cryptosporidiosis outbreak in Milwaukee in 1993. Some members indicated concern that filtered water turbidities associated with the outbreak apparently were significantly lower than the current maximum turbidity level of 5 NTU. Indications are that the turbidity levels were at about 2 NTU (MacKenzie et al., 1994; Fox and Lytle., 1996).

TABLE 3.—NUMBER AND PERCENT OF PLANTS THAT EXCEEDED MONTHLY 95TH PERCENTILE TURBIDITY LIMITS IN AT LEAST N MONTHS OUT OF 12

Turbidity limit	Data source	At least 1 month		At least 3 months		At least 6 months	
		Num	Pct	Num	Pct	Num	Pct
0.1	State 1	34	72.3	28	59.6	24	51.1
	State 2	69	80.2	59	68.6	51	59.3
	AWWSC	33	73.3	24	53.3	15	33.3
	Partnership	177	75.3	136	57.9	100	42.6
0.2	State 1	17	36.2	9	19.1	2	4.3
	State 2	44	51.2	29	33.7	15	17.4
	AWWSC	12	26.7	7	15.6	2	4.4
	Partnership	98	41.7	51	21.7	27	11.5
0.3	State 1	10	21.3	3	6.4	0	0.0
	State 2	30	34.9	11	12.8	3	3.5
	AWWSC	6	13.3	1	2.4	0	0.0
	Partnership	45	19.1	17	7.2	7	3.0
0.4	State 1	3	6.4	0	0.0	0	0.0
	State 2	9	10.5	1	1.2	0	0.0
	AWWSC	3	6.7	0	0.0	0	0.0

TABLE 3.—NUMBER AND PERCENT OF PLANTS THAT EXCEEDED MONTHLY 95TH PERCENTILE TURBIDITY LIMITS IN AT LEAST N MONTHS OUT OF 12—Continued

Turbidity limit	Data source	At least 1 month		At least 3 months		At least 6 months	
		Num	Pct	Num	Pct	Num	Pct
Partnership	22	9.4	5	2.1	3	1.3	

Population served ≥10,000. State 1 (4-hour daily data from 47 plants): 10 CA, 10 OR, 9 TX, 6 WI, 6 WV, 6 WY. State 2 (86 plants including State 1 data and daily maximums * from additional plants) : 10 CA, 5 GA, 9 KS, 5 NJ, 12 OH, 10 OR, 6 RI, 9 TX, 8 WI, 6 WV, 6 WY. AWWSC: 45 plants: 1 CA, 3 CT, 2 IA, 6 IN, 1 MD, 2 MO, 24 PA, 1 TN, 2 VA, 3 WV. Partnership for Safe Water 235 plants. *For plants with only daily maximums, the monthly 95th percentile was estimated as the 95th percentile of the daily maximums divided by 1.2. The adjustment was done to account for the potential bias of taking the 95th percentile of daily maximums, and was based on the relationship observed in the State 1 data between the 95th percentile of the daily maximums and the 95th percentile of the 4-hour data.

TABLE 4.—NUMBER AND PERCENT OF PLANTS THAT EXCEEDED MONTHLY MAXIMUM TURBIDITY LIMITS IN AT LEAST N MONTHS OUT OF 12

Maximum turbidity limit	Data source	At least 1 month		At least 3 months		At least 6 months	
		Num	Pct	Num	Pct	Num	Pct
0.3	State 1	36	76.6	15	31.9	6	12.8
State 2	69	80.2	36	41.9	15	7.4	
AWWSC	24	53.3	10	22.2	4	8.9	
Partnership	129	54.9	72	30.6	37	15.7	
0.5	State 1	18	38.3	3	6.4	1	2.1
State 2	35	40.7	7	8.1	1	1.2	
AWWSC	12	26.7	3	6.7	0	0.0	
Partnership	65	27.7	20	8.5	5	2.1	
1.0	State 1	1	2.1	0	0.0	0	0.0
State 2	6	7.0	0	0.0	0	0.0	
AWWSC	4	8.9	0	0.0	0	0.0	
Partnership	16	6.8	4	1.7	2	0.9	
2.0	State 1	1	2.1	0	0.0	0	0.0
State 2	2	2.3	0	0.0	0	0.0	
AWWSC	0	0.0	0	0.0	0	0.0	
Partnership	7	3.0	2	0.9	1	0.4	

b. Individual Filter Performance.

During a turbidity spike, significant amounts of particulate matter (including oocysts, if present) may pass through the filter. Figure 3 presents the turbidity levels over time of a typical filter. The greatest potential for a peak (and thus, pathogen break-through) is near the beginning of the filter run after filtered backwash or start up of operation (Amirtharajah 1988; Bucklin et al. 1988; Cleasby 1990; and Hall and Croll 1996).

Various factors effect the duration and amplitude of filter spikes, including sudden changes to the flow rate through the filter, treatment of the filter backwash water, filter to waste capability, and site-specific water quality conditions. The M–DBP Advisory Committee also discussed the need to control turbidity spikes in order to limit the number of oocysts passing through the filter.

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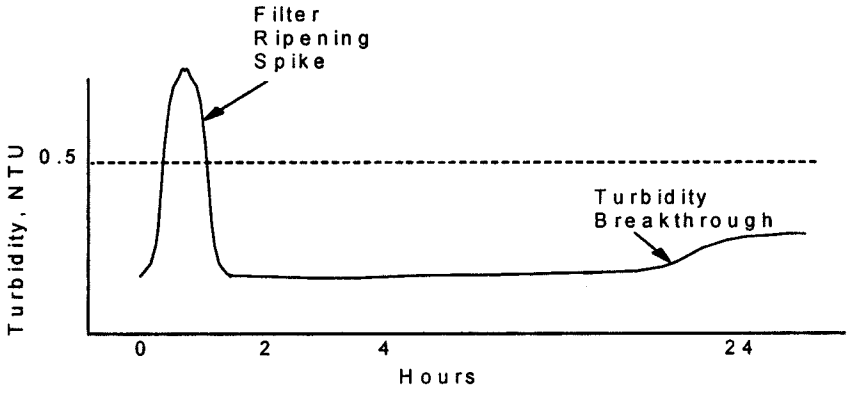

Figure 3. Plot of Turbidity Profile

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c. Turbidity Measurement.

Turbidity is a measure of light scatter that is affected by the size distribution and shape of suspended particles in the water. Four methods are commonly used to measure turbidity and all are approved for use under the SWTR. They include the Nephelometric Method listed in 2130B of the *Standard Methods for the Examination of Water and Wastewater,* Standard Test Method for Turbidity of Water ASTM (1990) D1889–94, the Nephelometric Method in 180.1 of USEPA–600/R–93–100 and the Great Lakes Instruments Method 2 (see section 141.74(a)(1)).

Turbidimeters which measure turbidity commonly consist of the following components: (1) a light source and lenses and other optical devices to project the light beam at the sample container and to direct the scattered light to the detector; (2) a transparent cell that contains the water to be measured; (3) light traps within the sample chamber that minimize the amount of stray light that reaches the detector; and (4) a meter that indicates the intensity of the light reaching the detector. While turbidity measurement has long been recognized as a means for evaluating treatment performance for removal of particulate matter (which include microorganisms), issues remain pertinent to the accuracy and precision of the measurement (Hart et al. 1992; Sethi et al. 1997).

Large tolerances in instrument design criteria, intended to promote competition among instrument manufacturers, have lead to turbidimeters with significantly different design features being available on the market. Turbidimeters with different designs (but within the design specifications of Standard Methods), calibrated according to manufacturer's recommendations, have been shown to provide different turbidity readings for a given suspension (Hart et al. 1992). The significance of this phenomenon as it might pertain to the same water with changing turbidities over time or different waters in the U.S. is not known. Therefore, narrowing instrument design criteria could reduce variation of turbidity measurement but the best direction that such change should take is not yet apparent.

Calibration procedures also affect turbidity measurements. Calibration typically involves placing a quantity of a standard suspension in the turbidimeter and then adjusting the response so that the meter gives a reading equal to the turbidity value assigned to the standard. Instruments that are calibrated with currently approved different standard suspensions can yield different turbidity measurements on the same water (Hart et al. 1992). The significance of this phenomenon as it might pertain to the same water with changing turbidities over time or different waters in the U.S. is also not known. While narrowing specifications for current calibration procedures could reduce variation of turbidity measurements, the best direction that such change should take is not yet apparent.

Other factors that may affect turbidity measurement include procedures used to prepare and wipe the sample cell and use of sample degassing procedures. The extent to which all of the above factors, collectively, affect turbidity measurement is not known. However, past performance evaluation (PE) studies conducted by USEPA provide some indication of accuracy and precision of turbidity measurements among different laboratories for a common synthetically prepared water. In PE studies, PE samples with known turbidity levels are sent to participating laboratories (who are not informed of the turbidity level). Laboratories participating in these studies used turbidimeters from various manufacturers and conducted their analysis in accordance with calibration and analytical procedures they are familiar with. Thus, the variability of the results reflect differences resulting from using different turbidimeter models and methods and the effects of different laboratory procedures. Table 5 summarizes results from PE studies conducted at turbidity levels close to the SWTR turbidity performance limit of 0.5 NTU. The Relative Standard Deviation (RSD) is the Standard Deviation divided by the mean. It appears that the RSD at turbidity levels considered in these PE studies are slightly below 20%. (A RSD of 20% implies that 95% of one-time turbidity measurements made by different laboratories would fall within 40% of the mean. The RSD for an individual laboratory, making numerous measurements on a given sample water would be expected to be significantly less than that achieved among different laboratories (using a variety of turbidimeters as indicated in Table 5).

TABLE 5.—USEPA PERFORMANCE EVALUATION RESULTS OF TURBIDITY MEASUREMENTS (USEPA 1997d)

[Turbidity readings are expressed in NTU, and Relative Standard Deviation in %]

Study No.	True Turb.	No. of samples	Mean	Relative S D
34 USEPA/State	.720	54	.752	16.0
34 All Lab	.720	1503	.744	15.8
23 USEPA/State	.650	24	.659	10.1
25 USEPA/State	.600	28	.585	13.8
25 All Lab	.600	708	.597	16.0
25 USEPA/State	.450	29	.463	20.5
25 All Lab	.450	707	.481	19.5
22 USEPA/State	.350	52	.406	16.1

No data is yet available on measurement performance from PE studies at levels less than 0.3 NTU. A major concern expressed by participants among the Advisory Committee is the ability to reliably measure low turbidity levels. The TWG assumed that if systems operated to achieve a turbidity limit of less than 0.2 NTU 95 percent of the time, this would provide an adequate margin of safety from variability in treatment performance and turbidity measurement error, to consistently meet a turbidity limit of 0.3 NTU.

USEPA intends to conduct two PE studies with true turbidities ranging from 0.1 to 0.3 NTU. One study is planned to begin no later than the end of January 1998 and the other study within 6 months thereafter. These new studies will provide an indication of accuracy and precision of turbidity measurements at lower levels than previously examined. Measurements by on-line turbidimeters will also be evaluated.

On-line monitoring issues: For expedience, on-line turbidimeters are often calibrated against a bench instrument that has been accurately calibrated by comparing the turbidity level in a water sample. However, at regular intervals they need to be taken off line and calibrated, as for bench instruments, by pouring the prepared standard suspension into the chamber of the instrument. On-line instruments must be inspected regularly to remove air bubbles and accumulated debris. Fluctuations in continuous measurements do not necessarily signify a decrease in water treatment performance. Fluctuations in continuous measurements should be investigated since they may be due to air bubbles, debris or a temporary disturbance due to a change in the flow rate of sample water flow through the turbidimeter. To address the contingency of such phenomenon, the Advisory Committee recommended, based on advice from the Technical Work Group, that turbidity spikes should be defined on the basis of at least 2 consecutive measurements taken over some interval of time (e.g., 15 minutes).

There is no standard design specification for on-line turbidimeters regarding chamber size and recommended flow rate. Thus, turbidity spikes of the treated water will be reflected with a delay of a few seconds to a few minutes, depending on chamber volume and flow rate of the turbidimeter. A turbidity peak measured by a turbidimeter with a large chamber volume and small flow rate will result in slightly reduced peak.

3. Advisory Committee Recommendations and Related Issues

USEPA reiterates its request for comment on the following recommendations of the M–DBP Advisory Committee.

1. Turbidity Performance Requirements. For all surface water systems that use conventional treatment or direct filtration, serve more than 10,000 people, and are required to filter: (a) the turbidity level of a system's combined filtered water at each plant must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month and, (b) the turbidity level of a system's combined filtered water at each plant must at no time exceed 1 NTU. For both the maximum and the 95th percentile requirements, compliance shall be determined based on measurements of the combined filter effluent at four-hour intervals.

2. Individual Filter Requirements. All surface water systems that use rapid granular filtration, serve more than 10,000 people, and are required to filter shall conduct continuous monitoring of turbidity for each individual filter and shall provide an exceptions report to the State on a monthly basis. Exceptions reporting shall include the following: (1) any individual filter with a turbidity level greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart; and (2) any individual filter with a turbidity level greater than 0.5 NTU at the end of the first 4 hours of filter operation based on 2 consecutive measurements fifteen minutes apart. A filter profile will be produced if no obvious reason for the abnormal filter performance can be identified.

If an individual filter has turbidity levels greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of 3 consecutive months, the system shall conduct a self-assessment of the filter utilizing as guidance relevant portions of guidance issued by the Environmental Protection Agency for Comprehensive Performance Evaluation (CPE). If an individual filter has turbidity levels greater than 2.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of two consecutive months, the system will arrange for the conduct of a CPE by the State or a third party approved by the State.

3. State Authority: States must have rules or other authority to require systems to conduct a Composite Correction Program (CCP) and to assure that systems implement any follow-up recommendations that result as part of the CCP.

In reference to the above recommendations, EPA also requests comment on what would or would not constitute an obvious reason for abnormal filter performance. The Agency also requests comment on how much time a system should have to conduct a self-assessment of the filter and how much time a system should have to arrange for the conduct of a CPE under circumstances such as described in the recommendations.

USEPA also requests comment on whether there are particular filters currently in operation in the United States for which specific guidance may be needed with regard to individual filter monitoring. For example, some members of the M-DBP Advisory Committee suggested that special guidance be developed for unique filtration devices made by Infilco Degremeont (previously made by Aldridge). These devices consist of multi-celled filters with a traveling bridge-automated back washing unit that are not conducive to individual cell monitoring.

USEPA also requests comment regarding existing SWTR provisions for lime softening plants that have very low

turbidity in source waters. The existing SWTR allows States to set numerically higher standards up to 1 NTU in 95 percent of samples taken per month for conventional treatment and direct filtration plants if the State determines that on-site studies demonstrate at least 99.9 percent overall removal and/or inactivation of Giardia cysts. (54 FR 27503). In the SWTR (54 FR 27486), the Agency notes that actual demonstrations ''(e.g. with pilot plant study results)'' are not required for the State to determine when minimum performance requirements at the higher turbidity level might be appropriate for a particular system. The SWTR states:

> Instead, the State's determination may be based upon an analysis of existing design and operating conditions (e.g. adequacy of treatment prior to filtration, percent turbidity removal across the entire treatment train, stringency of disinfection) and/or performance relative to certain water quality characteristics (e.g. microbiological analysis of the filtered water, particle size counts in water before and after filtration). The State may wish to consider such factors as source water quality and system size in determining the extent of analysis necessary. (54 FR 27503).

Committee members raised situations where filtration plants have been designed for specific source water quality characteristics such as high alkalinity and extremely low turbidity water (e.g. 0.1 to 0.5 NTU). In systems with such source waters, turbidity levels from the filters may actually be higher than in the source waters due to reactions from chemicals added mainly for purposes other than source water particle removal. Lime softening plants operating under certain conditions, depending upon process configuration and raw water characteristics or when flocculation conditions change, may periodically experience a carry over of extremely fine calcium carbonate or magnesium hydroxide particles. These fine particles may pass through filters thereby resulting in artificially elevated effluent turbidity levels. If turbidity performance criteria are tightened under the IESWTR some plants may have difficulty meeting these criteria but still achieve substantial removal of *Giardia lamblia, Cryptosporidium parvum,* and viruses. As reflected in the 1989 SWTR, USEPA believes that in cases where lime softening is practiced and source water turbidity levels are low, provisions for alternative treatment performance criteria (i.e., in lieu of turbidity) may be appropriate.

As in the present SWTR, USEPA believes that demonstrations of equivalent protection need not be based on actual demonstrations (e.g. pilot plant study results). Instead the State's determination can be based on the factors cited at 54 FR 27503 as quoted above. Other factors related to source water microbial quality (e.g. pristine source water, source water protection programs, microbial monitoring results, bank filtration) may be appropriate for such determinations.

USEPA requests comment on the appropriateness of continuing existing provisions that provide States the flexibility of approving higher turbidity levels up to 1 NTU in 95 percent of samples per month and up to 2 NTU maximum turbidity for such plants, and additionally seeks comments on:

- What types of plants might fall in this category (e.g. softening plants designed for color and hardness removal with very low turbidity source waters);
- What demonstrations of equivalent protection from Giardia lamblia, Cryptosporidium parvum, and viruses are appropriate (e.g. microbiological analysis of the filtered water, monitoring results for protozoans, watershed control, wellhead protection programs);
- What additional or alternative requirements States might place on such systems to insure the objective of equivalent protection from Giardia lamblia, Cryptosporidium parvum, and viruses (e.g. regular monitoring for protozoans in source and or filtered water, or for other water quality parameters, watershed control, well head protection programs);
- Allowing systems to acidify turbidity samples when calcium carbonate carry-over exists to obtain true turbidity readings; and
- The appropriateness of including source water microbial quality measurements or surrogates as part of a State determination of equivalent protection when considering whether to authorize higher operating turbidity levels.

D. Disinfection Benchmark for Stage 1 DBP MCLS

A fundamental principle of the 1992–93 regulatory negotiation which was reflected in the 1994 proposal for the IESWTR was that new standards for control of byproducts must not result in significant increases in microbial risk. This principle was also one of the underlying premises of the M-DBP Advisory Committee's deliberations, i.e., that existing microbial protection must not be significantly reduced or undercut as a result of systems taking the necessary steps to comply with the Stage 1 DBPR. The Advisory Committee's recommendations to meet this key objective are discussed in this section.

The approach outlined below represents the recommendation of the Advisory Committee to develop a mechanism that is designed to assure that pathogen control is maintained while the Stage 1 DBPR provisions are implemented. Briefly, the disinfection benchmark addresses the three issues of who must gather the necessary information to evaluate current practices, how the benchmark operates, and finally, how the system and the State work together to assure that microbial control is maintained.

Based on data provided by systems and reviewed by the TWG, the baseline of microbial inactivation (expressed as logs of *Giardia lamblia* inactivation) demonstrated high variability. Inactivation varied by several logs on a day-to-day basis at any particular treatment plant and by as much as tens of logs over a year due to changes in water temperature, flow rate (and consequently contact time), seasonal changes in residual disinfectant, pH, and disinfectant demand (and consequently disinfectant residual). There were also differences between years at individual plants.

To address these variations, the TWG developed an approach for a system to use to characterize disinfection practice; the procedure is called profiling. In essence, this approach allows a plant to chart or plot its daily levels of *Giardia* inactivation on a graph which, when viewed on a seasonal or annual basis, represents a ''profile'' of the plant's inactivation performance. The system can use the profile to develop a baseline or benchmark of inactivation against which to measure possible changes in disinfection practice. This approach makes it possible for a plant that may need to change practice to meet DBP MCLs to assure no significant increase in microbial risk. It provides the necessary tool to allow plants to project or measure the possible impacts of potential changes in disinfection. Only certain systems would be required to develop a profile and keep it on file for State review during sanitary surveys, and only a subset of those required to develop a profile would be required to submit it to the State as part of a package submitted when the system is making significant changes to its disinfection practice.

USEPA reiterates its request for comment on the following recommendations of the M-DBP Advisory Committee that address the three questions outlined above: (1) who should develop a profile, (2) how a profile is actually generated, and (3) how the profile will be used.

1. Applicability

Systems would be required to prepare a disinfection profile, if at least one of the following criteria are met:

(1) TTHM levels are at least 80% of the MCL (0.064 mg/l) as an annual average for the most recent 12 month compliance period for which compliance data are available prior to November 1998 (or some other period designated by the State). Monitoring would be in accordance with current TTHM requirements.

(2) Haloacetic acid (HAA5) levels are at least 80% of the MCL (0.048 mg/l) as an annual average for the most recent 12 month period for which data are available (or some other period designated by the State). In connection with HAA5 monitoring, the following provisions apply:

(a) Systems that have collected HAA5 data under the ICR must use those data to determine the HAA5 level, unless the State determines that there is a more representative annual data set.

(b) If the system does not have four quarters of HAA5 data by the end of 90 days following the IESWTR promulgation date, the PWS must conduct HAA5 monitoring for four quarters. This monitoring must comply with the monitoring requirements included in the DBP Stage 1 rule.

(The Advisory Committee recommended a value of 80% of the MCL because available data indicated that DBP levels varied from year to year due to many factors (e.g., changes in source water quality, changes in water demand). The Committee believed that targeting a level 20% below the MCL would include most systems that would be expected to make changes to comply with the TTHM and HAA5 MCLs on a continuing basis. Also, USEPA previously considered this target level at the recommendation of the 1992 reg-neg committee, to evaluate DBP Stage 1 compliance forecasts and costs, based upon the judgement that most facilities will take additional steps to ensure continuing MCL compliance if they are at or above these levels.)

2. Developing the Profile and Benchmark

As outlined above, profiling is the characterization of a system's disinfection practice over a period of time. The system can create the profile by conducting new daily monitoring or by using ''grandfathered'' data (as explained below). A disinfection profile consists of a compilation of daily *Giardia lamblia* log inactivations (or virus inactivations under conditions to be specified in the final rule), computed over the period of a year, based on daily measurements of operational data (disinfectant residual concentration(s), contact time(s), temperature(s), and where necessary, pH(s)).

Grandfathered data are those operational data that a system previously collected at a treatment plant during the course of normal operation. These data may or may not have been used previously for compliance determinations with the SWTR. Those systems that have all necessary data to determine profiles, using operational data collected prior to promulgation of the IESWTR, would be able to use up to three years of operational data in developing profiles. Grandfathered operational data should be substantially equivalent to operational data that would be collected under this rule.

Those systems that do not have three years of operational data to develop profiles would have to conduct monitoring to develop the profile for one year beginning no later than 15 months after IESWTR promulgation. If the PWS has existing operational data to develop profiles, it would have to use those data to develop profiles for the years prior to the IESWTR promulgation.

In order to develop the profile, a system would have to:

—Measure disinfectant residual concentration (C, in mg/l) prior to entrance into distribution system and just prior to each additional point of disinfectant addition, whether with the same or a different disinfectant.

—Determine contact time (T, in minutes) during peak flow conditions. T can be based on either a tracer study *or* assumptions based on contactor geometry and baffling. However, systems would have to use the same method for both grandfathered data and new data.

—Measure water temperature (°C).

—Measure pH (for chlorine only).

The system would then have to convert operational data to log inactivation values for *Giardia* (and viruses when chloramines or ozone used as primary disinfectant).

—Determine CT_{actual} for each disinfection segment.

—Determine $CT_{99.9}$ (i.e., 3-logs inactivation) from tables in the SWTR/IESWTR using temperature (and pH for chlorine) for each disinfection segment. [NOTE: USEPA may redesign the tables so that no conversion is necessary (i.e., the tables will reflect a CT_{90} (1-log) value.]

—For each segment, log inactivation = $(CT_{act}/CT_{99.9}) \times 3.0$.

A log inactivation benchmark would then be calculated as follows:

1. Calculate the average log inactivation for each calendar month.

2. Determine the calendar month with the lowest average log inactivation.

3. The lowest average month becomes the critical period for that year.

4. If data from multiple years are available, the average of critical periods for each year becomes the benchmark.

5. If only one year of data is available, the critical period for that year is the benchmark.

3. State Review

The State would review disinfection profiles as part of its periodic sanitary survey. If a system that is required to develop a disinfection profile subsequently decides to make a significant change in disinfection practice, it would have to consult with the State before implementing such a change. Significant changes would be defined as: (1) moving the point of disinfection, (2) changing the type of disinfectant, (3) changing the disinfection process, or (4) making any other change designated as significant by the State. Supporting materials for such consultation would have to include a description of the proposed change, the disinfection profile, and an analysis of how the proposed change will affect the current disinfection benchmark.

4. Guidance

USEPA, in consultation with interested stakeholders, will develop guidance for States and systems on how to develop and evaluate disinfection profiles, how to identify and evaluate significant changes in disinfection practices, and guidance on moving the point of disinfection from before the point of coagulant addition to after the point of coagulant addition. USEPA will also develop guidance for systems that would be required to develop a profile based on virus inactivation instead of *Giardia lamblia* inactivation. Guidance will be available when the IESWTR is promulgated.

5. Request for Public Comment

USEPA requests comment on all aspects of the recommendation outlined above and any alternative suggestions that stakeholders or other interested parties may have. Commenters may want to focus particular attention on the following issues:

—Applicability requirements,

—Characterization of disinfection practices and components (e.g., monitoring, analysis),

—Use of TTHM and HAA5 data from the same time period instead of TTHM data from one year and HAA5 data from another,

—Definition of significant changes to disinfection practice,

—Different approaches to evaluating possible changes in disinfection practice against a disinfection profile, and

—Whether the use of grandfathered data, if available, should be

mandatory for profiling and benchmarking.

E. Definition of Ground Water Under the Direct Influence of Surface Water (GWUDI)—Inclusion of Cryptosporidium in the Definition

1. Summary of 1994 Proposal and Public Comments

The July 29, 1994, **Federal Register** notice proposed to amend the SWTR by including *Cryptosporidium* in the definition of a GWUDI system. Under the rule, a system using ground water considered vulnerable to *Cryptosporidium* contamination would be subject to the provisions of the SWTR. USEPA proposed that this determination be made by the State for individual sources using State-established criteria.

The 1994 proposed IESWTR also requested comment on revisions to USEPA's guidance on this issue. *Cryptosporidium* oocysts are smaller than *Giardia* cysts and may have substantially different hydrodynamic behavior in ground water due to their smaller size and perhaps also due to a difference in charge distribution on the outer surface of the oocyst. USEPA guidance for the determination of GWUDI suggests methods that may be insensitive to this differing hydrodynamic behavior in ground water.

Almost all commenters agreed that *Cryptosporidium* should be added to the definition. Only one commenter clearly opposed the addition without caveat, maintaining that problems with the analytical methods for the recovery and enumeration of viable organisms and uncertainties associated with risk assessment should preclude its addition. One commenter contended that *Cryptosporidium* should be included only if USEPA addresses the amount of natural disinfection at each site and defines treatment effectiveness, especially coagulant use, for GWUDI systems. One commenter believed that the definition of *Cryptosporidium* should be made at the species level, e.g. *Cryptosporidium parvum*, because other species were not pathogenic to humans.

One commenter was concerned about the Microscopic Particulate Analysis (MPA), one of the methods that USEPA identifies in guidance as being suitable for making GWUDI determinations. As part of this method, a microscopic examination is made of the ground water to determine whether insect parts, plant debris, rotifers, nematodes, *Giardia lamblia*, and other material associated with the surface or near surface environment are present. The commenter claimed that the MPA has analytical method problems similar to those associated with the recovery of cysts and oocysts from environmental samples and suggested that the method should undergo additional testing with positive and negative controls and with performance evaluation samples.

2. Overview of Existing Guidance

USEPA issued guidance on the MPA in October 1992 as the Consensus Method for Determining Groundwater Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis. Additional guidance for making GWUDI determinations is also available (USEPA, 1994e,f). Since 1990, States have acquired substantial experience in making GWUDI determinations and have documented their approaches (Massachusetts Department of Environmental Protection, 1993; Maryland, 1993; Sonoma County Water Agency, 1991). Guidance on existing practices undertaken by States in response to the SWTR may also be found in the State Sanitary Survey Resource Directory, jointly published in December 1995 by USEPA and the Association of State Drinking Water Administrators. AWWARF has also published guidance (Wilson et al., 1996).

3. Summary of New Data and Perspectives

Most recently, Hancock et al. (1997) used the MPA test to study the occurrence of *Giardia* and *Cryptosporidium* in the subsurface. They found that, in a study of 383 ground water samples, the presence of *Giardia* correlated with the presence of *Cryptosporidium*. The presence of both pathogens correlated with the amount of sample examined but not with the month of sampling. There was a correlation between source depth and occurrence of *Giardia* but not *Cryptosporidium*. The investigators also found no correlation between the distance of the ground water source from adjacent surface water and the occurrence of either *Giardia* or *Cryptosporidium*. However, they did find a correlation between distance from a surface water source and generalized MPA risk ratings of high (high represents an MPA score of 20 or greater), medium or low, but no correlation was found with the specific numerical values that are calculated by the MPA scoring system.

USEPA is interested in an expanded discussion of MPA performance. The work cited here is preliminary information and represents the only data provided to USEPA so far. USEPA is considering several analytical activities to address possible changes in the GWUDI determination guidance. These changes are as follows:

- Change the MPA methodology to include a score for *Cryptosporidium* oocysts in the risk rating method.
- Conduct additional comparison of MPA scores with cyst and oocyst recovery to evaluate the performance of MPA as an indicator method (e.g., Schulmeyer, 1995).
- Conduct additional MPA performance evaluation testing (with both positive and negative controls).
- Compare MPA scores and cyst/oocyst recovery in horizontal collector wells and vertical wells to determine if additional guidance for horizontal collector wells is needed.

4. Request for Public Comment

USEPA is continuing to consider inclusion of *Cryptosporidium* in the definition of GWUDI. USEPA requests further comment on this issue as well as on issues outlined above pertaining to guidance for GWUDI determinations.

F. Inclusion of Cryptosporidium in Watershed Control Requirements

1. Summary of 1994 Proposal and Public Comments

USEPA proposed to extend the existing watershed control requirements for unfiltered systems to include the control of *Cryptosporidium*. This would be analogous to and build upon the existing requirements for *Giardia lamblia* and viruses; *Cryptosporidium* would be included in the watershed control provisions wherever *Giardia lamblia* is mentioned. USEPA also proposed requiring a State, as a condition of primacy, to describe how it would judge the adequacy of watershed control programs for *Cryptosporidium* as well as *Giardia lamblia* and viruses in the source water.

Several commenters to the proposed rule specifically supported inclusion of *Cryptosporidium* in watershed control. Others supported watershed control programs in general without specifically articulating an opinion on *Cryptosporidium*. One commenter specifically opposed the inclusion of *Cryptosporidium* in watershed control program, maintaining that other avenues of watershed control could be promoted without including this organism in the control plan. Another commenter opposed including *Cryptosporidium* because environmental sources of *Giardia* and *Cryptosporidium* were not sufficiently understood. This commenter also opposed the requirement to include *Cryptosporidium*

in State watershed control program protocols as a condition of primacy.

Other comments included: (1) Systems need to be informed of the nature of upstream pathogen sources and changes in upstream water quality in a timely manner, (2) watershed characteristics should not be the sole basis for determining water treatment strategies, (3) upstream sewage discharges should be prohibited and cattle farming and feedlots prohibited or substantially limited in a watershed, and (4) watershed control programs should be scientifically based, educational, and voluntary. One commenter contended that the burden of contamination on the watershed should not fall to the drinking water systems, and that better coordination on regulations is needed between the USEPA's drinking water and wastewater programs.

2. Overview of Existing Guidance

The SWTR specifies the conditions under which a system can avoid filtration (40 CFR 141.71). These conditions include good source water quality, as measured by concentrations of coliforms and turbidity, disinfection requirements; watershed control; periodic on-site inspections; the absence of waterborne disease outbreaks; and compliance with the Total Coliform Rule and the MCL for TTHMs.

The watershed control program under the SWTR must minimize the potential for source water contamination by Giardia lamblia and viruses. This program must include a characterization of the watershed hydrology characteristics, land ownership and activities which may have an adverse effect on source water quality. The SWTR Guidance Manual (USEPA, 1991a) identifies both natural and human-caused sources of contamination to be controlled. These sources include wild animal populations, wastewater treatment plants, grazing animals, feedlots, and recreational activities. The Guidance Manual recommends that grazing and sewage discharges not be permitted within the watershed of unfiltered systems, but indicates that these activities may be permissible on a case-by-case basis where there is a long detention time and a high degree of dilution between the point of activity and the water intake.

3. Summary of New Data and Perspectives

Since proposal of the IESWTR in July 1994, several new outbreaks of waterborne cryptosporidiosis have occurred in the United States. A recent summary of these outbreaks (Solo-Gabriele and Neumeister, 1996) identified raw sewage, surface runoff from livestock grazing areas, septic tank effluent, cattle wastes, treated wastewater, and backflow of contaminated water in the distribution system as the suspected sources of *Cryptosporidium* contamination of the water supplies in these outbreaks. Cattle grazing, feedstocks and in particular, calves and other young livestock, appear to be of greater concern for *Cryptosporidium* contamination than for *Giardia*. Some outbreaks of cryptosporidiosis have been related to upsets in the treatment process of filtered water systems or have occurred on occasions when spikes in turbidity have occurred in those systems. However, little information is available for unfiltered water systems as to whether spikes in raw water turbidity increase the likelihood that elevated levels of *Cryptosporidium* are present in the source water. Because *Cryptosporidium* cannot easily be controlled with conventional disinfection practices, there is particular concern about the presence of this organism in the source waters of systems that do not filter.

Data from the ICR may be useful in providing information on the relative *Giardia* and *Cryptosporidium* levels in the raw water sources of unfiltered and filtered water systems. In one comprehensive study on *Giardia* and *Cryptosporidium* densities in ambient water and drinking water, investigators (LeChevallier and Norton, 1995) found *Cryptosporidium* oocyst levels in ambient water ranging from 0.065/L to 65.1/L, with a geometric mean of 2.4 oocysts/L. In drinking water, the level of *Cryptosporidium* oocysts ranged from 0.29–57 oocysts/100L, with a mean of 3.3 oocysts/100L.

The Seattle Water Department summarized the *Giardia* and *Cryptosporidium* monitoring results from several unfiltered water systems (Montgomery Watson, 1995). The central tendency of this data is about 1 oocyst/100L. Thus, depending upon what removal efficiencies are achieved by filtration for *Cryptosporidium* (for example, 2 logs), it appears that unfiltered water systems that comply with the source water requirements of the SWTR may have a risk of cryptosporidiosis equivalent to that of a water system with a well-operated filter plant using a water source of average quality.

Although there are no specific monitoring requirements in the watershed protection program, the non-filtering utility is required to develop state-approved techniques to eliminate or minimize the impact of identified point and non-point sources of pathogenic contamination. USEPA is considering adding specific monitoring requirements to the IESWTR for the unfiltered supplies serving 10,000 or more people to ensure the continued effectiveness of the watershed control program. The monitoring would be similar to the requirements under the ICR for *Giardia* and *Cryptosporidium* although the sampling frequency may be modified. As with the ICR, a USEPA-approved method and laboratory for *Giardia* and *Cryptosporidium* analyses would be required.

At a minimum, such a monitoring program might require some level of routine sampling (e.g., on a weekly, biweekly or monthly basis). The program may also include ''event'' sampling. An ''event'' would constitute an occasion when the raw water turbidity and/or fecal/total coliform concentration exceeded a specific value or possibly exceeded a site-specific 90th percentile value. At least one sample during an event might be required in addition to routine sampling. Results of all protozoa and related analyses would be made available to the State at a minimum as part of the annual on-site inspection required under the SWTR for non-filtering supplies.

USEPA is continuing to consider extending the existing watershed control requirements for unfiltered systems to include the control of *Cryptosporidium*. USEPA requests further comment on this issue. The Agency also requests comment on issues pertaining to monitoring for unfiltered systems serving 10,000 or more people, including comment on the following approaches:

Routine Source Water *Giardia* and *Cryptosporidium* Monitoring:

Option 1. Weekly *Giardia* and *Cryptosporidium* Monitoring

Option 2. Bi-Weekly *Giardia* and *Cryptosporidium* Monitoring

Option 3. Monthly *Giardia* and *Cryptosporidium* Monitoring

The Agency also requests comments on whether the frequency of monitoring should depend on system size, e.g., should requirements differ for systems serving between 10–100,000 people versus those serving more than 100,000 people.

''Event'' Source Water *Giardia* and *Cryptosporidium* Monitoring:

Option 1. No event sampling required.

Option 2. Collect sample(s) for *Giardia* and *Cryptosporidium* when source water turbidity exceeds 1.0 NTU or some alternative value such as a site-

specific 90th percentile which might be lower than 1.0 NTU.

Option 3. Collect sample(s) for *Giardia* and *Cryptosporidium* when source water fecal coliform concentration exceeds 20 per 100 mL or total coliform level exceeds 100 per 100 mL, depending on which class of coliforms is used under the individual systems filtration avoidance agreement. Alternatively, the trigger could be some other coliform or fecal coliform value.

Option 4. Individual utility develops turbidity frequency distribution (e.g., based on previous 1 to 3 years of daily historical data) and collects sample(s) for *Giardia* and *Cryptosporidium* when turbidity exceeds 90th percentile level.

Option 5. Some combination of Options 2, 3, or 4.

The Agency also requests comment on whether any of the above options should depend on system size.

G. Sanitary Survey Requirements

1. Summary of 1994 Proposal and Public Comments

The July 29, 1994, **Federal Register** proposed to amend the SWTR to require periodic sanitary surveys for all public water systems that use surface water, or ground water under the direct influence of surface water, regardless of whether they filter or not. States would be required to review the results of each sanitary survey to determine whether the existing monitoring and treatment practices for that system are adequate, and if not, what corrective measures are needed to provide adequate drinking water quality.

The July 1994 notice proposed that only the State or an agent approved by the State would be able to conduct the required sanitary survey, except in the unusual case where a State has not yet implemented this requirement, i.e., the State had neither performed the required sanitary survey nor generated a list of approved agents. The proposal suggested that under exceptional circumstances the sanitary survey could be conducted by the public water system with a report submitted to the State within 90 days. USEPA also requested comment on whether sanitary surveys should be required every three or every five years.

Most commenters on this issue voiced support for requiring a periodic sanitary survey for all systems. One commenter suggested that USEPA develop sanitary survey guidance for administration by the States, while another commenter suggested that sanitary surveys by the private sector be certified by States or national associations using USEPA-defined criteria. Commenters recommended that surveys be conducted either by the State or a private independent party/contractor. One respondent contended that sanitary surveys, as presently conducted, were insufficient to assess operational effectiveness in surface water systems.

With regard to sanitary survey frequency, commenters were nearly evenly divided between every three years and every five years. Some commenters argued that the frequency should depend on: (1) whether a system's control is effective or marginal, (2) system size (less frequent for small systems), (3) source water quality, (4) whether the State believes a system's water quality is likely to change over time, (5) results of the previous survey, and (6) population density on the watershed. One commenter suggested an annual sanitary survey.

Regarding criteria for sanitary survey inspectors, some commenters suggested that the State should decide what requirements to use. Others suggested some combination of education and working experience related to water plant operations, including (1) professional engineering certificate and water plant operator license for at least five years, (2) knowledge of surface water contaminants, source and fate of contaminants, and both removal capabilities of existing treatment technologies and ability to evaluate their performance, (3) a BS degree (preferably MS degree) in sanitary or environmental engineering with two years experience in evaluating water treatment plants and valid plant operator's license, (4) five years experience in water system operation, evaluation, and/or design, and a BS in engineering or environmental science, (5) a BS degree in science or engineering and five years experience in the drinking water field.

2. Overview of Existing Regulations and Guidance

Sanitary surveys have historically been conducted by state drinking water programs as a preventive tool to identify water system deficiencies that could pose a threat to public health. The first regulatory requirement for systems to have a periodic on-site sanitary survey appeared in the final TCR (54 FR 27544–27568). This rule requires all systems that collect less than 5 total coliform samples each month to undergo such surveys. These sanitary surveys must be conducted by the State or an agent approved by the State. Community water systems were to have had the first sanitary survey conducted by June 29, 1994, and every five years thereafter while non-community water systems are to have the first sanitary survey conducted by June 29, 1999, and every five years thereafter unless the system is served by a protected and disinfected ground water supply, in which case, a survey must be conducted every 10 years.

The SWTR did not specifically require water systems to undergo a sanitary survey. Instead, it required that unfiltered water systems, as one criterion to remain unfiltered, have an annual on-site inspection to assess the system's watershed control program and disinfection treatment process. The on-site survey must be conducted by the State or a party approved by the state. This on-site survey is not a substitute for a more comprehensive sanitary survey, but the information can be used to supplement a full sanitary survey.

USEPA's SWTR Guidance Manual (USEPA, 1991a), Appendix K, suggests that, in addition to the annual on-site inspection, a sanitary survey be conducted every three to five years by both filtered and unfiltered systems. This time period is suggested ''since the time and effort needed to conduct the comprehensive survey makes it impractical for it to be conducted annually.''

3. New Developments

Since the publication of the proposed ESWTR in 1994, USEPA and the States (through the Association of State Drinking Water Authorities) have issued a joint guidance on sanitary surveys entitled USEPA/State Joint Guidance on Sanitary Surveys (1995). The Guidance outlines the following elements as integral components of a comprehensive sanitary survey:

- Source
  - —Protection
  - —Physical Components and Condition
- Treatment
- Distribution System
- Finished Water Storage
- Pumps/Pump Facilities and Controls
- Monitoring/Reporting/Data Verification
- Water System Management/ Operations
- Operator Compliance with State Requirements

The guidance also addresses the qualifications for sanitary survey inspectors, the development of assessment criteria, documentation, follow-up after the survey, tracking and enforcement.

USEPA is aware that a number of States have independently developed their own sanitary survey criteria. For instance, the American Water Works Association California-Nevada Section,

Source Water Quality Committee in conjunction with the California Department of Health Services, Division of Drinking Water and Environmental Management (DHS) have published a document entitled Watershed Sanitary Survey Guidance Manual (AWWA California -Nevada Section 1993) to assist domestic water suppliers in defining the scope of their watershed sanitary surveys and to provide information on the methods and sources of information for conducting sanitary surveys.

4. Advisory Committee Recommendations and Related Issues

USEPA reiterates its request for comment on the following recommendations of the M–DBP Advisory Committee.

A sanitary survey would be defined as an onsite review of the water source (identifying sources of contamination using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water. Included in this definition is the concept that components of a sanitary survey may be completed as part of a staged or phased State review process within the established frequency interval set forth below. Finally, for a sanitary survey to fall within this definition, it must address each of the eight elements in the December 1995 USEPA/State Guidance on Sanitary Surveys.

In terms of frequency, this approach would provide that sanitary surveys must be conducted for all surface water systems (including ground water under the influence) no less frequently than every three years for community systems and no less frequently than every five years for noncommunity systems. Any sanitary survey conducted after December 1995, that addresses the eight sanitary survey components of the 1995 EPA/State guidance, may be counted or ''grandfathered'' for purposes of completing the round of surveys. This approach would also provide that for community systems determined by the State to have outstanding performance based on prior sanitary surveys, successive sanitary surveys may be conducted no less than every five years.

Finally, under this approach, as part of follow-up activity for sanitary surveys, systems must respond to deficiencies outlined in the State's sanitary survey report within 45 days, indicating how and on what schedule the system will address significant deficiencies noted in the survey. In addition, States must have the appropriate rules or other authority to assure that facilities take the steps necessary to address significant deficiencies identified in the survey report that are within the control of the PWS and its governing body.

USEPA also requests comment on whether systems should be required to respond in writing to a State's sanitary survey report discussed in the paragraph above. USEPA also requests comment on (1) what would constitute ''outstanding performance'' for purposes of allowing sanitary surveys for a community water system to be conducted every five years and (2) how to define ''significant deficiencies.''

H. Covered Finished Water Reservoirs

1. Summary of the 1994 Proposal and Public Comments Received

The July 29, 1994, **Federal Register** indicated that USEPA was considering whether to issue regulations requiring systems to cover finished water reservoirs and storage tanks, and requested public comment. The rationale for this position was given in the proposed rule.

Most commenters supported either federal or State requirements. Some commenters suggested that regulations apply only to new reservoirs. Some commenters opposed any requirement, citing high cost, the notion that ''one size does not fit all'', and aesthetic benefits of an open reservoir.

Some commenters suggested elements for such regulations or guidance, including (1) applying the same criteria to finished water reservoirs as exists for unfiltered surface water systems, (2) using engineering measures to minimize contamination, (3) disinfecting the effluent to maintain residual in distribution system, (4) monitoring reservoirs routinely for water quality indicators, (5) covering all storage tanks, (6) fencing reservoirs with signs warning against swimming, trespassing, and tampering, and (7) adding notices in the annual water quality report that the reservoir is not in compliance with current waterworks standards. A few commenters suggested a number of other elements.

2. Overview of Existing Information

Possible Health Concerns: When a finished water reservoir is open to the atmosphere it may be subject to some of the environmental factors that surface water is subject to, depending upon site-specific characteristics and the extent of protection provided. It may be subject to contamination by persons tossing items into the reservoir or illegal swimming (Pluntze 1974; Erb, 1989).

Microscopic and other organisms may proliferate in open finished water reservoirs. Increases in algal cells, heterotrophic plate count (HPC) bacteria, turbidity, color, particle counts, biomass and decreases in chlorine residuals have been reported (Pluntze, 1974, AWWA Committee Report, 1983, Silverman et al., 1983, LeChevallier et al. 1997a).

Small mammals, birds, fish, and the growth of algae may contribute to the microbial degradation of an open finished water reservoir (Graczyk et al., 1996; Geldreich, 1990; Fayer and Ungar, 1986; Current, 1986). Mammals, birds and fish and their carcasses seed the water and the sediment with total and fecal coliforms, *E. coli* and pathogens. In one study, sea gulls contaminated a 10 million gallon reservoir and increased bacteriological growth and in another study waterfowl were found to elevate coliform levels in small recreational lakes by twenty times their normal levels (Morra, 1979). Seagulls are a source of numerous coliforms and can also be a source for several human pathogens, (Geldreich and Shaw, 1993). Algal growth increases the biomass in the reservoir, which reduces dissolved oxygen and thereby increases the release of iron, manganese, and nutrients from the sediments. This, in turn, supports more growth (Cooke and Carlson, 1989). Plants, macrophytes and organic debris will add to the biomass and nutrient supply.

State Regulations: In order to assess regulatory requirements at the State level, it is necessary to contact individual drinking water programs and collect and evaluate specific regulatory language obtained from those programs. A survey of nine States was conducted in the summer of 1996 (Montgomery Watson, 1996). The States which were surveyed included several in the West (Oregon, Washington, California, Idaho, Arizona, and Utah), two States in the East known to have water systems with open reservoirs (New York and New Jersey), and one midwestern state (Wisconsin). Seven of the nine States which were surveyed require by direct rule that all new finished water reservoirs and tanks be covered.

Survey of Ten Utilities: There is no comprehensive information available on the number or size of open finished water reservoirs in water systems around the country; however, there is one recent survey of ten utilities which either have open finished water reservoirs or which had them in the past and covered or replaced them (E&S Environmental Chemistry, 1997). The existing open reservoirs which were operated by these systems varied greatly in size, from 5.5 million gallons (MG) to 900 MG. The systems with open finished reservoirs also had closed reservoirs within their service area, but for some of the systems the open reservoirs represent the largest component of total storage volume in the systems.

Most of the reservoirs in the systems in this survey were excavated and lined, but several of the larger ones were formed by dams or natural lakes that had been converted to water supply use. Many of these reservoirs have irregular geometry and configurations which make covering very difficult or impossible. Others are so large that covering them would be impractical. For some of these reservoirs, it is impractical to find locations for replacement with the proper hydraulic characteristics and size. To partially solve this problem in some cases, systems have chosen to leave large existing open reservoirs off-line, except for emergency supply purposes.

None of the systems had comprehensive evidence about the effect of open reservoirs on water quality. These water systems had instituted a number of measures at open reservoirs to control potential sources of contamination; these measures included fencing setbacks, security cameras, on-site surveillance, rechlorination, wire canopies to control bird activity, and other measures.

3. Request for Public Comment

USEPA is considering as part of the IESWTR a requirement that systems cover all new reservoirs, holding tanks or other storage facilities for finished water for which construction begins after the effective date of the rule. The Agency intends to further consider this issue, including whether there should be a requirement that all finished water reservoirs, holding tanks and other storage facilities be covered, as part of the development of the Long-Term ESWTR. The Agency requests further comment on this issue and whether provisions should be established to require all new reservoirs, holding tanks, or other storage facilities to be covered.

I. Cross Connection Control Program

1. Summary of 1994 Proposal and Public Comments

The July 29, 1994, **Federal Register** requested public comment on whether the Agency should require States and/or systems to have a cross-connection control program. In addition, the Agency solicited comment on a number of associated issues, including (1) what specific criteria, if any, should be included in such a requirement, (2) how often such a program should be evaluated, (3) whether USEPA should limit any requirement to only those connections identified as a cross connection by the public water system or the State, and (4) conditions under which a waiver from this requirement would be appropriate. The Agency also requested commenters to identify other regulatory measures USEPA should consider to prevent contamination of drinking water in the distribution system (e.g., minimum pressure requirements in the distribution system).

Most commenters supported either a federal or State cross connection control program. Various commenters recommended that such a program include a backflow prevention program with approved backflow preventer lists, categorization of all service connections with respect to potential risk of backflow, requirement for periodic testing and maintenance of backflow prevention devices, periodic review of program by State, establishment of an annual backflow device testing program, establishment of a backflow device inspector certification program, enforcement authority, and other suggestions. Commenters also recommended national disinfection procedures for repair of water lines and for placing new lines into service, a provision for at least one person trained in cross-connection control to carry out the program, and other suggestions.

Commenters opposed to a cross connection control program indicated that (1) a federally-mandated program would be impractical, burdensome, and would fail, (2) a State program would be more appropriate than an USEPA-mandated program, (3) most States already have a comprehensive program, thus negating need for federal regulations, (4) USEPA should publish general guidelines only, and (5) there should be a separate regulation because a cross connection control program would affect both surface water and ground water.

2. Overview of Existing Information

Historically, a significant portion of waterborne disease outbreaks reported by CDC are caused by distribution system deficiencies. Distribution system deficiencies are defined in CDC's publication Morbidity and Mortality Weekly Report as cross connections, contamination of water mains during construction or repair, and contamination of a storage facility. Between 1971–1994, approximately 53 waterborne disease outbreaks were associated with cross connections or backsiphonage. Fifty-six outbreaks were associated with other distribution system deficiencies (Craun, Pers. Comm. 1997b). Some outbreaks have resulted from water main breaks or repairs.

There is no centralized repository where backflow incidents are reported or recorded. The vast majority of backflow incidents are probably not reported. Specific backflow incidents are described in detail in USEPA's Cross-Connection Control Manual (USEPA, 1989a).

Where cross connections exist, some protection is still afforded to the distribution system by the maintenance of a positive water pressure in the system. Adequate maintenance of pressure provides a net movement of water out through breaks in the distribution pipes and prevents contaminated water outside of the pipes from entering the drinking water supply. The loss of pressure in the distribution system, less than 20 psi, can cause a net movement of water from outside the pipe to the inside, possibly allowing the introduction of fecal contamination into the system. This problem is of special concern where wastewater piping is laid in the same street as the water pipes, creating a potential threat to public health whenever there is low or no pressure.

Many States have cross connection control programs. A Florida Department of Environmental Protection survey evaluated cross-connection control regulations in the 50 states (Florida DEP 1996). The survey results showed that 29 of the 40 states that responded to the survey request have programs. The rigor of the programs and the extent to which they are enforced was not addressed by the survey. An USEPA report suggests that the responsibility for administration and enforcement of the State programs is generally at the local level (USEPA, 1995a).

3. Request for Public Comment

USEPA does not plan to address cross connection control in the IESWTR. As noted above, many States currently have programs, although the extent to which these vary is unclear. The Agency does plan to consider cross connection control issues during the development of the Long-Term ESWTR, in the context of a broad range of issues related to distribution systems. USEPA continues to request comments or additional information related to cross connection control or other distribution system issues.

J. Recycling Filter Backwash Water and Filtering to Waste

The July 29, 1994, notice requested comment on the extent to which the ESWTR should address the issue of recycling filter backwash water, given its potential for increasing the densities of *Giardia* and *Cryptosporidium* on the filters. The 1996 Amendments to the SDWA require USEPA to promulgate a

regulation for filter backwash recycling not later than August 2000, (SDWA 1412(b)(14)).

Most commenters who addressed this issue contended that backwash water should not be recycled or that, if it is recycled, it should be treated first. One commenter suggested that this decision should be based on the pathogen density in the backwash water. Another commenter suggested that the rule should include criteria for assessing the extent of backwash recycling, depending on raw water quality, size of filters, and water volume. Another commenter maintained that this issue should be left to the State and system. One commenter suggested that the impacts of recycling needed additional research and that any rule addressing this issue needed to incorporate the results of the latest research.

1. Filter Backwash Recycle Configurations

Treatment plants can be configured into several general categories but the variation within each category is significant.

One aspect of this treatment variation is how recycling of waste streams from plant processes are handled. Figure 4 shows a general schematic of a conventional treatment plant and how recycle streams may be developed and treated. Note that backwash water treatment is carried out in a miniature coagulation-flocculation-sedimentation treatment facility. Some utilities are considering microfiltration to replace these unit processes.

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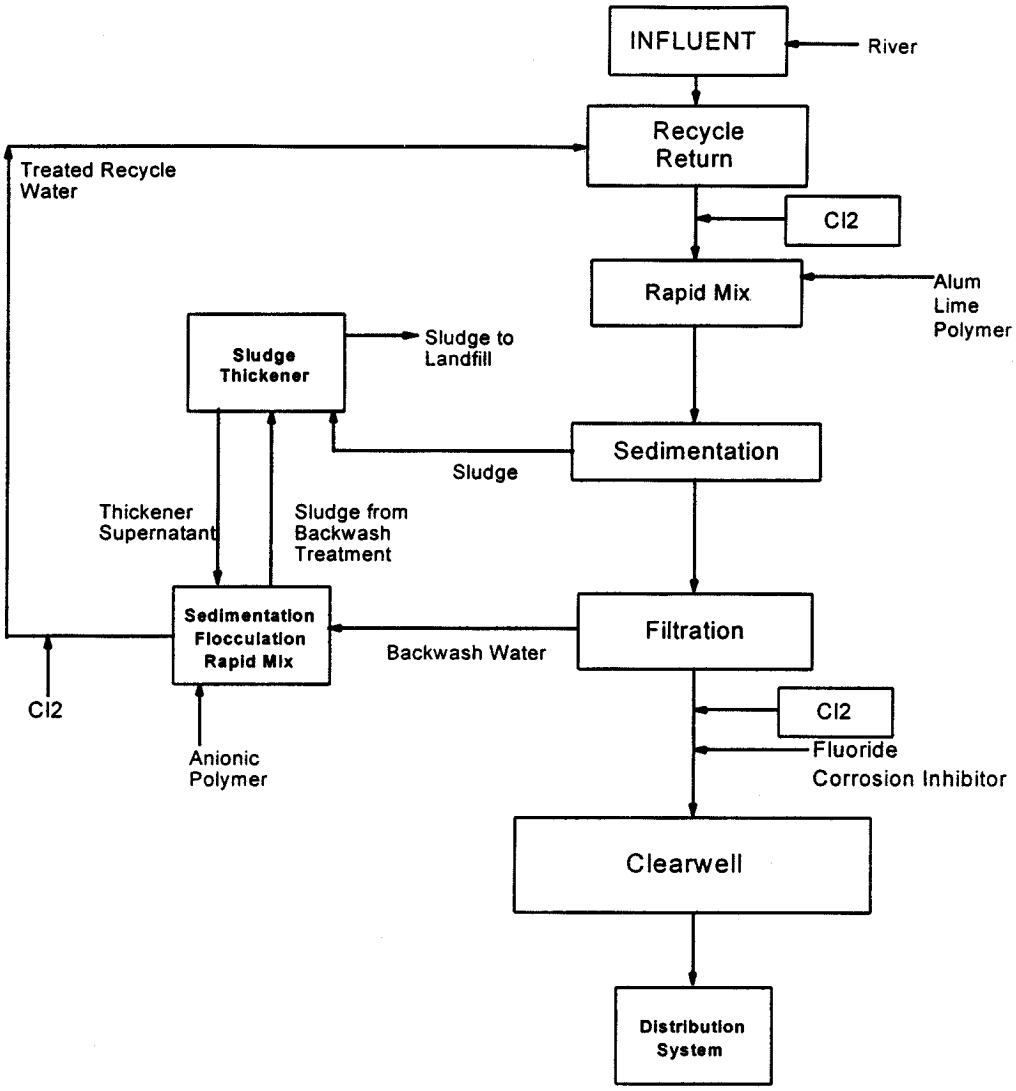

Figure 4. Schematic of Typical Waste Stream Recycle with Treatment

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Figure 5 shows an alternate view for some water treatment facilities that do not practice treatment of their recycled waste streams. There is an almost infinite variety between these two examples. In addition, waste streams can be recycled to many different points in the treatment train. The most common recycle points are at the plant influent or rapid mix. However, there are several known examples of recycle streams being introduced into the treatment process as late as the filter influent.

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Figure 5. Schematic of Typical Waste Stream Recycle without Treatment

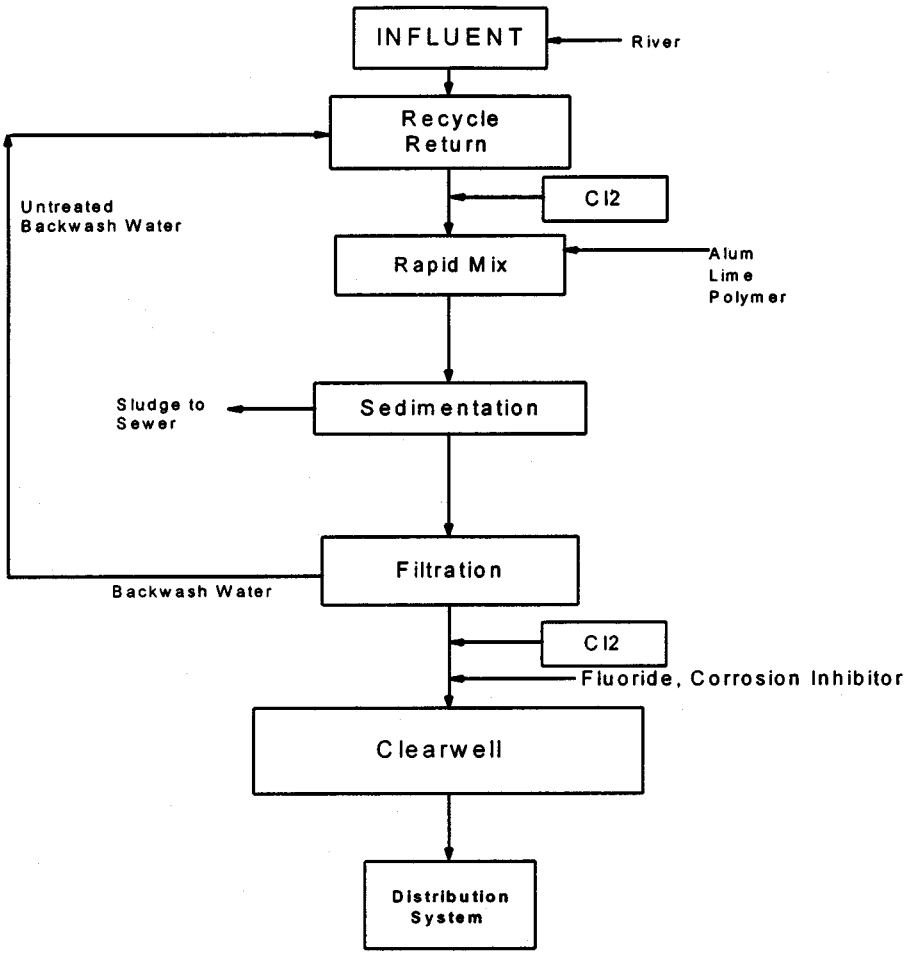

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Figure 6 shows a typical plot of turbidity over time from a filter from reintroduction into service after backwash to breakthrough of turbidity at the end of the filter run. Some plants have installed filter-to-waste facilities which allow the discharge of the first minutes of a filter's operation after backwashing usually into the backwash reclamation system. In California, the State drinking water regulations define filter-to-waste as: ' ''Filter-to-waste'' means a provision in a filtration process to allow the first filtered water, after backwashing a filter, to be wasted or reclaimed.' (McGuire, 1994)

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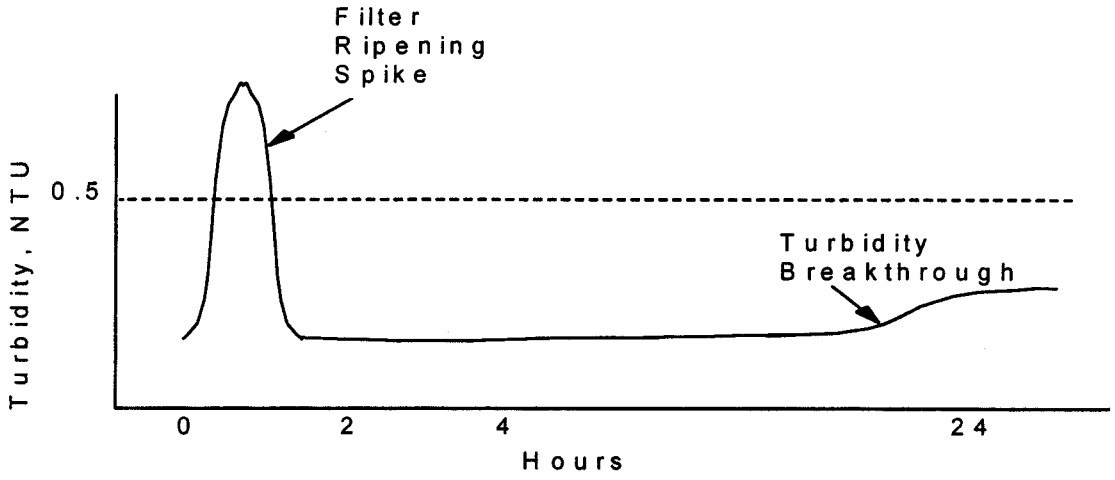

Figure 6. Plot of Turbidity Profile

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Figure 7 shows a general schematic of a filter-to-waste operation. After the backwash process is complete and the filter influent water is allowed to enter the filter, Valve A is operated so that all of the filter effluent water is sent to waste. After a specified period of time or when it is determined that the ripening spike is largely over, Valve A is operated so that the filtered water becomes part of the product water of the treatment plant.

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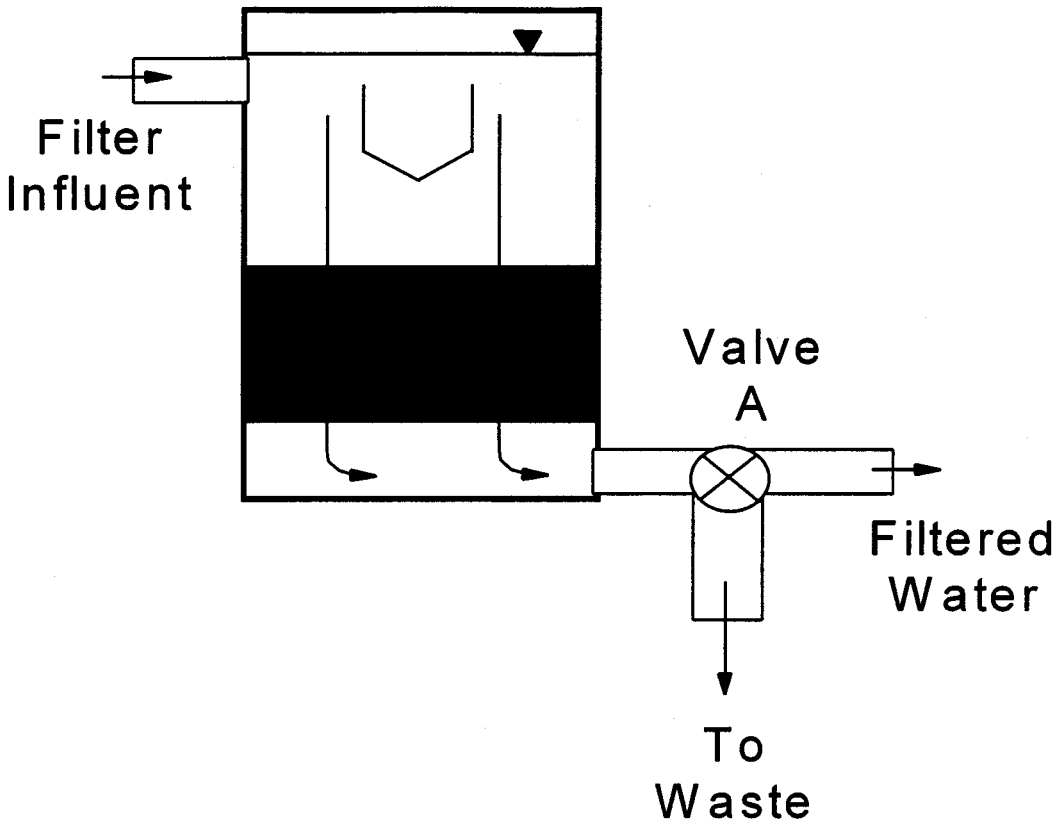
Figure 7. Filter-to-Waste Operation



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2. State Drinking Water Regulations

California has specific regulations that deal with backwash recycle and filter-to-waste. Treatment of backwash recycle flows is covered in the design of treatment facilities section. For new construction, utilities are required to install solids removal treatment for recycled filter backwash water. Also, treated backwash water must be returned to the ''headworks'' (i.e., the plant influent) of the treatment plant. Solids removal treatment unit processes are not specified in the regulation, but new construction must be approved by the California Department of Health Services (California Health and Safety Code, Sections 646658 & 64660).

To minimize the filter ripening spike, the California Department of Health specifies operational requirements such that filtration rates are increased gradually when filters are placed back into service following backwashing or any other interruption in the operation of the filter. When any individual filter is placed back into service following backwashing or other interruption event, the filtered water turbidity from that filter cannot exceed any of the following criteria:

- 2.0 NTU.
- 1.0 NTU in at least 90 percent of the interruption events during any consecutive 12-month period.
- 0.5 NTU after the filter has been in operation for 4 hours.

For new construction, utilities are required to provide filter-to-waste or add additional coagulant chemicals to backwash water.

3. Literature Overview of Standard of Practice

a. Treatment Reference Texts. The joint ASCE/AWWA (1990) water treatment plant design book includes one section on page 182 dealing with washwater disposal and recovery. The section lists several possibilities including recycling without treatment, equalization and treatment, and lagoons to provide for both equalization and sedimentation. On page 188, the backwash recycle facility at the Duluth, Minnesota plant is described. Chemical addition, flocculation and clarification comprise the backwash treatment system.

The fourth edition of Water Quality and Treatment contains one section on pages 988–989 dealing with filter backwash residuals. The section notes that recovery of ''dirty'' backwash water is becoming increasingly common and that the volume of backwash water is typically one to five percent of total plant production. Flow equalization is listed as the most common approach to dealing with recycling of backwash water. The section states that ''For conventional plants, solid separation before return is not common, and some holding tanks are mixed to keep solids in suspension.'' Direct filtration plants are noted for needing solids separation

treatment of backwash water, because there is no sedimentation facility in a direct filtration plant. Concerns are expressed in the section about increasing the concentrations of *Giardia* cysts in the plant influent with the recycle of untreated backwash water.

A handbook of practice was published in 1987 dealing with water treatment plant waste management. Backwash water was described as a major waste stream on page 5 and flow equalization was listed as an important requirement. The handbook gives specific examples of the size of backwash basins needed based on the number of filters backwashed and the backwash frequency. The example discusses tankage volumes that would allow a maximum 10 percent recycle rate of the backwash water to the plant influent. Neither clarification nor polymer addition were mentioned in this early reference (Cornwell et al., 1987).

b. ICR Treatment Plants. Of the 523 treatment plants subject to the ICR, 282 use conventional treatment. Of the conventional treatment plants, 146 (or 52%) practice recycling of their backwash water. Additionally, 15 direct filtration plants and 3 in-line filter plants recycle their backwash water. These data show that a large fraction of the surface water treatment plants recycle their backwash water.

The ICR will provide the first detailed data on the number of treatment plants that treat their recycled backwash water and the technologies they use and some limited data on backwash water quality. Until the initial sampling plan data is available for analysis sometime in early 1998, the only information available on the ICR utilities is from their Initial Sampling Schematics and that will only show the addition of a treatment chemical. The Initial Sampling Schematics do not indicate if coagulation, flocculation or sedimentation is used for washwater recycle treatment.

An inspection of those schematics revealed the following information on treatment of recycled backwash water. A total of 164 schematics for plants using conventional treatment, direct filtration or in-line filtration were examined. Only 12 of the plants indicated that they provided any chemical treatment. Addition of a polymer was practiced at 5 plants. Chlorination as the only treatment of the recycled washwater was found at 2 plants. A total of 5 plants provided both chlorination and polymer treatment of the backwash water.

c. Cornwell and Lee 1993 Report. Another source of information on waste stream quality and the impact of recycling of these streams on treated water quality is found in an American Water Works Association Research Foundation (AWWARF) 1993 report authored by Cornwell and Lee. They studied the quality characteristics of waste streams from 24 treatment plants and investigated the treatment characteristics in some detail at 8 plants.

Among the contaminants analyzed were *Giardia* and *Cryptosporidium*. The study found that filter backwash water could have very high cyst/oocyst concentrations and chemical loads. However, the researchers found no finished water quality problems as a result of recycling.

The study found that backwash water sedimentation was effective in reducing particle and pathogen concentrations in the used filter backwash water. However, very low overflow rates (less than 0.05 gpm/sf) of the sedimentation basin were required to achieve the solids removal unless a polymer was used. Using an anionic polymer increased the particle removals and allowed sedimentation overflow rates of 0.2 to 0.3 gpm/sf. The last two sentences of the Executive Summary of the report provide insight into the overall findings.

> ''The use of equalized, continuous recycle, proper waste stream treatment prior to recycle, and characterization of waste stream quality through proper monitoring should be used in conjunction with recycle operations. If these recommendations are used, recycle can be an appropriate part of water treatment operations (Cornwell and Lee, 1993).''

In a paper which summarized the report findings, the authors stated a general rule that the recycle streams should be flow equalized and blended in to the plant flow over the entire 24 hour plant operating cycle. The rule of thumb that the amount of recycle should be less than 10 percent of the plant flow may not be sufficient, and a lower percentage of recycle may have to be practiced depending on the quality of the recycled water (Cornwell and Lee, 1994).

d. Other Studies. In 1996, AWWA conducted a survey of treatment plants to determine the extent of backwash water recycling and the treatment provided to that water (McGuire, 1997). A total of 400 plants from utilities serving more than 100,000 people were contacted. About 40 percent of those plants responded. Of those responding, about 60 percent of the plants recycled their filter backwash water. The other 40 percent appeared to discharge the backwash water to a surface water supply or to a sanitary sewer. Of the plants that recycled their backwash water, 27 percent responded that they treated the recycle water. The important point to note from this limited survey is that recycle of backwash water appears to be a common practice among water treatment plants.

4. Filter-to-Waste

One possible concern is the discharge of large number of particles from filters that are put back into service after backwashing. Work done on *Giardia* removal by filtration at Fort Collins, Colorado, indicated that a filter-to-waste period was not necessary to produce low *Giardia* filter effluent levels as long as proper chemical preconditioning of the filter was practiced (Gertig et al. 1988). Logsdon et al. studied sedimentation and several different filter media from removing *Giardia* cysts at McKeesport, Pennsylvania. *Giardia* cyst concentrations were found to be higher at the beginning of the filter run, indicating that filter-to-waste may be needed to reduce the levels of *Giardia* in the finished water (Logsdon et al, 1985).

One study (Amirtharajah, 1988) indicated that more than 90% of the particles that pass through a filter do so during the initial stages of filtration. Another study (Logsdon et al., 1981) found that initial cyst concentrations in the effluent, after backwash, were from 10 to 25 times higher than those in the stabilized filter run, even though the difference in turbidity was less than 0.1 NTU. One British study (Hall and Croll 1996) found that in one test filter run, calculation of the total number of particles released during the whole run showed that up to 30% of the particles were released during the first hour of filter ripening. The turbidity during this peak was 0.4 NTU. Gradual start of the filter after backwashing reduced the peak particle count in the effluent. Effectiveness of practicing filter-to-waste in reducing the passing of oocysts depends on the duration of the ripening period. For example, a 15 minute filter-to-waste period will not be very effective for a ripening period of 2 hours. Mid and end-of-run turbidity spikes can also pass large number of particles (including pathogen oocysts) into the effluent. However, these latter spikes can be controlled by avoidance of flow changes and by timely backwashing the filter.

5. Request for Public Comment

USEPA does not plan to include separate provisions for recycling of filter backwash water and filter-to-waste issues in the IESWTR. The Agency anticipates that some systems will address these issues as part of their efforts to comply with revised turbidity performance standards of 0.3 NTU for

the 95th percentile of monthly measurements and a maximum turbidity level of 1 NTU. As previously discussed in this Notice, USEPA is required under the 1996 Amendments to the SDWA to issue a regulation to address filter backwash recycling by August 2000. USEPA plans to develop these regulations in conjunction with the development of the Long-Term ESWTR. USEPA continues to request comments or additional information related to recycling of filter backwash water or filter-to-waste issues.

K. Certification Criteria for Water Plant Operators

The July 29, 1994, notice requested comment on whether the ESWTR should define minimum certification criteria for surface water treatment plant operators. Currently, the SWTR (141.70) requires such systems to be operated by ''qualified personnel who meet the requirements specified by the State.'' The 1996 Amendments to the SDWA require USEPA to undertake several actions with regard to operator certification, including the publication of guidelines specifying minimum standards.

Of the few commenters who addressed this issue most asserted that minimum certification criteria for water operators should be left to the States. One commenter contended that certified operator(s) should be on site at all times and that a non-certified operator should never be in charge. Another respondent noted that rewording § 141.70 to read ''personnel who are certified by the State, or can obtain certification within one year of date of employment'' will adequately define certification criteria.

Consistent with the 1996 SDWA amendments, USEPA appointed an Operator Certification Working Group of the National Drinking Water Advisory Council (NDWAC) to form a partnership with States, water systems and the public to develop information on recommended operator certification requirements. USEPA will publish guidelines specifying minimum standards for certification (and recertification) of operators of community and nontransient noncommunity public water systems. USEPA is developing the draft guidelines based on recommendations from the NDWAC. The draft guidelines, when available, will be published in the **Federal Register** for public review and comment. Members of the public who are interested in further information regarding this effort may contact Richard Naylor of USEPA's Office of Ground Water and Drinking Water at 202–260–5135 or at e-mail address: naylor.richard@epamail.epa.gov.

L. Regulatory Compliance Schedule and Other Compliance-Related Issues

A. Regulatory Compliance Schedule

Background

During the 1992 Disinfectants/Disinfection Byproducts Regulatory Negotiation (reg-neg) that resulted in the 1994 proposed Stage 1 DBPR and proposed IESWTR, there was extensive discussion of the compliance schedule and applicability to different groups of systems and coordination of timing with other regulations.

In addition to the Stage 1 DBPR, the Negotiating Committee agreed that EPA would (a) propose an interim ESWTR which would apply to surface water systems serving 10,000 or more people, and (b) at a later date, propose a long-term ESWTR applying primarily to small systems under 10,000. Both of these microbial rules would be proposed and promulgated so as to be in effect at the same time that systems of the respective size categories would be required to comply with new regulations for disinfectants and DBPs. Finally, although the GWDR was not specifically addressed during the reg-neg, EPA anticipated that it would be promulgated at about the same time as the IESWTR and Stage 1 DBPR.

EPA proposed a staggered compliance schedule, based on the reg-neg results. The Negotiating Committee and EPA believed that such a process was needed for the rules to be properly implemented by both States and PWSs. Also, EPA proposed a staggered schedule to achieve the greatest risk reduction by providing that larger water systems were to come into compliance earlier than small systems (to cover more people earlier), and surface water systems were to come into compliance earlier than ground water systems (since the potential risks of both pathogens and DBPs were considered generally higher for surface water systems). Large and medium size surface water PWSs (serving at least 10,000 people) constitute less than 25% of community water systems using surface water and less than 3% of the total number of community water systems, but serve 90% of the population using surface water and over 60% of the population using water from community water systems. These large PWSs are also those with experience in simultaneous control of DBPs and microbial contaminants. EPA proposed that these systems be required to comply with the Stage 1 DBPR and IESWTR 18 months after promulgation of the rules and that States would be required to adopt the rules no later than 18 months after promulgation. These 18 month periods were prescribed in the 1986 SDWA Amendments.

Surface water PWSs serving fewer than 10,000 people were to comply with the Stage 1 DBPR requirements 42 months after promulgation, to allow such systems to simultaneously come into compliance with the LTESWTR. This compliance date reflected a schedule that called for the LTESWTR to be promulgated 24 months after the IESWTR was promulgated and for PWSs then to have 18 months to come into compliance. Such a simultaneous compliance schedule was intended to provide the necessary protection from any downside microbial risk that might otherwise result when systems of this size attempted to achieve compliance with the Stage 1 DBPR.

Ground water PWSs serving at least 10,000 people would also be required to achieve compliance with the Stage 1 DBPR 42 months after promulgation. A number of these systems, due to recently installing or upgrading to meet the GWDR (which EPA planned to promulgate at about the same time as the Stage 1 DBPR), were expected to need some period of monitoring for DBPs in order to adjust their treatment processes to also meet the Stage 1 DBPR standards.

1996 Safe Drinking Water Act Amendments

The SDWA 1996 Amendments affirmed several key principles underlying the M–DBP compliance strategy developed by EPA and stakeholders as part of the 1992 Regulatory Negotiation process. First, under Section 1412(b)(5)(A), Congress recognized the critical importance of addressing risk/risk tradeoffs in establishing drinking water standards and gave EPA the authority to take such risks into consideration in setting MCL or treatment technique requirements. Second, Congress explicitly adopted the staggered M–DBP regulatory development schedule developed by the Negotiating Committee. Section 1412(b)(2)(C) requires that the standard setting intervals laid out in EPA's proposed ICR rule be maintained even if promulgation of one of the M–DBP rules was delayed. As noted above, this staggered regulatory schedule was specifically designed as a tool to minimize risk/risk tradeoff. A central component of this approach was the concept of ''simultaneous compliance'' which provides that a PWS must comply with new microbial and DBP requirements at the same time to assure

that in meeting a set of new requirements in one area, a facility does not inadvertently increase the risk (i.e., the risk ''tradeoff'') in the other area.

The SDWA 1996 Amendments also changed two statutory provisions that elements of the 1992 Negotiated Rulemaking Agreement were based upon. As outlined above, the 1994 Stage 1 DBPR and ICR proposals provided that 18 months after promulgation large PWSs would comply with the rules and States would adopt and implement the new requirements. Section 1412(b)(10) of the SDWA as amended now provides that drinking water rules shall become effective 36 months after promulgation (unless the Administrator determines that an earlier time is practicable or that additional time for capital improvements is necessary—up to two years). In addition, Section 1413(a)(1) now provides that States have 24 instead of the previous 18 months to adopt new drinking water standards that have been promulgated by EPA.

Discussion

In light of the 1996 SDWA amendments, developing a compliance deadline strategy that encompasses both the Stage 1 DBPR and IESWTR, as well the related LTESWTR and Stage 2 DBPR, is a complex challenge. On the one hand, such a strategy needs to reflect new statutory provisions. On the other, it needs to continue to embody key reg-neg principles reflected in both the 1994 ICR and Stage 1 DBPR proposals; principles that both Congressional intent and the structure of the new Amendments, themselves, indicate must be maintained.

An example of the complexity that must be addressed is the relationship between the principles of risk/risk tradeoff, simultaneous compliance, and the staggered regulatory schedule adopted by Congress. Under the 1996 SDWA amendments, the staggered regulatory deadlines under Section 1412(b)(2)(C) call for the IESWTR and Stage 1 DBPR to be promulgated in November 1998 and the LTESWTR in November of 2000. However, a complicating factor reflected in the Negotiated Rulemaking Agreement of 1992 and contained in the 1994 ICR, IESWTR, and Stage 1 DBPR proposals, is that Stage 1 applies to all PWSs, while IESWTR applies only to PWSs over 10,000, and the LTESWTR covers remaining surface water systems under 10,000.

One approach might be to simply provide that each M–DBP rule becomes effective 3 years after promulgation in accordance with the new SDWA provisions. For surface water systems over 10,000, each plant would be required to comply with related microbial and DBP requirements at the same time thereby minimizing potential risk/risk tradeoffs. For surface water systems under 10,000, however, this approach would result in a very large number of smaller plants complying with DBP requirements two years before related LTESWTR microbial provisions became effective, thereby creating an unbalanced risk tradeoff situation that the Negotiating Committee, EPA, and Congress each sought to avoid.

As this example suggests, given the staggered regulatory development schedule developed by stakeholders in the reg-neg process and adopted by Congress, there is a difficult inconsistency between the principle of avoiding risk tradeoffs, simultaneous compliance, and simply requiring all facilities to comply with applicable M–DBP rules three years after their respective promulgation. The challenge, then, is to give the greatest possible meaning to each of the new SDWA provisions while adhering to the fundamental principles also endorsed by Congress of addressing risk-risk tradeoffs and assuring simultaneous compliance.

A further question that must be factored into this complex matrix is how to address the relationship between promulgation of a particular rule, its effective date, and its adoption by a primacy State responsible for implementing the Safe Drinking Water Act. Under the 1994 IESWTR and Stage 1 DBPR proposals, the rule's 18 month effective date was the same as the 18 month date by which a State was required to adopt it. This approach reflected the 18 month SDWA deadlines applicable during reg-neg negotiations and at the time of proposal.

The difficulty with requiring PWS compliance and State implementation by the same date is that States may not have enough lead time to adopt rules, train their own staff, and develop policies to implement and enforce new rules by the deadline for PWS compliance. In situations where the new rules are complex and compliance requires state review and ongoing interaction with PWSs, successful implementation can be very difficult, particularly for States with many small systems that have smaller staffs and fewer resources to anticipate the requirements of final rules. As noted above, Congress addressed this issue by extending the time for States to put their own rules in place from 18 months to two years after federal promulgation and, then, by generally providing for a one year interval before PWSs must comply (three years after promulgation). As a result, the 18 month interval contemplated by the 1994 proposals is no longer applicable, and the approach of setting the same date for PWS compliance and State rule implementation is no longer consistent with the phased approach laid out in the new SDWA amendments.

A final set of issues that must be addressed in connection with the Stage 1 DBPR proposal are compliance deadlines for ground water systems that currently disinfect. Reflecting the Negotiated Rulemaking Agreement, the 1994 proposal provided that ground water systems serving at least 10,000 that disinfect must comply three and one half years (42 months) after Stage 1 DBPR promulgation. Small ground water systems serving fewer than 10,000 that disinfect would be required to come into compliance five years (60 months) after Stage 1 DBPR promulgation. Again, the challenge here is to reconcile new statutory compliance provisions with the principles of simultaneous compliance, avoiding risk/risk tradeoffs, and deference to Congress' clear intent to preserve the ''delicate balance that was struck by the parties in structuring the negotiated rulemaking agreement''. (Joint Explanatory Statement of the Committee on Conference on S.1316, p2). An additional factor that must be considered in this context is that Congress affirmed the need for microbial ground water regulations but also clearly contemplated that such standards might not be promulgated until issuance of Stage 2 DBPR (no later than May, 2002).

Alternative Approaches

In light of the 1996 SDWA amendments and their conflicting implications for different elements of the compliance strategy agreed to by the Negotiating Committee and set forth in the 1994 IESWTR and Stage 1 DBPR proposals, EPA is today requesting comment on four alternative compliance approaches. The Agency also requests comment on any other compliance approaches or modifications to these options that commenters believe may be appropriate.

OPTION 1.—IMPLEMENT 1994 PROPOSAL SCHEDULE

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	5/00	5/02	5/02	11/03
IESWTR (11/98)	5/00	NA	NA	NA
LTESWTR (11/00)	[1] 5/02	5/02	NA	NA
GWDR (11/00)	NA	NA	([2])	([2])

[1] (If required).
[2] Not addressed.

Option 1 (schedule as proposed in 1994) simply continues the compliance strategy laid out in the 1994 Stage 1 DBPR and IESWTR proposals. This would provide that medium and large surface water PWSs (those serving at least 10,000 people) comply with the final Stage 1 DBPR and IESWTR within 18 months after promulgation, and that surface water systems serving fewer than 10,000 comply within 42 months of Stage 1 DBPR promulgation. This option also would provide that ground water systems serving at least 10,000 and that disinfect comply within 42 months, while ground water systems serving fewer than 10,000 comply within 60 months.

This approach was agreed to by EPA and other stakeholder members of the 1992 Negotiating Committee. However, it has been at least in part superseded by both the general 36 month PWS compliance period and the 24 month State adoption and implementation period provided under the 1996 SDWA amendments. If the proposed 1994 compliance schedule were to be retained, EPA would need to make a determination that the statutory compliance provision of 36 months was not necessary for large and medium surface systems because compliance within 18 months is ''practicable''. To maintain simultaneous compliance, the Agency would also have to make the same practicability determination for small surface water systems in complying with the LTESWTR and for ground water systems serving at least 10,000 in complying with the GWDR. In addition, the Agency would need to justify 42 months for small surface water systems and 60 months for small ground water systems with disinfection by making a national determination that the additional time was required due to the need for capital improvements at each of these small systems. EPA also would need to articulate a rationale for why States should not be provided the statutorily specified 24 months to implement new complex regulatory provisions before PWSs are required to comply. Finally, to implement this approach, the Agency would be required to modify the timing associated with the microbial backstop provision agreed to on July 15, 1997 by the M–DBP Advisory Committee (since a 18 month schedule would not allow time after promulgation for medium surface water systems (10,000–99,999) to collect HAA data prior to having to determine whether disinfection benchmarking is necessary).

EPA requests comment on the issues outlined above in connection with this option. In particular, the Agency requests comment and information to support a finding that compliance by specified systems in 18 months is practicable for some rules, and that extensions to 42 or 60 months for other systems are required to allow for capital improvements.

OPTION 2.—ADD 18 MONTHS TO 1994 PROPOSAL SCHEDULE

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/03	11/03	5/05
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	[1] 11/03	11/03	NA	NA
GWDR (11/00)	NA	NA	([2])	([2])

[1] (If required).
[2] Not addressed.

Option 2 (each date in proposed 1994 compliance strategy extended by 18 months) reflects the fact that the 1996 SDWA amendments generally extended the previous statutory deadlines by 18 months (to three years) and established an overall compliance period not to extend beyond 5 years. This second approach would result in simultaneous compliance for surface water systems. Large surface water systems (those serving at least 10,000) would have three years to comply in accordance with the baseline 3 year compliance period established under Section 1412(b)(10) of the 1996 Amendments.

Small surface water systems (under 10,000) would be required to comply with Stage 1 D/DBPR requirements within five years and applicable LTESWTR requirements within three years. Since the LTESWTR will be promulgated two years after Stage 1 DBPR (in accordance with the new SDWA M–DBP regulatory deadlines discussed above), the net result of this approach is that small surface water systems would be required to comply with both Stage 1 DBPR and IESWTR requirements by the same end date of November 2003, thus assuring simultaneous compliance. This meets the objective of both the reg-neg process and Congress to address risk-risk tradeoffs in implementing new M–DBP requirements.

USEPA believes that providing a five year compliance period for small surface water systems under the Stage 1 DBPR is appropriate and warranted under section 1412(b)(10), which expressly allows five years where necessary for capital improvements. Of necessity, capital improvements require

preliminary planning and evaluation. Such planning requires, perhaps most importantly, identification of final compliance objectives. This then is followed by an evaluation of compliance alternatives, site assessments, consultation with appropriate state and local authorities, development of final engineering and construction designs, financing, and scheduling. In the case of the staggered M–DBP regulatory schedule established as part of the 1996 SDWA amendments, LTESWTR microbial requirements for small systems are required to be promulgated two years after the establishment of Stage 1 DBPR requirements. Under these circumstances, small systems will not even know what their final combined M–DBP compliance obligations are until **Federal Register** publication of the final LTESWTR. As a result, an additional two year period reflecting the two year Stage 1 DBPR/LTESWTR regulatory development interval established by Congress is required to allow for preliminary planning and evaluation which is an inherent component of any capital improvement process. EPA believes this approach is consistent with both the objective of assuring simultaneous compliance and not exceeding the overall statutory compliance period of five years. This same logic would also apply to ground water systems serving at least 10,000, since such systems would need the final GWDR to determine and implement a compliance strategy.

With regard to extended compliance schedules, EPA notes that the economic analysis developed as part of the M–DBP Advisory Committee indicates that there will be capital costs associated with implementation of both the IESWTR as well as the Stage I DBP rules. As outlined above, the 1996 SDWA amendments provide that a two year extension may be provided by EPA at the national level or by States on a case-by-case basis if either EPA or a State determines that additional time is necessary for capital improvements. EPA does not believe there is data presently in the record for either of these rulemakings to support a national determination by the Agency that a two-year extension is justified. EPA requests comment on this issue and, if a commenter believes such an extension is warranted, requests that the comments provide data to support such a position.

Adding 18 months to the 1994 proposed compliance strategy would result in 78 month (six and a half year) compliance period for small ground water systems. This is beyond the overall five year compliance period established by Congress under Section 1412(b)(10). EPA is not aware of a rationale to support this result that is consistent with both the objectives of the reg-neg process and the new SDWA amendments; however, the Agency requests comment on this issue. As discussed below, EPA believes there is a reasonable compliance strategy for addressing ground water systems that reflects the requirements of the SDWA amendments as well as the intent of the reg-neg process.

OPTION 3.—REQUIRE COMPLIANCE WITH ALL RULES WITHIN THREE YEARS OF PROMULGATION

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/01	11/01	11/01
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	[1] 11/03	11/03	NA	NA
GWDR (11/00)	NA	NA	11/03	11/03

[1] (If required).

Under this approach, all systems would be required to comply with Stage 1 DBPR, IESWTR, and LTESWTR within three years of final promulgation. This approach reflects the baseline three year compliance period included as part of the new SDWA compliance provisions. Unlike option 2 outlined above which simply adds an 18 month extension to the 1994 proposed compliance approach, this option is not tied to the 1994 proposal. Rather it applies the new baseline three year compliance period to the staggered M–DBP regulatory development schedule which was also established as part of the 1996 SDWA amendments.

This approach would result in simultaneous compliance for large surface water systems. However, it would eliminate the possibility of simultaneous compliance for small surface water systems and all ground water systems. Contrary to reg-neg objectives and Congressional intent, it would create an incentive for risk/risk tradeoffs on the part of small surface water systems who would be required to take steps to comply with Stage 1 DBPR provisions two years before coming into compliance with the LTESWTR, and for all ground water systems who would be required to take steps to comply with Stage 1 DBPR provisions two years before coming into compliance with the GWDR.

OPTION 4.—MERGE SDWA PROVISIONS WITH NEGOTIATED RULEMAKING OBJECTIVES

Rule (promulgation)	Surface water PWS		Ground water PWS	
	≥10k	<10k	≥10k	<10k
DBP 1 (11/98)	11/01	11/03	11/03	11/03
IESWTR (11/98)	11/01	NA	NA	NA
LTESWTR (11/00)	[1] 11/03	11/03	NA	NA
GWDR (11/00)	NA	NA	11/03	11/03

[1] (If required).

This option combines the principle of simultaneous compliance with the revised compliance provisions reflected in the 1996 SDWA amendments. Large surface water systems would be required to comply with Stage 1 DBPR

and IESWTR within 3 years of promulgation, thus assuring simultaneous compliance and consistency with the baseline statutory compliance period of 3 years. Small surface water systems under 10,000 would comply with the provisions of the Stage 1 DBPR at the same time they are required to come into compliance with the analogous microbial provisions of the LTESWTR. This would result in small surface water systems simultaneously complying with both the LTESWTR and Stage 1 DBPR requirements. Under this approach, small systems would comply with LTESWTR requirements three years after promulgation and Stage 1 DBPR requirements five years after promulgation. For the reasons articulated under option two above, EPA believes providing a five year compliance period under Stage 1 DBPR is appropriate and necessary to provide for capital improvements.

For ground water systems, the 1994 proposed Stage 1 DBPR compliance schedules provided for only one half of the risk-risk tradeoff balance. They did not include a companion rule development and compliance schedules for the analogous microbial provisions of a Ground Water Disinfection Rule. The 1996 SDWA amendments provide an outside date for promulgation of ground water microbial requirements of ''no later than'' May 2002, but leave to EPA the decision of whether an earlier promulgation is more appropriate. In light of the reg-neg emphasis and Congressional affirmation of the principal of simultaneous compliance to assure no risk-risk tradeoffs, EPA has developed a ground water disinfection rule promulgation schedule that will result in a final GWDR by November 2000, the same date as the Congressional deadline for the LTESWTR. Ground water systems would be required to comply with the GWDR by November 2003, three years after promulgation, and to assure simultaneous compliance with DBP provisions, such systems would be required to comply with Stage 1 DBPR requirements by the same date. Again, for the reasons outlined under option 2, USEPA believes a five year compliance period for ground water systems is necessary and appropriate.

Option 4 assures that ground water systems will be required to comply with Stage 1 DBPR provisions at the same time that they comply with the microbial provisions of the Ground Water Disinfection Rule (GWDR). Successful implementation of this option requires that EPA develop and promulgate the GWDR by November 2000 as indicated above. The Agency recognizes that this is an ambitious schedule, but believes it is necessary to meet the twin objectives of simultaneous implementation and consistency with the new statutory compliance provisions of the 1996 SDWA. In evaluating this option, the Agency also considered the possibility of meeting these twin objectives in a somewhat different fashion by delaying final promulgation of the Stage I DBP rule as it applies ground water systems until the promulgation of the GWDR. This alternative possibility would assure simultaneous compliance and also provide a ''safety net'' in the event that the GWDR November 2000 promulgation schedule is delayed. EPA is concerned, however, that this approach may not meet or be consistent with new SDWA requirements which provide that the Stage I DBPR be promulgated by November 1998. The Agency requests comment on this issue.

Recommendation

EPA has evaluated each of the considerations identified in Options 1 through 4. On balance, the Agency believes that Option 4 is the preferred option. The primary reasons are (1) to allow States at least two years to adopt and implement M–DBP rules consistent with new two year time frame provided for under the 1996 SDWA amendments, (2) to match the compliance schedules for the LTESWTR and Stage 1 DBPR for small (<10,000 served) surface water systems to allow time for capital improvements and addressing risk-risk tradeoff issues, and (3) to assure that all ground water systems simultaneously comply with newly applicable microbial and Stage 1 DBPR requirements on the same compliance schedule provided for small surface water systems.

Request for Comments

EPA requests comment on both the compliance schedule options discussed above and on any other variations or combinations of these options. EPA also requests comment on its preferred option 4 and on the underlying rationale for allowing a five year compliance schedule for ground water and small surface water systems under the Stage 1 DBPR.

B. Compliance Violations and State Primacy Obligations

A public water system that fails to comply with any applicable requirement of the SDWA (as defined in 1414 (I)) is subject to an enforcement action and a requirement for public notice under the provisions of section 1414. Applicable requirements include, but are not limited to, MCLs, treatment techniques, monitoring and reporting. These regulatory requirements are set out in 40 CFR l41.

The SDWA also requires States that would have primary enforcement responsibility for the drinking water regulations (''primacy'') to adopt regulations that are no less stringent than those promulgated by EPA. States must also adopt and implement adequate procedures for the enforcement of such regulations, and keep records and make reports with respect to these activities in accordance with EPA regulations. 5 U.S.C. 1413. EPA may promulgate regulations that require States to submit reports on how they intend to comply with certain requirements (e.g., how the State plans to schedule and conduct sanitary surveys required by the IESWTR), how the State plans to make certain decisions or approve PWS-planned actions (e.g., approve significant changes in disinfection under the IESWTR or approve Step 2 DBP precursor removals under the enhanced coagulation requirements of the Stage I DBPR), and how the State will enforce its authorities (e.g., correct deficiencies identified by the State during a sanitary survey within a specified time). The primacy regulations are set out in 40 CFR 142.

EPA drafted requirements for both the PWSs (part 141) and the primacy States (part 142) in the proposed rules. EPA is requesting comments on whether there are elements of the Advisory Committee's recommendations in this Notice that should be treated as applicable requirements for the PWS and included in part l41 as enforceable requirements. Similarly, EPA requests comments on whether there are elements of the Advisory Committee's recommendations in this Notice that should be treated as requirements for States and included in part 142 as primacy requirements.

C. Compliance With Current Regulations

EPA reaffirms its commitment to the current Safe Drinking Water Act regulations, including those related to microbial pathogen control and disinfection. Each public water system must continue to comply with the current rules while new microbial and disinfectants/disinfection byproducts rules are being developed.

M. Disinfection Studies

1. New *Giardia* Inactivation Studies at High pH Levels

The Surface Water Treatment Rule (SWTR) requires plants treating surface

water to meet minimum inactivation/removal requirements for *Giardia* cysts and viruses. Under the SWTR, the concept of CT values (disinfectant residual concentration (C) multiplied by contact time (T)) is used for estimating inactivation efficiency of disinfection practices in plants. As a supplement to the rule, USEPA published a guidance manual document entitled ''Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources'' (USEPA 1991a) [SWTR Guidance Manual]. In this manual, CT tables (Log inactivation versus CT values under different environmental conditions) are provided to utilities as a guidance in carrying out the disinfection requirements.

The SWTR Guidance Manual did not include CT values at pH values above 9 due to the limited research results available at the time of rule promulgation. pH values above 9 mainly exist in plants with lime softening processes. An approach for extending the existing CT tables in the SWTR Guidance Manual to the upper pH boundary (pH 11.5) that may occur in some plants is presented below. With this approach, the latest available data reported by Logsdon et al. (1994) was used as a basis for CT values at high pH values by applying a linear regression to Logsdon's experimental results in laboratory water and a safety factor to cover the variability in natural water.

Analysis of Logsdon's Data: Logsdon et al. (1994) performed *Giardia* inactivation experiments with free chlorine in both laboratory and natural waters at 5°C and at pH values of 9.5, 10.5, and 11.5. The analysis of MW-s's data is performed with the following assumptions:

1. Since the experimental data of MW-s et al. for CT values vs. log inactivation are relatively scattered, a sophisticated model will not improve the result of simulation. Rather, a linear regression was used to fit these data points, by assuming the dilution coefficient n=1 in the conventional Watson's Law (first-order kinetics).

2. Data points for inactivation greater than 3-logs in the Logsdon et al. report are not included in the linear regression because of their uncertainty.

3. Data points for natural water have a greater variability than those for laboratory water. Also, CT tables in the SWTR Guidance Manual were developed solely based on tests using laboratory water. To ensure consistency, therefore, data points for natural water from the Logsdon et al. study were not used. However, a safety factor was applied to the CT values estimated from laboratory data to reflect the variability of inactivation results in natural water.

4. To be consistent, the safety factor of CT values at pH > 9 is assumed to be the same as that for the existing CT values in the SWTR Guidance Manual at pH ≤ 9. To appropriately quantify a safety factor being applied to obtain those existing CT values in the SWTR Guidance Manual, the previous data base for pH ≤ 9 was reevaluated and interpreted in the same manner as that for pH > 9 (using a linear regression and a safety factor). Subsequently, the safety factor was set at a value such that, if multiplied by the CT values estimated by a linear regression, the resultant CT values would match the existing CT values in the SWTR Guidance Manual.

5. For determination of a safety factor, data from the following studies were considered: Jarroll et al. (1981), Rice et al. (1982), Hibler et al. (1987), and Rubin et al. (1989) [Those data were used as a basis for developing the existing CT values in the SWTR Guidance Manual.]. Only the data from Jarroll et al. (1981) were used in the linear regression because the protocols or conditions in other studies are not comparable to those used in the study by Logsdon et al. (1994), as noted below:

(1) The study by Hibler et al. (1987) was based on animal infectivity tests. Excystation was used in the study by Logsdon et al. (1994).

(2) The study by Rubin et al. (1989) was conducted only at 15°C while the study by Logsdon et al. (1994) was performed at 5°C.

(3) No data for control excystation was shown in the study by Rice et al. (1982) and therefore this data was not used in the regression analysis.

The data from Jarroll et al. (1981) for chlorine concentrations of 4 and 8 mg/L were not used in the regression analysis because the chlorine residual in the study by Logsdon et al. (1994) was no higher than 2.1 mg/L.

The Results of Data Analysis: The data from Jarroll et al. (1981) pertaining to log inactivation versus CT values are plotted in Figures 8—10 for pH values of 6, 7, and 8, respectively. Because Jarroll et al. found that essentially no inactivation at pH values of 6–8 was observed in control samples in which no disinfectant was added within 60 minutes (i.e., CT = 0, log inactivation = 0), the intercept of the linear regression line was zero.

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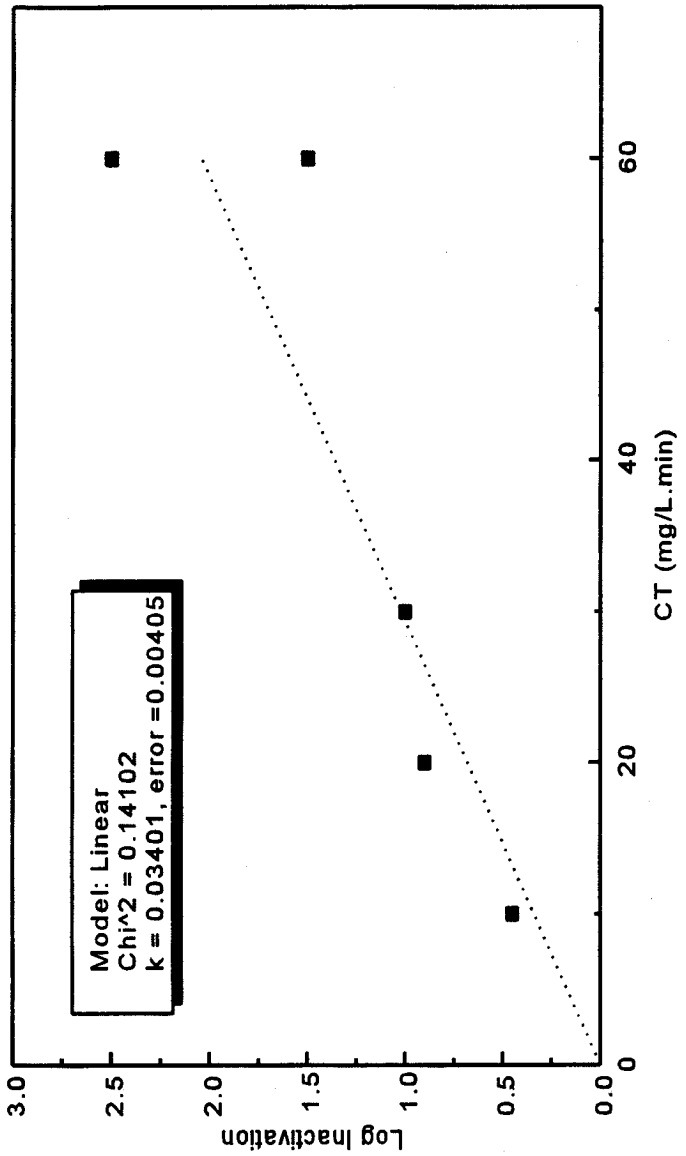

Figure 8: *Giardia* Inactivation with Free Chlorine @ pH 6 & 5 °C
(Data from Jarroll et al., 1981)

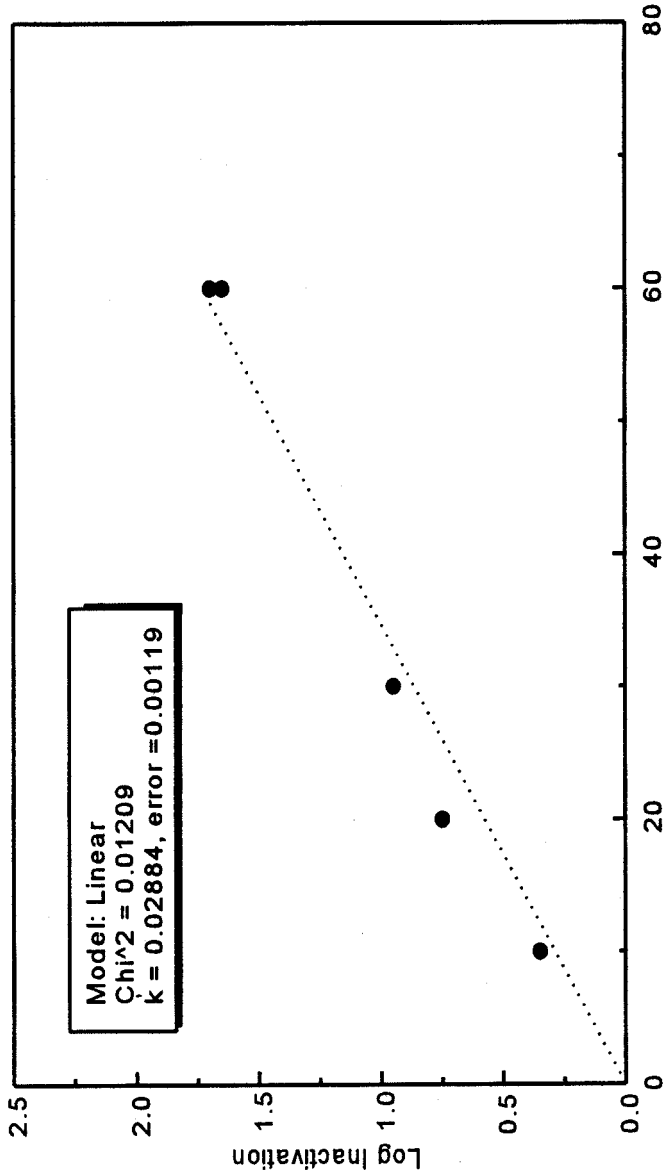

Figure 9: *Giardia* Inactivation with Free Chlorine @ pH 7 & 5 °C
(Data from Jarroll et al., 1981)

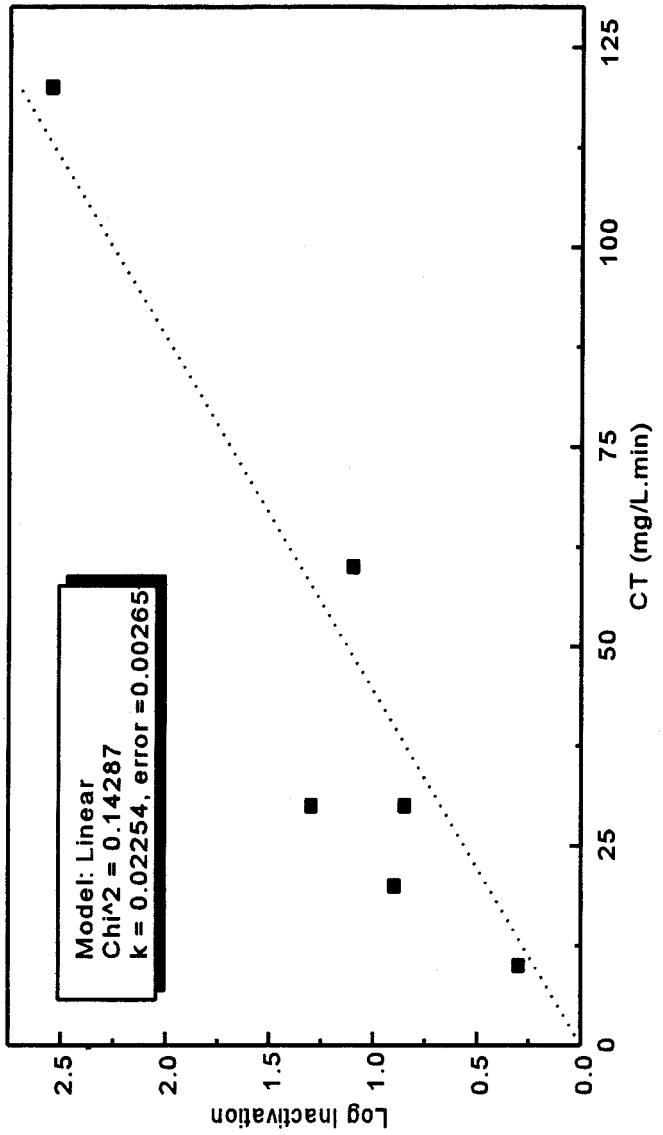

Figure 10: *Giardia* Inactivation with Free Chlorine @ pH 8 & 5 °C (Data from Jarroll et al., 1981)

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The regression results with the values of the Watson coefficient k are shown in each figure. Based on these results, CT values for a designated log inactivation at the three different pH values are estimated and shown in Table 6. By trials, it is found that if a safety factor of 1.5 is applied to those estimated CT values, the resulting CT values approximate the values in the SWTR Guidance Manual for chlorine concentration ≤ 2 mg/L: at pH 6, the safety-factored CT values are slightly higher than those in the SWTR Guidance Manual; at pH 7, the safety-factored CT values are about in the middle of the range of CT values in the SWTR Guidance Manual; at pH 8, the safety-factored CT values are in the low range of CT values in the SWTR Guidance Manual. Therefore, a safety factor of 1.5 appears appropriate for the development of CT tables at higher pHs.

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Table 6: Comparison of Estimated CT Values (Based on the Jarroll's Study) and Values in the Manual for C ≤ 2 mg/L for pH=6-8 at 5 °C

pH	Log Inactivation	Estimated CT, mg-min/L	Estimated CT x 1.5 Safety Factor	CT in Guidance Manual for C ≤ 2 mg/L
pH=6	0.5	14	21	16-19
	1	29	43	32-39
	1.5	44	66	49-58
	2	58	87	65-77
	2.5	73	110	81-97
	3	88	132	97-116
pH=7	0.5	17	26	23-28
	1	34	51	46-55
	1.5	52	78	70-83
	2	69	104	93-110
	2.5	86	129	116-138
	3	103	154	139-165
pH=8	0.5	23	34	33-41
	1	45	68	66-81
	1.5	68	102	99-122
	2	91	136	132-162
	2.5	114	171	165-203
	3	136	204	198-243

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The Logsdon data for *Giardia* inactivation with chlorine are shown in Figures 11–13 for pH values of 9.5, 10.5, and 11.5, respectively. Since Logsdon et al. (1994) also observed that little or no inactivation was caused by a high pH itself (i.e., non-disinfected lime softened water) in at least 6 hours, the intercept of the linear regression line should be zero. Based on the determinant k values indicated in each Figure, CT values required for inactivation in the range of 0.5–3 log at pH values of 9.5–11.5 and temperature of 5°C are estimated and tabulated in Table 7. To evaluate the adequacy of the safety factor value (1.5), the line of log inactivation versus the safety-factored CT values is also shown in each of Figures 11–13. It can be seen from Figures 11 and 12 that most data points for natural water are above the safety-factored line, and few points are near the line, indicating the safety factor of 1.5 is appropriate for the establishment of CT tables for pH > 9.

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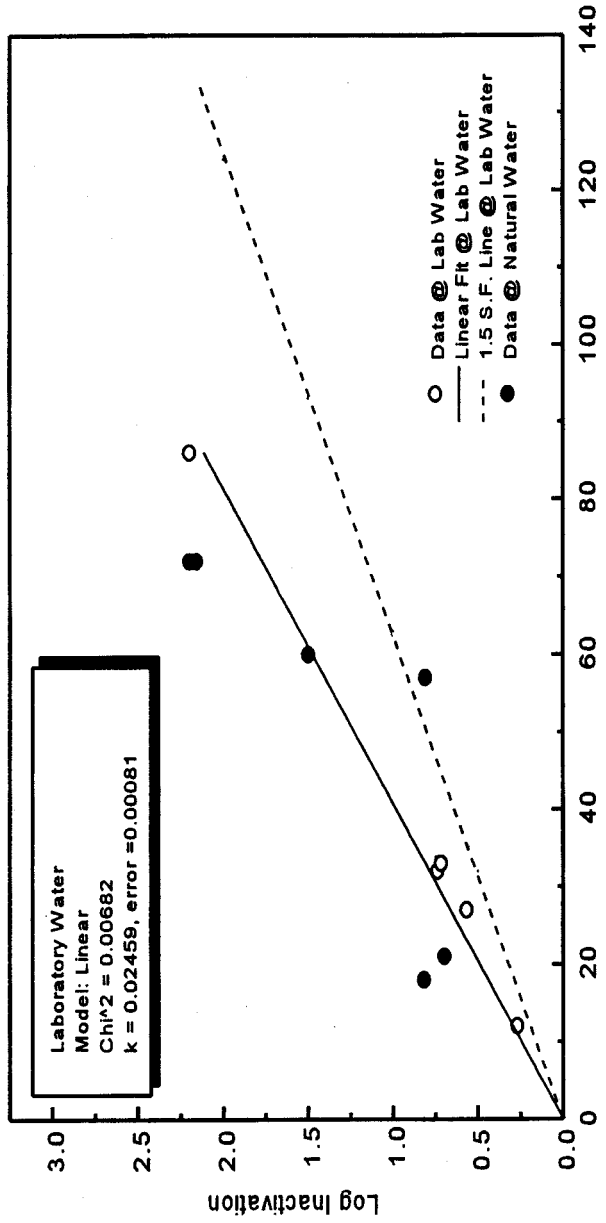

Figure 11: *Giardia* Inactivation with Free Chlorine @ pH 9.5 & 5 °C
(Data from Logsdon et al., 1994)

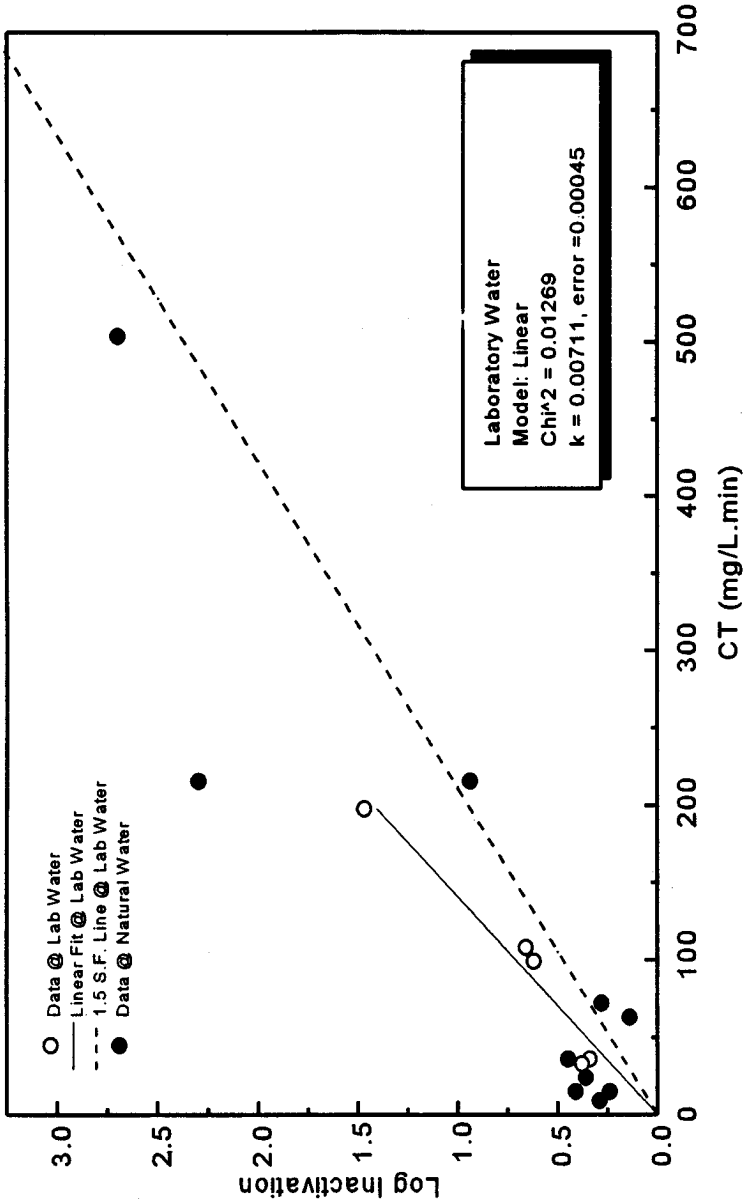

Figure 12: *Giardia* Inactivation with Free Chlorine @ pH 10.5 & 5 °C
(Data from Logsdon et al., 1994)

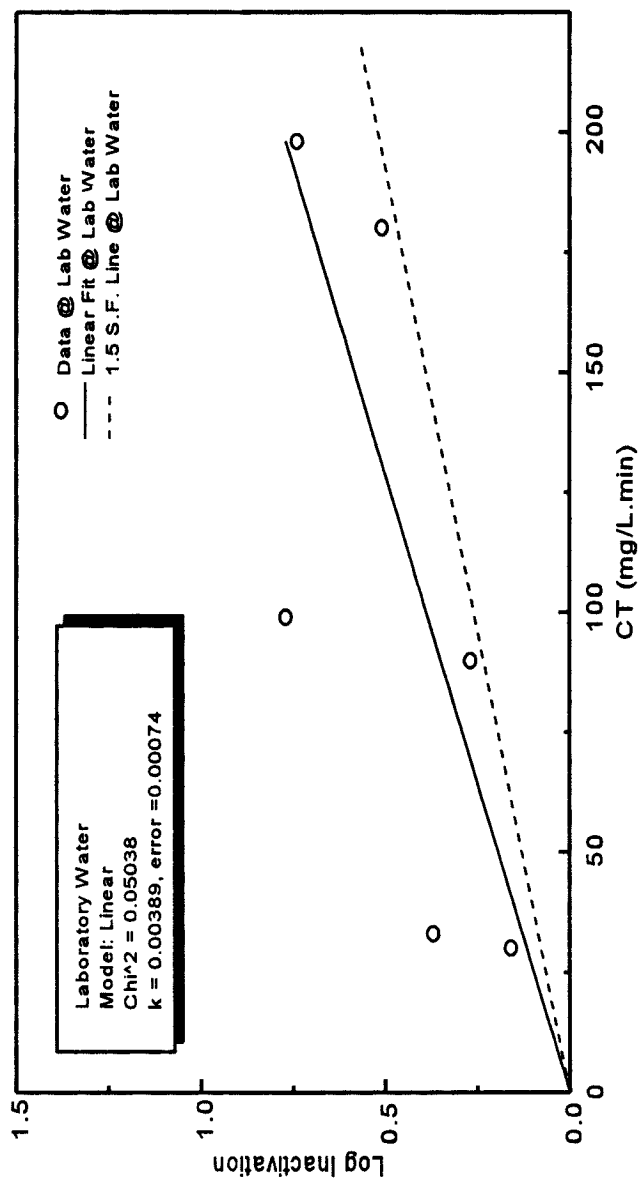

Figure 13: *Giardia* Inactivation with Free Chlorine @ pH 11.5 & 5 °C. (Data from Logsdon et al., 1994)

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TABLE 7.—ESTIMATED CT VALUES FOR pH=9.5–11.5 AT C ≤ 2 mg/L AND AT 5°C—BASED ON THE LOGSDON'S STUDY FOR LABORATORY WATER

pH	Log inactivation	Estimated CT mg-min/L	Estimated CT × 1.5 S.F.
pH=9.5 ...	0.5	21	32
	1	42	63
	1.5	62	93
	2	83	124
	2.5	104	156
	3	125	188
pH=10.5	0.5	70	105
	1	141	212
	1.5	211	316
	2	282	423

TABLE 7.—ESTIMATED CT VALUES FOR pH=9.5–11.5 AT C ≤ 2 mg/L AND AT 5°C—BASED ON THE LOGSDON'S STUDY FOR LABORATORY WATER—Continued

pH	Log inactivation	Estimated CT mg-min/L	Estimated CT × 1.5 S.F.
	2.5	352	528
	3	422	633
pH=11.5	0.5	128	192
	1	256	384
	1.5	385	578
	2	513	770
	2.5	641	962
	3	769	1154

By comparing the data in Table 6 and 10, it is seen that estimated CT values at pH 9.5 are consistently lower than those at pH 8 in the SWTR Guidance Manual. To maintain the consistency of an increasing trend of CT values with an increasing pH and be conservative for compliance purposes, the mathematical model described in the SWTR Guidance Manual (equation 15 in Appendix F) by Clark and Regli (1993) is used to extend the existing CT tables in the SWTR Guidance Manual to pH=9.5, e.g., CT=60 mg/L for 0.5 log inactivation with 1 mg/L of chlorine at 5°C. As proposed in the SWTR Guidance Manual, the equation can be directly applied to estimate CT values for 0.5 and 5°C, and a twofold decrease in CT values for every 10°C increase in temperature can be assumed when it is higher than 5°C. Consequently, the CT

values for *Giardia* inactivation with free chlorine at pH 9.5 are computed and shown in Table 8.

The same temperature correction factor above is used to estimate CT values for pH values of 10.5 and 11.5 at temperature from 5 to 25°C, and 1.5 of temperature factor is applied to convert CT values at 5°C to those at 0.5°C. Subsequently, the safety-factored CT values for *Giardia* inactivation with free chlorine were estimated and summarized in Tables 11 and 13 for pH values of 10.5 and 11.5, respectively. It should be mentioned that although the level of chlorine residual (the C value) may affect CT values shown in Tables 12 and 13, it is recommended that those values are only applicable to a C value up to 3 mg/L, at least until more research data become available.

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Table 8: CT Values (mg-min/L) for Inactivation of Giardia by Free Chlorine at pH 9.5

C, mg/L	Log Inactivation at 0.5 °C						C, mg/L	Log Inactivation at 5 °C					
	0.5	1	1.5	2	2.5	3.0		0.5	1	1.5	2	2.5	3.0
0.4	74	149	223	297	371	446	0.4	53	105	158	210	263	315
0.6	79	158	237	316	395	474	0.6	56	112	168	224	279	335
0.8	82	165	247	330	412	494	0.8	58	117	175	233	292	350
1	85	170	256	341	426	511	1	60	121	181	241	302	362
1.2	88	175	263	350	438	525	1.2	62	124	186	248	310	372
1.4	90	179	269	358	448	538	1.4	63	127	190	254	317	381
1.6	91	183	274	366	457	549	1.6	65	129	194	259	324	388
1.8	93	186	279	372	465	558	1.8	66	132	198	264	329	395
2	95	189	284	378	473	567	2	67	134	201	268	335	402
2.2	96	192	288	384	480	575	2.2	68	136	204	272	339	407
2.4	97	194	292	389	486	583	2.4	69	138	206	275	344	413
2.6	98	197	295	393	492	590	2.6	70	139	209	278	348	418
2.8	99	199	298	398	497	597	2.8	70	141	211	282	352	422
3	100	201	301	402	502	603	3	71	142	213	285	356	427

Continued

C, mg/L	Log Inactivation at 10 °C						C, mg/L	Log Inactivation at 15 °C					
	0.5	1	1.5	2	2.5	3.0		0.5	1	1.5	2	2.5	3.0
0.4	35	70	105	140	175	210	0.4	26	53	79	105	131	158
0.6	37	75	112	149	186	224	0.6	28	56	84	112	140	168
0.8	39	78	117	156	194	233	0.8	29	58	88	117	146	175
1	40	80	121	161	201	241	1	30	60	90	121	151	181
1.2	41	83	124	165	207	248	1.2	31	62	93	124	155	186
1.4	42	85	127	169	211	254	1.4	32	63	95	127	159	190
1.6	43	86	129	173	216	259	1.6	32	65	97	129	162	194
1.8	44	88	132	176	220	264	1.8	33	66	99	132	165	198
2	45	89	134	178	223	268	2	33	67	100	134	167	201
2.2	45	91	136	181	226	272	2.2	34	68	102	136	170	204
2.4	46	92	138	183	229	275	2.4	34	69	103	138	172	206
2.6	46	93	139	186	232	278	2.6	35	70	104	139	174	209
2.8	47	94	141	188	235	282	2.8	35	70	106	141	176	211
3	47	95	142	190	237	285	3	36	71	107	142	178	213

Table 8: CT Values (mg-min/L) for Inactivation of *Giardia* by Free Chlorine at pH 9.5

Continued

C, mg/L	Log Inactivation at 20 °C						C, mg/L	Log Inactivation at 25 °C					
	0.5	1	1.5	2	2.5	3.0		0.5	1	1.5	2	2.5	3.0
0.4	21	42	63	84	105	126	0.4	18	35	53	70	88	105
0.6	22	45	67	89	112	134	0.6	19	37	56	75	93	112
0.8	23	47	70	93	117	140	0.8	19	39	58	78	97	117
1	24	48	72	97	121	145	1	20	40	60	80	101	121
1.2	25	50	74	99	124	149	1.2	21	41	62	83	103	124
1.4	25	51	76	102	127	152	1.4	21	42	63	85	106	127
1.6	26	52	78	104	129	155	1.6	22	43	65	86	108	129
1.8	26	53	79	105	132	158	1.8	22	44	66	88	110	132
2	27	54	80	107	134	161	2	22	45	67	89	112	134
2.2	27	54	81	109	136	163	2.2	23	45	68	91	113	136
2.4	28	55	83	110	138	165	2.4	23	46	69	92	115	138
2.6	28	56	84	111	139	167	2.6	23	46	70	93	116	139
2.8	28	56	84	113	141	169	2.8	23	47	70	94	117	141
3	28	57	85	114	142	171	3	24	47	71	95	119	142

Table 9: CT Values (mg-min/L) for Inactivation of *Giardia* by Free Chlorine at pH 10.5

Temp. °C	Log Inactivation @ pH=10.5					
	0.5	1	1.5	2	2.5	3.0
0.5	131	265	395	395	529	660
5	105	212	316	316	423	528
10	79	159	237	237	317	396
15	53	106	158	158	212	264
20	39	80	119	119	159	198
25	26	53	79	79	106	132

Table 10: CT Values (mg-min/L) for Inactivation of *Giardia* by Free Chlorine at pH 11.5

Temp. °C	Log Inactivation @ pH=11.5					
	0.5	1	1.5	2	2.5	3.0
0.5	240	480	723	963	1203	1443
5	192	384	578	770	962	1154
10	144	288	434	578	722	866
15	96	192	289	385	481	577
20	72	144	217	289	361	433
25	48	96	145	193	241	289

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In summary, the CT table for *Giardia* inactivation with free chlorine at pH 9.5 was developed by using the same approach in the SWTR Guidance Manual for the existing CT tables at lower pH values. For the development of CT tables at pH values of 10.5 and 11.5, the data reported by Logsdon et al. (1994) was used with a linear regression multiplied by a safety factor of 1.5. The new CT values are shown in Tables 11, 12, and 13 for pH values of 9.5, 10.5, and 11.5, respectively. USEPA solicits comment on the approach taken and whether the CT values shown in Tables 11, 12 and 13 are appropriate for revising existing guidance for estimating inactivation efficiencies for chlorine at pHs above 9. USEPA also solicits comment on other approaches for developing criteria by which systems could estimate inactivation efficiencies at pHs above 9.

2. Effectiveness of Different Disinfectants on *Cryptosporidium*

When the ESWTR was proposed in 1994, USEPA recognized that chlorine disinfectants were relatively ineffective in inactivating *Cryptosporidium*, but was not certain if alternative disinfectants might be more effective than chlorine. No public comment addressed this issue directly. Studies since the proposal have confirmed the ineffectiveness of chlorine species, such as free chlorine and monochloramine, for the practical inactivation of *Cryptosporidium*. However, new data suggest that sequential disinfection with free chlorine followed by monochloramine can achieve a greater degree of *Cryptosporidium* inactivation than by chlorine alone. Moreover, ozone and chlorine dioxide have been found to be much more effective than chlorine. Sequential disinfection such as ozone or chlorine dioxide followed by one of the chlorine species appears more powerful than either disinfectant alone in inactivating *Cryptosporidium*. The following data detail the inactivation of *Cryptosporidium* by individual disinfectants, as well as by sequential disinfectants.

The purpose of presenting this data in this section is to provide the public opportunity to comment on whether there is (a) sufficient information available for generating CT tables to estimate log inactivation of *Cryptosporidium*, comparable to what was done for *Giardia* under the SWTR, and (b) sufficient data to conclude that chlorination, at levels commonly practiced by utilities, is virtually ineffective for inactivating *Cryptosporidium*. Both of these issues relate to USEPA's rationale for using *Giardia* as the key target organism for defining the disinfection benchmark (see Section D).

Table 11a summarizes the data on disinfection of *Cryptosporidium* with

chlorine species and ultraviolet radiation (UV). The results from studies with free chlorine indicate that some inactivation of *C. parvum* could be achieved at relatively high doses of chlorine (i.e., >1,000 mg/L of chlorine bleach and 80 mg/L of free chlorine) (Korich et al., 1990a; Ransome et al., 1993) and a high CT value (7,200 mg-min/L) (Korich et al., 1990a; Lykins et al., 1992). However, this common water disinfectant has been conclusively shown to be ineffective for inactivation of *C. parvum* oocysts at practical plant doses (<6 mg Cl_2/L) or CT values (Korich et al., 1990a; Ransome et al., 1993; Finch et al., 1997). The same is essentially true for monochloramine (Lykins et al., 1992; Finch et al., 1997) and the oxidant of permanganate (Finch et al., 1997). Therefore, it is unlikely that significant inactivation of *Cryptosporidium* will occur in water treatment plants with the single addition of these disinfectants at currently used levels.

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Table 11a: Summary of Literature Data on Inactivation of Waterborne *Cryptosporidium parvum* - with Free Chlorine, Chloramine, and Ultraviolet Radiation (UV)

Disinfectant	Test Condition	Analytical method	Inactivation	Reference
Free Chlorine	CT=1.44x10^6 (1000 mg/l, 24 hrs) @ pH 9.5, 10 °C	In vitro excystation	< one log	Ransome et al., 1993
	Practical plant doses (5 mg/L)	Viability in Neonatal BALB/c mice	Ineffective	Korich et al., 1990a
	CT=7,200 (80 mg/L, 90 min.)	Viability in Neonatal BALB/c mice	One log	Korich et al., 1990b
	CT=7,200 @ pH 7, 25 °C		2 log	Lykins et al., 1992
	CT=480 (2 mg/L, 240 min.) @ pH 6, 22 °C	Infectivity in Neonatal CD-1 mice	0.5 log	Finch et al., 1997
	CT=960 (4 mg/L, 240 min.) @ pH 8, & 22 °C	Infectivity in Neonatal CD-1 mice	Ineffective	
Chloramine	CT=7,200 @ pH 7, 25 °C		2 log	Lykins et al., 1992
	CT=4320 (3 mg/L, 24 hrs.) @ pH 7, 10 °C	In vitro Excystation	0.6 log	Ransome et al., 1993
	CT=960 (4 mg/L, 240 min.) @ pH 8, 22 °C	Infectivity in Neonatal CD-1 mice	Ineffective	Finch et al., 1997
UV	In a prolonged period (120 min)	Animal infectivity	Effective	Lorenzo-Lorenzo et al., 1993
	80 mW-s/cm^2 @ pH 7, 10 °C	In vitro excystation	1 log	Ransome et al., 1993
	8,748 mW-s/cm^2 on Oocysts captured on 2 μm filter	In vitro excystation	2 log	Campbell et al., 1995
	1,280 - 41,400 mW-s/cm^2 in a batch reactor	Infectivity in Neonatal CD-1 mice	Ineffective	Finch et al., 1997
	8,000 mW-s/cm^2 on Oocysts captured on 2 μm filter	Infectivity of BALB/c mice	> 3 log	Clancy et al., 1997

As indicated in Table 11a, the literature data on *Cryptosporidium* inactivation with UV appear controversial because of different experimental protocols used by different investigators. Finch et al. (1997) found that UV was ineffective in inactivating *C. parvum* suspended in a batch reactor. However, significant inactivation was observed when the oocysts were captured in 2cm filters and exposed to a preset UV irradiation dose (Campbell et al., 1995; Clancy et al., 1997). More data are needed to evaluate the practical application of UV for inactivation of *Cryptosporidium* oocysts. Also, of interest are possible synergistic effects with UV application followed by residual disinfectants.

Table 11b summarizes the findings of inactivation of *Cryptosporidium* with ozone. The data obtained from bench-scale tests with oxidant-demand-free laboratory water indicate that for CT values between 1.2–23.0 mg-min/L, the range of inactivation was 0.5 to 5 log at temperatures of 5 to 25 °C and at pH values of 7 to 8 (Peeters et al., 1989; Korich et al., 1990a,b; Parker et al., 1993; Ransome et al., 1993; Finch et al., 1994 & 1997). The variability demonstrated in these results is influenced by the differences in test procedures used by different researchers, i.e., the different measures of *Cryptosporidium* inactivation (infectivity, excystation, etc.) and the different methods of CT calculations (initial ozone dose, average ozone concentration, and ozone residual).

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Table 11b: Summary of Literature Data on Inactivation of Waterborne *Cryptosporidium* Oocysts - with Ozone*

Water Type	Test Condition	Analytical method	Inactivation	Reference
Laboratory Water (Bench-Scale)	CT= 4.1-4.6 @ room temp.	Viability in Neonatal Swiss OF1	2 log	Peeters et al., 1989
	CT=5 (constant residual of 1.0 mg/L, 5 min) @ pH=7, 25 °C.	Viability in Neonatal BALB/c mice	2 log	Korich et al., 1990a,b
	CT=10 (residual 1.0 mg/L) @ 22 °C	DAPI/PI	0.5 log	Parker et al., 1993
	CT=5-19 (residual 0.3-1.3) @ pH 7, 10 °C	In vitro excystation	1-1.5 log	Ransome et al., 1993
	CT=2.5-23 (ave. Residual 0.38-2.3 mg/L) @ pH 7, 22 °C	Infectivity in Neonatal CD-1 mice	0.6-4.7 log	Finch et al., 1997
	CT=2.8 (0.75 mg/L, 3.7 min.) @ pH=6, 22 °C	Same above	1.5 log	
	CT=1.2 (0.5 mg/L, 2.4 min.) @ pH=8, 22 °C	Same above	0.5 log	
Natural Water (Pilot-Scale)	CT=10-15 @ pH 7, 15 °C, 0.3 NTU, Alk=10 mg $CaCO_3$/L, TOC=1.5 mg/L		3 log	Danial et al., 1993
	CT=6, @ pH 8, 24 °C, 0.5 NTU, Alk=59 mg $CaCO_3$/L, TOC=1.7 mg/L	Infectivity in Neonatal BALB/c mice	2 log	Miltner et al., 1997

Therefore, caution should be used when comparing the results from one study to another. For instance, a CT value of 10 mg-min/L for 0.5-log inactivation was obtained from the study conducted by Parker et al. (1993), who used vital dyes to evaluate the viability of *Cryptosporidium*. This result is incomparable to the data shown in Table 11b. Subsequently, Korich et al. (1993) found that vital stains are of questionable value for determining oocyst viability.

In another example, in a series of experiments at pH 7 and at temperatures of 5–22 °C, Finch et al. (1997) found a 45–92% reduction in ozone concentration at initial residuals of 0.6–2.2 mg/L and contact times of 5–15 minutes. Parker et al. (1993) reported that the *Cryptosporidium* inactivation level was greater when the ozone concentration was maintained at a constant level (i.e., through a batch mode reactor), compared to when the same initial ozone dose was allowed to decay during the same contact time. Both Finch et al. (1994) and Parker et al. (1993) found that an increase in temperature caused a higher inactivation at the same ozone residual and the same contact time. It appears that an increase of 15 °C decreases by half the CT values needed for a 2-log inactivation.

Owens et al. (1994) observed that *C. muris* is slightly more resistant to ozone than *C. parvum*, and proposed that *C. muris* be used as a surrogate model for *C. parvum*. However, the data that support this hypothesis are very limited.

Two pilot-scale studies with natural waters have been performed (Danial et al., 1993; Miltner et al., 1997). The CT values of ozone required to achieve 2- and 3-logs inactivation of *Cryptosporidium* were 6.0 mg-min/L (pH 8, 24 °C) (Miltner et al., 1997) and 10–15 mg-min/L (pH 7, 15 °C) (Danial et al., 1993). It appears that higher CT values are required in natural water for inactivation of *Cryptosporidium* than in laboratory water; this may be attributed to the existing oxidant demands in natural water or other factors. Danial et al. (1993) indicated that the ozone residual for a given dose rapidly decomposed as the pH was increased from 7 to 9 during lime addition. This finding implies that if ozonation is practiced in lime-softening water plants, it will be necessary to adjust the pH downstream.

When inactivation of *Cryptosporidium* oocysts is compared with that of *Giardia* cysts with similar test protocols, *C. parvum* is approximately 10 times more resistant to ozone than *G. lamblia* in laboratory water (Finch et al., 1994) and *G. muris* in natural water (Owens et al., 1994; Miltner et al., 1997). These findings imply that the use of ozone cannot be expected to significantly inactivate *Cryptosporidium* at the concentration and contact times employed in inactivating *Giardia* in water treatment practices.

Table 11c summarizes the findings of *Cryptosporidium* inactivation with chlorine dioxide. For CT values between 23–213 mg-min/L, the range of inactivation is 0.5–3.2 log or higher at temperatures of 10–25 °C and at pH values of 7–8 in laboratory water (Peeters et al., 1989; Korich et al., 1990b; Ransome et al., 1993; Finch et al., 1995 & 1997). Similar to ozone, chlorine dioxide is also unstable in the water. In 0.05 M phosphate buffer water at pH 8 and 22 °C, Finch et al. (1997) found that a 49–99% reduction in chlorine dioxide concentrations occurs after 15–120 minutes at initial residuals of 0.36–3.3 mg/L. LeChevallier et al. (1997b) recently performed a pilot-scale study in a natural water by evaluating viability of oocysts with both an in-vitro excystation assay and a tissue culture infectivity. While the difference in results with the two methods was not shown, the study reported that a CT value of 40 mg-min/L results in 1-log inactivation of oocysts at pH 8.0 and 20°C, and a 0.5-log inactivation at pH 6.0. The study also revealed that a temperature reduction from 20 to 10 °C decreases the effectiveness of chlorine dioxide by 40%.

The existing data show chlorine dioxide as an effective disinfectant for *Cryptosporidium* inactivation. However, CT values required for *Cryptosporidium* inactivation appear much higher than those for same log inactivation of *Giardia* under comparable water conditions (Lisle and Rose, 1995). Since the 1994 D/DBP proposed rule has set the maximum contaminant levels for chlorine dioxide and chlorite (by-product of chlorine dioxide), at 0.8 mg/L and 1 mg/L, respectively, the use of chlorine dioxide may be limited for the inactivation of *Cryptosporidium*.

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Table 11c: Summary of Literature Data on Inactivation of Waterborne *Cryptosporidium parvum* - with Chlorine Dioxide

Water Type	Test Condition	Analytical method	Inactivation	Reference
Laboratory Water (Bench-Scale)	CT=6.6 (residual=0.22 mg/L, 30 min.) @ room temp.	Viability in Neonatal Swiss OF1	1.2 log	Peeters et al., 1989
	CT=60-80 @ pH 7, 25 °C,	Viability of Neonatal BALB/c mice	1-1.4 log	Korich et al., 1990b
	CT=75 (residual 5 mg/L, 15 min) @ pH 7, 10 °C	In vitro excystation	>1 log	Ransome et al., 1993
	CT= 27-30, 40, & 70 @ pH 7, 22 °C	Infectivity in Neonatal CD-1 mice	1, 2, & 3 log	Finch et al., 1995
	CT=168 (1.4 mg/L, 120 min.) @ pH=8, 22 °C	Infectivity in Neonatal CD-1 mice	1.7 log	Finch et al., 1997
Natural Water (Pilot-Scale)	CT=40 @ Pilot scale, TOC=2-4 mg/L, 20 °C	In vitro excystation and tissue culture infectivity	1 log @ pH 8 0.18 log @ pH 6	LeChevallier et al., 1997b

Table 12 summarizes the results from Finch et al. (1997). Finch et al. found that sequential disinfection of *C. parvum* oocysts by different disinfectants is more effective than that indicated by the effectiveness of each disinfectant from independent studies, i.e., the effect is synergistic. According to their current report, greater than 2.9-log inactivation of oocysts can be achieved when *C. parvum* is exposed to 0.75 mg/L initial ozone residual for 3.7 minutes and then 2.0 mg/L free chlorine residual for 265 minutes (pH 6). Based on the additive effects of ozone and free chlorine alone under similar conditions, a 2.0-logs inactivation is expected. Similarly, the inactivation by monochloramine following ozonation is increased by 1.5 log-units when compared with either ozone or monochloramine alone.

Additional 1.2-log inactivation due to the synergism of chlorine dioxide and free chlorine has also been obtained at pH 8. Furthermore, sequential exposure of *C. parvum* oocysts to free chlorine followed by a monochloramine (pH 8.0) reduces infectivity by 0.6 log. Since the expected inactivation by either chlorine species at pH 8 is virtually zero, there is a synergism between free chlorine and monochloramine. It should be noted that combinations of chlorine species with other disinfectants may stimulate the formation of chlorate (Siddiqui et al., 1996) or other toxic disinfectant byproducts. Also, the synergistic effect with sequential disinfectants has only been observed in bench-scale studies in a single laboratory. Nevertheless, such findings suggest new strategies for the effective inactivation of *Cryptosporidium*. For a practical application, further investigations are being conducted at a wider range of water quality conditions (pH, temperature, and disinfectant demand) (USEPA, 1995b).

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Table 12: Summary of Literature Data on Inactivation of Waterborne *Cryptosporidium parvum* - with Sequential Disinfectants

Sequential Disinfectants	Test Condition	Analytical method	Inactivation	Reference
Ozone & Free Chlorine	O_3=0.75 mg/L for 3.7 min, Cl_2=2.0 mg/L for 265 min, @ pH 6, 22 °C	Infectivity in Neonatal CD-1 mice	2.9 log	Finch et al., 1997
Ozone & Monochloramine	O_3=0.5 mg/L for 2.4 min, NH_2Cl=2.0 mg/L for 240 min, @ pH 8, 22 °C	Same above	1.9 log	
Chlorine Dioxide & Free Chlorine	ClO_2=1.3 mg/L for 120 min, Cl_2=1.3 mg/L for 120 min, @ pH 8, 22 °C	Same above	2.9 log	
Free Chlorine & Monochloramine	Cl_2=4.0 mg/L for 15 min, NH_2Cl=4.0 mg/L for 240 min, @ pH 8, 22 °C	Same above	0.6 log	
Ozone, Hydrogen Peroxide & UV_{254}	O_3=0.5 mg/L & H_2O_2=1.5 mg/L for 3.4 min, UV=131 W.s/cm, pH 8, 22 °C	Same above	1.1 log	

Analytical Method—Four analytical methods are currently being used to evaluate inactivation of *Cryptosporidium* oocysts: in vitro excystation, vital dyes (DAPI/PI staining), animal infectivity, and tissue culture infectivity. It has been shown that excystation and DAPI/PI staining consistently underestimate inactivation when compared with animal infectivity, which is more expensive (Finch et al., 1994; Black et al., 1996). The use of different animal models also leads to inconsistent results for *Cryptosporidium* infectivity. Although the tissue culture technique may provide a convenient, low-cost alternative to animal infectivity, only limited data exist with this method (LeChevallier et al., 1997b).

Cryptosporidium Inactivation Map—In conjunction with development of the long-term ESWTR, USEPA is developing a graph of CT values versus log inactivation under various water quality conditions. The Agency is also exploring other means that utilities can use to estimate *Cryptosporidium* inactivation with different single or sequential disinfectants. Additional data, especially under natural water/field conditions, is necessary to develop this graph. Finch et al. (1994) attempted to establish CT tables for *Cryptosporidium* inactivation with ozone by analyzing numerous sets of experimental data by using both the Chick-Watson model and the Hom model. It was found that the inactivation kinetics of *C. parvum* by ozone deviated from the simple first-order Chick-Watson model and was better described by a nonlinear Hom model. A further analysis, however, hasn't been performed on a broader data basis to evaluate such a finding. Moreover, a much better understanding of *Cryptosporidium* inactivation with sequential disinfectants is needed.

3. New Virus Inactivation Studies

One of the treatment options that USEPA proposed as part of the ESWTR was to include a 4-logs minimal inactivation requirement for viruses, in addition to any physical removal of viruses that might be achieved. USEPA intends to consider this option when additional data become available. However, significant data are available regarding disinfection conditions necessary to achieve different inactivation levels of viruses. The availability of such data is discussed below.

USEPA's guidance manual to the SWTR (USEPA, 1991a), assumes that CT values for chlorine necessary to achieve a 0.5-log inactivation of *Giardia* cysts will result in greater than a 4-log inactivation of viruses. This assumption is based on the comparison between the effects of free chlorine on *Giardia lamblia* and hepatitis A virus (HAV). In the proposed ESWTR, USEPA noted that some viruses are more resistant to chlorine than is HAV, and the use of disinfectants other than free chlorine to achieve 0.5-log inactivation of *Giardia* may not yield a 4-log inactivation of viruses. Achieving adequate inactivation of viruses may be of greater concern when disinfectants other than chlorine (e.g., chlorine dioxide and ozone) are used to inactivate *Cryptosporidium* oocysts.

CT tables in the SWTR for estimating viral inactivation efficiency with chlorine dioxide and ozone were based on laboratory studies using HAV and poliovirus 1, respectively. Very few studies have since been conducted to investigate viral inactivation with chlorine dioxide. Huang et al. (1997) evaluated the disinfection effects of chlorine dioxide on six viruses, including poliovirus type 1, coxsackievirus type B_3, echovirus 11, adenovirus type 7, herpes simplex virus 1, and mumps virus. All viruses were completely inactivated at CT=90 mg-min/L (3 mg/L of initial dose and 30 minutes of contact time) at pH values of 3, 5, and 7, but not 9. Complete inactivation of all six viruses was also found at CT=30 mg-min/L (1 mg/L of initial dose and 30 minutes of contact time) at pH 7.0. At 7.0 mg/L of initial dose, greater than 10 minutes of contact time were required for complete inactivation at the same pH.

More studies have been performed to evaluate viral inactivation efficiencies by ozone than by chlorine dioxide. The results from these studies are summarized in Table 13.

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Table 13: Literature Data on Inactivation of Viruses with Ozone*

Virus	Ozone Dose & Contact Time	pH	Temp °C	Inactivation	Reference
Hepatitis A virus (HAV)	Residual=0.27 mg/L & <48 sec.	7.0	10	4-6 log	Herbold et al., 1989
	Initial 1 mg/L & 24 sec.	6-7	4	4 log	Vaughn et al., 1990
	Residual 0-1.4 mg/L (Initial 0.3-1.7 mg/L) & 5 sec.	6-10	3-10	>4 to > 6 log	Hall & Sobsey, 1993
MS2 Coliphage	Initial 0.6-1.8 mg/L & 60-240 sec. (Paired study w/PV3)	7	22	2.7-7 log	Finch et al., 1992
	Residual 0.04 mg/L & 20 sec.	7	22	4 log	
	Residual-not detected & <60 sec. (Natural water w/TOC 1.3 -6.7 mg/L)	7-8	4-22	~ 100%	
	Residual 0-1.4 mg/L (Initial 0.3-1.7 mg/L) & 5 sec.	6-10	3-10	>4 to > 5 log	Hall & Sobsey, 1993
Poliovirus 1 (PV1)	Residual 0.08 mg/L & <6 sec.	7	10	4-6 log	Herbold et al., 1989
	Initial 1 mg/L & 5 min.	6.4	17	4 log	Kaneko, 1989
	CT=0.15 mg-min/L	8	24	2 log	Miltner et al., 1997
Poliovirus 3 (PV3)	Initial 0.6-1.8 mg/L & 60-240 sec. (Paired study w/MS2)	7	22	1.6-3.6 log or high	Finch et al., 1992
T2 Phage	Residual 0.6 mg/L & 4 min.	7	17	3 log	Kaneko, 1989

* Bench studies except one conducted by Miltner et al., 1997 who performed a pilot study with natural water at 0.5 NTU and 59 mg $CaCO_3$/L.

In general, the tested viruses, including HAV, MS2 coliphage, poliovirus 1 (PV1), poliovirus 3 (PV3), and T2 phage, are relatively sensitive to ozone, and more than 4-logs inactivation of these viruses can be achieved with less than 2 mg/L of ozone and 5 minutes of contact time in a wide range of pH values and temperatures (Herbold et al., 1989; Kaneko, 1989; Vaughn et al., 1990; Finch et al., 1992; Hall and Sobsey, 1993; Miltner et al., 1997). Finch et al. (1992) reported that MS2 coliphage was extremely sensitive to ozone in both laboratory water and natural water, and that complete viral inactivation could occur during the process of satisfying ozone demand in natural water. In paired experiments, they also found that there was significantly less inactivation of PV3 than MS2 coliphage under the same ozonation conditions. In contrast, Hall and Sobsey (1993) demonstrated that MS2 coliphage was at least as resistant to ozone as HAV in a pH range of 6–10, suggesting that MS2 coliphage might be a good model for predicting HAV inactivation by ozone. In a continuous-flow system with a constant flow of ozone and viral suspensions, Herbold et al. (1993) found that HAV required approximately three times the ozone that PV1 required for the same inactivation. In a similar system, Botzenhart et al. (1993) showed that MS2 coliphage was more resistant to ozone than PhiX 174 coliphage.

Some researchers have pointed out that viral disinfection with ozone is difficult to evaluate, not only due to the relatively short inactivation times, but also because the concentration of ozone significantly decreases during the contact time. Finch et al. (1992) found ozone dose and the interaction between ozone dose and dissolved organic carbon (DOC) were the most important factors affecting ozone inactivation of MS2 coliphage in surface waters. Inactivation of MS2 coliphage was significantly reduced when the natural DOC in the water increased during spring runoff, presumably because the ozone concentration was rapidly depleted by the DOC. This effect, however, was not observed when an ozone residual of 0.1 mg/L at the end of 30 seconds was detected, resulting in greater than 4-logs inactivation of MS2 coliphage under all water quality conditions.

Finch et al. (1992) found that the effects of temperature and turbidity on inactivation rates were indistinguishable from experimental error. This contrasts with other studies that reported that viral inactivation with ozone was more efficient at lower temperatures (Botzenhart et al., 1993; Herbold et al., 1993), and the presence of kaolin particles at 1 mg/L or higher resulted in a greater level of ozone residual required for the same level of viral inactivation (Kaneko, 1989). Vaughn et al. (1990) observed that the pH-related effects on ozonation of viruses was not significant in a pH range of 6–8. Kaneko (1989) reported that the presence of ammonium decreased the ozone concentration and thus decreased the inactivation efficiency of ozone.

Kaneko (1989) also revealed that ozonation of viruses could be divided into three phases: an initial large reduction of viruses; a subsequent logarithmic reduction of viruses; and finally, a slow reduction in response to decreasing ozone concentrations. Thus, it is not surprising that the viral inactivation rate beginning 5 minutes after adding the disinfectant was greater with chlorine than with ozone, even though the inactivation rates within 5 minutes of the addition of ozone were 10 to 1,000 higher than the initial rates of inactivation with chlorine (Kaneko and Igarashi, 1983; Kaneko, 1989).

Finch et al. (1992) have concluded that, when comparing the ozone inactivation data for MS2 coliphage, PV3, and *Giardia muris*, the conditions for inactivating *G. muris* cysts are the most rigorous and it is likely that enteric viruses will be inactivated by greater than 4 logs when *Giardia* is inactivated by 3 logs. Such a comparison is also needed for chlorine dioxide. Although the tested enteric viruses appear to be more susceptible to ozone than *Giardia*, no data are yet available on the effectiveness of ozone in inactivating Norwalk virus and other pathogenic human viruses, especially when they are clumped and adsorbed to organic matter as they usually are in natural water. The varying results on viral inactivation with ozone suggest that ozone inactivation studies need to measure and report ozone concentrations over time.

III. Economic Analysis of the M–DBP Advisory Committee Recommendations

A. Overview of RIA for Proposed Rule

The Regulatory Impact Analysis (RIA) for the proposed IESWTR (59 FR 38832, July 29, 1994), estimated national capital and annualized costs (amortized capital and annual operating costs) for surface water systems serving at least 10,000 people at $3.6 billion and $391 million respectively. These costs were based on the assumption that systems would also be required to provide enough treatment to achieve less than a 10^{-4} risk level from giardiasis while meeting the Stage 1 DBPR. In estimating these costs, it was assumed that additional *Giardia* reduction beyond the requirements of the SWTR to achieve the 10^{-4} risk level would be achieved solely by using chlorine as the disinfectant and providing additional contact time by increasing the disinfectant contact basin size.

The Regulatory Impact Analysis for the Interim Enhanced Surface Water Treatment Rule (USEPA, 1994d) predicted that ESWTR compliance would result in no more than a few hundred infections caused by waterborne *Giardia* per year per 100 million people. This is hundreds of thousands of cases fewer than predicted in the absence of an ESWTR. USEPA estimated that the benefit per *Giardia* infection avoided would be $3000 per case. Using this estimate, the 400,000 to 500,000 *Giardia* infections per year that could be avoided would have an economic value of $1.2 to $1.5 billion per year. This suggests that the benefit nationwide of avoiding *Giardia* infections is as much as three or four times greater than the estimated $391 million national annual cost of providing additional contact time.

Table 14 shows this $391 million estimated cost as described in the proposal (using 1992 $s and a discount rate of 10 percent). The table also converts this cost to 1997$s (with a 10 percent discount rate) to provide for comparison with costs based on provisions included in this notice.

For a more detailed discussion of the cost and benefit analysis of the 1994 proposal refer to The Regulatory Impact Analysis for the Interim Enhanced Surface Water Treatment Rule (USEPA, 1994d).

B. What's Changed Since the Proposed Rule

The cost estimates in the proposed rule reflect cost estimates for one of several regulatory alternatives included in the proposal. At the time of proposal USEPA assumed that additional data would be collected under the ICR to more accurately estimate costs and benefits of the *Giardia* based rule option as well as alternative regulatory options. National source water occurrence data for *Giardia* and *Cryptosporidium* are being collected as part of the ICR to help this effort. Due to the delays discussed earlier in this Notice and the new expedited rule deadlines, ICR data will not be available for the IESWTR impact analysis. From February 1997, however, the Agency has worked with stakeholders to identify additional data available since 1994 to be used in developing components of the

expedited rules. USEPA established the Microbial and Disinfectants/ Disinfection Byproducts Advisory Committee to collect, share and analyze new information and data, as well as to build consensus on the regulatory implications of this new information. The Committee met five times from March to July, 1997 to discuss issues related to the IESWTR and Stage I D/ DBPR.

USEPA has also evaluated comments received on the proposal in its consideration of elements to be included in a regulatory option independent of ICR source water occurrence data. These comments suggested (1) sufficient degrees of effectiveness of current treatment, including filtration, in preventing waterborne transmission of *Cryptosporidium* and (2) a revised approach focussing on optimizing treatment processes. In response to these comments, new information received and the Advisory Committee's recommendations, USEPA has developed the Economic Analysis described in summary below. Details of the analysis used to derive the costs and benefits described below are available in the draft document Economic Analysis of M/DBP Advisory Committee Recommendations for the Interim Enhanced Surface Water Treatment Rule (USEPA, 1997a). The economic analyses are based on the Committee's recommendations to USEPA on issues including turbidity control, removal of *Cryptosporidium,* disinfection benchmarking and sanitary surveys.

C. Summary of Cost Analysis

1. Total National Costs

USEPA is considering several approaches, based on the recommendations of the Advisory Committee. The two most substantial approaches, from the perspective of costs and benefits, govern turbidity performance and turbidity monitoring. The Microbial and Disinfectants/ Disinfection Byproducts Committee made a number of recommendations that are indicated in this Notice for comment, including new turbidity provisions with associated monitoring requirements, disinfection benchmarking practices to help ensure there are no significant increases in microbial risk while systems comply with the Stage 1 DBPR and a sanitary survey provision of relatively minimal costs. USEPA estimates that the national capital and annualized costs (amortized capital and annual operating costs) of these provisions (based on a 10 percent interest rate) would be $730 million and $312 million, respectively [Table 14] (USEPA, 1997a). These figures include costs associated with improved treatment, turbidity monitoring, a disinfection benchmark and sanitary surveys. This represents a reduction of over $3.4 billion (in 1997 $s) from the capital costs estimated for the proposed rule. This is accounted for primarily by the recommendations for changes in the level of disinfection required and restoration of disinfection credit prior to precursor removal. This would result in fewer systems needing to install additional disinfectant contact basins, relative to the costs in the 1994 proposal.

A discount rate of 10 percent was used to calculate the unit costs for the national cost model. This discount rate provides both a link to the 1994 IESWTR cost analyses and is a reasonable estimation of the cost to utilities to finance capital purchases assumed to be necessary due to the proposal.

In order to demonstrate the sensitivity of the national cost model to different discount rates, the national costs at 10 percent are compared to national costs calculated using a 7% discount rate. This rate represents the standard social discount rate preferred by the Office of Management and Budget for benefit-cost analyses of government programs and regulations. Tables of unit cost estimates at the 7 percent rate are included in the appendix to the draft Economic Analysis and displayed for comparative purposes (USEPA, 1997a). Costs presented in the Economic Analysis are expressed in June 1997 constant dollars.

The water flow rates that were used in calculating the costs of the 1994 proposal (in 1992 $s and 1997 $s) were also used in calculating the national costs of the recommended provisions discussed in this Notice. Additional analyses gauged the sensitivity of the cost model to a different input value for maximum flow rates for the largest system category (systems serving >1 million people). With this adjusted flow rate (using a 10 percent discount rate) total annualized national costs would be $314 million, compared to $312 million based on flow rates used in the 1994 proposal.

USEPA requests comment on how the new data have been used and any additional data that would improve the assessment of costs and benefits.

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Table 14: Costs of the Interim Enhanced Surface Water Treatment Rule ($000)

	Advisory Committee Recommendations (1997 $s)			1994 Proposal	
	10 Percent discount rate	7 Percent discount rate	10 Percent w/adjusted flow rates)	1997 $s (10 percent discount rate)	1992 $s (7 percent discount rate)
Utility Costs					
Total Utility Treatment Capital	730,802			4,139,555	3,665,568
Annual Utility Costs					
Annualized Capital	*101,834*				
Annual O & M	*101,102*				
Total Treatment	202,936	191,251	205,124	442,231	391,702
Turbidity Monitoring	95,982	95,982	95,982		
Total Annual Utility Costs	298,918	287,233	301,106	442,231	391,702
One-Time Utility Costs					
Turbidity Monitoring Start-up	4,291	4,291	4,291		
Disinfection Benchmarking	2,691	2,691	2,691		
State Costs					
Annual State Costs					
Turbidity Monitoring	5,257	5,257	5,257		
IFAs and CPEs	547	547	547		
Sanitary Survey	6,781	6,781	6,781	979	867
One-Time State Costs					
Start-up/Implementation	407	407	407	3,057	2,708
Disinfection Benchmarking	3,112	3,112	3,112		
Summary of Total Costs					
Utility Costs					
Total Annual	298,918	287,233	301,106	442,231	391,702
One-Time	6,983	6,983	6,983		
State Costs					
Total Annual	12,585	12,585	12,585	979	867
One-Time	3,519	3,519	3,519	3,057	
Total One-Time Costs	**10,501**	**10,501**	**10,501**	**3,057**	**2,708**
Total Annual Costs	**311,503**	**299,818**	**313,691**	**443,210**	**392,569**

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2. Household Costs

Household costs are a way to represent water system treatment costs as a costs to the system customer. Figure 14 displays results of the household cost analyses for a 0.3 NTU, 1 maximum CFE NTU turbidity treatment approach discussed in this Notice. As can be seen from the graph, a small percentage of the systems might, using this methodology, incur a maximum cost per household of approximately $110 per year. The highest household costs are incurred in households served by small systems that need to implement all of the activities to comply.

It must be borne in mind that the upper bound of the graph displays an extrapolated curve, and does not represent actual data points. The assumptions and structure of this analysis, in describing the curve, tend to overestimate the highest costs. To find itself on the upper bound of the curve, a system would have to implement all, or almost all, of the treatment activities. These systems, conversely, might seek less costly alternatives, such as connecting into a larger regional water system. In the judgment of the Advisory Committee's Technical Work Group, this extreme situation and the resulting high values may occur only for a small number of households.

Based on this analysis, over 97 percent of the households are estimated to incur annual costs of less than $20 per household per year and over 50 percent are estimated to incur costs of less than $2 per household per year.

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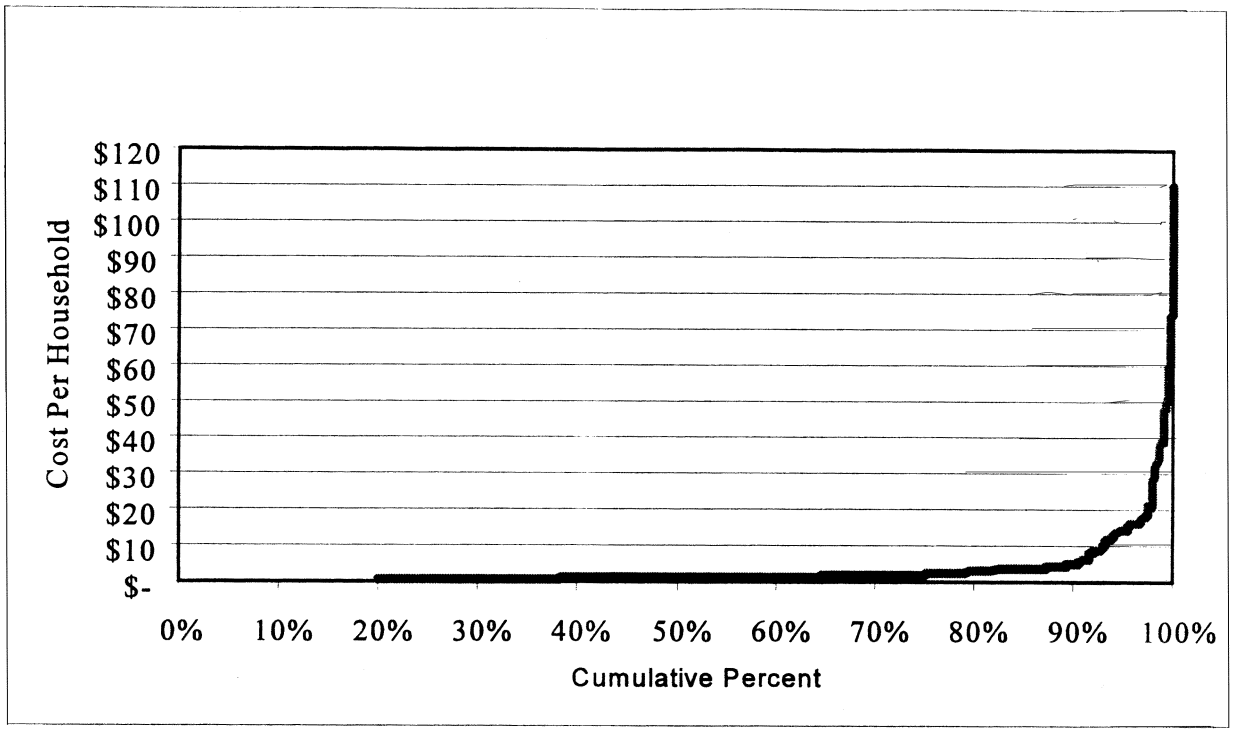
Figure 14: Cumulative Percentage of Household Costs



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D. Cost of Turbidity Performance Criteria and Associated Monitoring

1. System Level Impact Analysis

The TWG developed a list of treatment activities that systems would be expected to employ in order to implement Advisory Committee recommendations. These activities were grouped into 10 categories based on general process descriptions as follows; chemical addition, coagulant improvements, rapid mixing, flocculation improvements, settling improvements, filtration improvements, hydraulic improvements, administration culture improvements, laboratory modifications and process control testing modifications. Descriptions of how systems were expected to evaluate these activities are described in the draft document Technologies and Costs for the Interim Enhanced Surface Water Treatment Rule (USEPA, 1997b).

2. National Impact Analyses

a. Decision Tree. The decision tree is a table of treatment activities that taken either singly or in combination will help utilities evaluate what is potentially involved in meeting the turbidity limits recommended by the Advisory Committee, i.e., the requirement that utilities serving more than 10,000 people be required to achieve a 95 percentile turbidity limit of 0.3 NTU and at no time exceed a turbidity value of 1 NTU (Appendix A, USEPA, 1997a). Percentages in a decision tree represent the projected percentage of public water systems using that activity to meet the turbidity limits recommended by the Advisory Committee. These percentages were factors in the national cost model

and generally represent the percentage of systems needing to modify treatment to meet the limits.

Further description of the compliance decision tree and methodology are included in the draft Economic Analysis of M/DBP Advisory Committee Recommendations for the Interim Enhanced Surface Water Treatment Rule (Economic Analysis) (USEPA, 1997a).

b. Utility Costs. Turbidity Treatment. The number of systems, the associated total capital costs, and the associated total annualized costs were estimated for seven system size categories. Total annual costs were calculated for each possible treatment activity and for each system size category. Unit costs were converted to annualized cost totals (in thousands of dollars) using the methodology described in the draft Economic Analysis.

As indicated in Table 14, the estimate of national annualized turbidity treatment costs are $203 million based on the Advisory Committee's recommended 0.3 NTU 95th percentile CFE standard while meeting a 1 NTU maximum combined filter effluent level (calculated with a 10% interest rate in 1997$s).

Turbidity Monitoring. A generalized turbidity monitoring model was developed to provide a framework for estimating costs associated with individual filter monitoring. The model assumes turbidimeters for each filter and an on-line Supervisory Control And Data Acquisition (SCADA) system. Filter readings would be taken at least once every 15 minutes and tabulated. The model assumes that once each work shift (8 hours) the turbidity data would be converted to a reviewable form, and would then be reviewed by a system manager. In cases where the monitoring recorded exceedances as described below, a report would be made to the State and, if warranted, an individual filter review or system assessment might occur. Annual utility monitoring costs are estimated at $96 million as shown in Table 14 above.

Under the approach recommended by the Advisory Committee, exception reporting to the State is warranted if:

—An individual filter has a turbidity level greater than 1.0 NTU for 2 consecutive measurements 15 minutes apart.

—An individual filter has a turbidity level greater than 0.5 NTU at the end of the first 4 hours of filter operation for 2 consecutive measurements 15 minutes apart.

—If a plant reports exceedances of 1.0 NTU at one filter for 3 consecutive months, an individual filter assessment (IFA) is required to be performed by the utility.

—If a plant records exceedances of 2.0 NTU at one filter in 2 consecutive months, a comprehensive performance evaluation (CPE) is required and must be performed by a third party.

c. State Costs. Annual Review Costs. Under the recommended provisions, it would be the State's responsibility to review system data to ensure that all systems in the State are in compliance with the provisions. State activities include compliance tracking, review of Statewide utility data, record keeping, and compliance determinations. Annual State costs for review (nationwide) are estimated to be $5.3 million (USEPA, 1997a).

Implementation and Start-Up Costs Related to Turbidity Monitoring. One-time State implementation activities include the adoption of the rule and State regulation development. As shown in Table 14, the rule would collectively cost States a total of $407,000 to implement turbidity monitoring provisions.

Exception Costs (Exception Reports, IFAs and CPEs). Under the approach recommended by the Advisory Committee, a monthly exception report would be filed by each utility at which a plant exceeds individual filter effluent (IFE) turbidities of either 1.0 NTU for 2 consecutive measurements 15 minutes apart, or 0.5 NTU at the end of the first 4 hours of a filter run.

In addition to the monthly exception report of individual filter effluent exceedances, additional steps are triggered when exceedances persist. If an individual filter has turbidity levels greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of 3 consecutive months, the system conducts a self assessment of the filter utilizing as guidance relevant portions of guidance issued by the Environmental Protection Agency for Comprehensive Performance Evaluation (CPE). If an individual filter has turbidity levels greater than 2.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of two consecutive months, the system will arrange for the conduct of a CPE by the State or a third party approved by the State.

The following assumptions were made by the Technical Working Group of the Advisory Committee regarding the percentage of systems per year that would trigger an interaction with the State based on the recommended provisions.

—10 percent of systems per year are assumed to file monthly reports to the State based on individual filter effluent provisions

—2 percent of systems per year are assumed to trigger Individual Filter Assessment (IFA) provisions

—1 percent of systems per year are assumed to trigger Comprehensive Performance Evaluation (CPE) provisions.

Based on these assumptions, approximately 28 IFAs and 14 CPEs will be conducted each year at an estimated cost of $5,000 and $25,000 each, respectively. States are expected, therefore, to incur annual costs (nationally) of $64,000 to review the exception reports, $138,000 and $345,300 in annual costs for IFAs and CPEs, respectively. The combined total annual State cost for these items is $572,000 (Table 14, above).

E. Disinfection Benchmark

1. Decision Tree

The Advisory Committee recommended that a utility prepare a disinfection profile if they:

—measure TTHM levels of at least 80 percent of the MCL (0.064 mg/l) as an annual average for the most recent 12-month period for which compliance data are available.

—measure HAA% level of at least 80 percent of the MCL (0.048 mg/l) as an annual average for the most recent 12-month compliance period for which compliance data are available.

HAA and TTHM figures from the 1996 Water Industry Data Base (WIDB) were used to estimate the percentage of systems that would be required to prepare a disinfection profile.

2. Utility Costs

Utility costs associated with profiling were divided into four activity areas; cost per system, cost per plant using paper data (i.e., for those plants that currently use paper to document their plant profile data), cost per plant using mainframe data, and cost per plant using PC data. Plants with paper data were assumed to represent half of the number of plants needing profiling, while plants with mainframe data and plants with PC data each represent 25 percent of all plants. The TWG assumed that all plants currently collect this data in either an electronic or paper format, and, therefore, would not incur additional data collection expenses due to microbial profiling. Data reporting costs per plant that are associated with microbial profiling include; data entry and spreadsheet development, data manipulation and analysis, and data

review. Costs per system include those to; read and understand the rule, mobilization and planning, generation of reports to State and for in-house review, and meet and review profile with the State. The national costs associated with microbial profiling for utilities was estimated at $2.7 million [Table 14].

3. State Costs

States will review profiles as part of its sanitary survey process. Utilities required to develop a disinfection profile that subsequently decide to make a significant change in disinfection practice must consult with the state prior to making such a change. Table 14 details the total national State costs of profiling (one-time) at $3.1 million.

F. Sanitary Surveys

States are expected to conduct sanitary surveys on a rotating basis, in general no less frequently than once every 3 years for community water systems (CWSs) and no less frequently than every 5 years for noncommunity water systems (NCWSs). For this analysis, 80 percent of Systems are assumed to have already conducted a sanitary survey. The remaining 20 percent of systems are considered to require new surveys in order to comply with the requirements in the IESWTR. The total national cost estimate for sanitary surveys, as shown in Table 14, is estimated at $6.7 million.

G. Summary of Benefits Analysis

The economic benefits of the provisions recommended by the Advisory Committee derive from the increased level of protection to public health. The primary goal of these provisions is to improve public health by increasing the level of protection from exposure to *Cryptosporidium* and other pathogens in drinking water supplies through improvements in filtration at water systems. In this case, benefits will accrue due to the decreased likelihood of endemic incidences of cryptosporidiosis, giardiasis and other waterborne disease, and the avoidance of resulting health costs. In addition to reducing the endemic disease, the provisions are expected to reduce the likelihood of the occurrence of *Cryptosporidium* outbreaks and their associated economic costs, by providing a larger margin of safety against such outbreaks for some systems.

The benefits analysis quantitatively examines health damages avoided based on the provisions recommended by the Advisory Committee. The assessment also discusses, but does not quantify, other economic benefits that may result from the provisions, including reduced risk of outbreaks, avoided costs of averting behavior such as boiling water.

The assessment of net benefits is always somewhat problematic due to the relative ease of quantifying compliance treatment costs versus the difficulty of assigning monetary values to the avoidance of health damages and other benefits arising from a regulation. The challenge of assessing net benefits for the recommended provisions is compounded by the fact that there are large areas of scientific uncertainty regarding the exposure to and the risk assessment for *Cryptosporidium*. Areas where important sources of uncertainty enter the benefits assessment include the following.

- Occurrence of *Cryptosporidium* oocysts in source waters.
- Occurrence of *Cryptosporidium* oocysts in finished waters.
- Reduction of *Cryptosporidium* oocysts due to treatment, including filtration and disinfection.
- Viability of *Cryptosporidium* oocysts after treatment.
- Infectivity of *Cryptosporidium*.
- Incidence of infections and associated symptomatic response (including impact of under reporting).
- Characterization of the risk.
- Willingness to pay to reduce risk and avoid costs.

The cumulative impact of these uncertainties on the outcome of the exposure and risk assessment is impossible to measure. The benefit analysis attempts to take into account some of these uncertainties by estimating benefits under two different current treatment assumptions and three improved removal assumptions. The benefit analysis also used Monte Carlo simulations to derive a distribution of estimates, rather than a single point estimate.

The following two assumptions were made about the performance of current treatment in removing or inactivating oocysts to estimate finished water *Cryptosporidium* concentrations. The standard assumption is that current treatment results in a mean physical removal and inactivation of oocysts of 2.5 logs and a standard deviation ±0.63 logs). Because the finished water concentrations of oocysts represent the baseline against which improved removal from the recommended provisions is compared, variations in the log removal assumption could have considerable impact on the risk assessment. To evaluate the impact of the removal assumptions on the baseline and resulting improvements, an alternative mean log removal/inactivation assumption of 3.0 logs (and a standard deviation ±0.63 logs) was also used to calculate finished water concentrations of *Cryptosporidium*.

USEPA made three assumptions about the improved log removal of oocysts that would result from the turbidity provisions recommended by the Advisory Committee. These were based on studies of treatment removal efficiencies discussed earlier in this Notice (Table 1: *Cryptosporidium* and *Giardia lamblia* removal efficiencies by rapid granular filtration). A range of 2–6 logs removal of *Cryptosporidium* oocysts were observed in these studies. USEPA assumed that a certain number of plants would show low, mid or high improved removal, depending upon factors such as water matrix conditions, filtered water turbidity effluent levels, and coagulant treatment conditions.

The finished water *Cryptosporidium* distributions that would result from additional log removal with the turbidity provisions were derived assuming that additional log removal was dependent on current removal, as described above, i.e., that sites currently achieving the highest filtered water turbidity performance levels would show the largest improvements or high improved removal assumption (e.g., plants now failing to meet a 0.4 NTU limit would show greater removal improvements than plants now meeting a 0.3 NTU limit). Table 15 contains the assumptions used to generate the new treatment distribution.

TABLE 15.—IMPROVED REMOVAL ASSUMPTIONS

Additional log removal with committee recommendations			
	Low	Mid	High
Plants now meeting 0.2 NTU limit	None	None	None
Plants operating between 0.2–0.3 NTU	0.15	0.25	0.3
Plants now meeting 0.4 NTU limit	0.35	0.5	0.6

TABLE 15.—IMPROVED REMOVAL ASSUMPTIONS—Continued

Additional log removal with committee recommendations			
	Low	Mid	High
Plants now failing to meet 0.4 NTU limit	0.5	0.75	0.9

The TWG working group assumed that for plants to achieve a 0.3 NTU 95th percentile standard they would operate their plants to achieve a 0.2 NTU limit. Therefore, systems meeting a 95th percentile limit of 0.2 NTU were assumed to make no further treatment changes to meet a 0.3 NTU standard, and therefore show no incremental increase in log removal.

Given the uncertainties described above, assumptions were made in developing the risk characterization. In summary, USEPA assumed:

—an exponential dose/response function for estimating infection rates (Haas et al., 1996)

—2 liters per person daily water consumption with a log normal distribution (Haas and Rose, 1995)

—a national surface water distribution of oocysts based on Monte Carlo analysis of data collected by LeChevallier and Norton (USEPA, 1996a)

—A uniform distribution of percentage of oocysts that would be infectious with a mean value of 10 percent

—An estimated 0.39 mean ratio (triangular distribution) of people that are infected to people that become ill (Haas, et al., 1996).

—The cost of an avoided case of cryptosporidiosis was estimated to be approximately $1800 per case. This was extrapolated from the estimate of $3,000 for giardiasis used in the RIA for the proposal, and based on the relatively shorter average length of illness.

Risk characterization uses these assumptions to calculate the number of illnesses avoided in Table 16. Using this number of illnesses avoided, the cost of illnesses avoided is calculated under each current log treatment assumption (i.e., 2.5 and 3.0 logs) for each of the improved removal assumptions. Table 16 summarizes the mean expected value of potential benefits expected to accrue to the recommended provisions under the six different scenarios, as well as the range.

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Table 16: Summary of Potential Benefits

	Current Treatment Assumption	
	2.5 Logs	3.0 Logs
Cost of Illness Avoided Annually		
LOW (improved removal assumption)		
Number of Illnesses Avoided (Expected Value)	319,000	136,000
Cost of Illness Avoided	$574.2 million	$244.8 million
MID (improved removal assumption)		
Number of Illnesses Avoided (Expected Value)	437,000	165,000
Cost of Illness Avoided	$786.6 million	$297.0 million
HIGH (improved removal assumption)		
Number of Illnesses Avoided (Expected Value)	469,000	177,000
Cost of Illness Avoided	$844.2 million	$318.6 million
Mortalities Prevented Annually		
Low (Expected Value)	48	19
Mid (Expected Value)	63	23
High (Expected Value)	67	24
Value of Lives Saved	Benefits not quantified, but could be substantial (estimated at $300 million annually at 2.5 logs or $100 million at 3.0 logs).	
Reduced Risk of Outbreaks		
Cost of Illness Avoided	Benefits not quantified, but could be substantial for large outbreak ($720 million cost of illness avoided for Milwaukee).	
Emergency Expenditures		
Liability Costs		
Averting Behavior	Benefits not quantified, but could be substantial for large outbreak ($19.5 million to $61.9 million for Milwaukee).	

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IV. National Technology Transfer and Advancement Act

Under section 12(d) of the National Technology Transfer and Advancement Act (''NTTAA''), the Agency is required to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices, etc.) that are developed or adopted by voluntary consensus standards bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires the Agency to provide Congress, through the Office of Management and Budget, an explanation of the reasons for not using such standards.

The Agency does not believe that this Notice addresses any technical standards subject to the NTTAA. A commenter who disagrees with this conclusion should indicate how the Notice is subject to the Act and identify any potentially applicable voluntary consensus standards.

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Dated: October 22, 1997.

Robert Perciasepe,

Assistant Administrator.

Appendix A—U.S. Environmental Protection Agency, Microbial/Disinfection by-Products (M/DBP), Federal Advisory Committee

Agreement in Principle

1.0 Introduction

Pursuant to requirements under the Safe Drinking Water Act (SDWA), the Environmental Protection Agency (EPA) is developing interrelated regulations to control microbial pathogens and disinfectants/disinfection byproducts (D/DBPs) in drinking water. These rules are collectively known as the microbial/disinfection byproducts (M/DBP) rules.

The regulations are intended to address complex risk trade-offs between the two different types of contaminants. In keeping with the agreement reached during the 1992–93 negotiated rulemaking on these matters, EPA issued a Notice of Proposed Rulemaking for Disinfection By-Products Stage I on July 29, 1994. EPA also issued a Notice of Proposed Rulemaking for an Interim Enhanced Surface Water Treatment Rule (IESWTR) on July 29, 1994. Finally, in May 1996, EPA promulgated a final Information Collection Rule (ICR), to obtain data on source water quality, byproduct formation and drinking water treatment plant design and operations.

As part of recent amendments to the SDWA, Congress has established deadlines for all the M/DBP rules, beginning with a November 1998 deadline for promulgation of both the IESWTR and the Stage I D/DBP Rule. To meet this new deadline, EPA initiated an expedited schedule for development of these two rules. Building on the 1994 proposals, EPA intends to issue a Notice of Data Availability (NODA) in November 1997 for public comment. EPA also decided to establish a committee under the Federal Advisory Committee Act (FACA) for development of the rules.

The M/DBP Advisory Committee is made up of organizational members (parties) named by EPA (see Attachment A). The immediate task of the Committee has been to discuss, evaluate and provide advice on data, analysis and approaches to be included in the NODA to be published in November 1997. This Committee met four times from March through June 1997, with the initial objective to reach consensus, where possible, on the elements to be contained in the D/DBP Stage I and IESWTR NODA. Where consensus was not reached, the Committee sought to develop options and/or to clarify key issues and areas of agreement and disagreement. This document is the Committee's statement on the points of agreement reached.

2.0 Agreement in Principle

The Microbial and Disinfection By-Products Federal Advisory Committee considered the technical and policy issues involved in developing a DBP Stage I rule and an IESWTR under the Safe Drinking Water Act and recommends that the Environmental Protection Agency base the applicable sections of its anticipated M/DBP Notice of Data Availability (NODA) on the elements of agreement described below.

This agreement in principle represents the consensus of the parties on the best conceptual principles that the Committee was able to generate within the allocated time and resources available.

The USEPA, a party to the negotiations, agrees that:

1. The person signing this agreement is authorized to commit this party to its terms.

2. EPA agrees to hold a meeting in July 1997 following circulation of a second draft of the NODA to obtain comments from the parties and the public on the extent to which the applicable sections of the draft NODA are consistent with the agreements below.

3. Each party and individual signatory that submits comments on the NODA agrees to support those components of the NODA that reflect the agreements set forth below. Each party and individual signatory reserves the right to comment, as individuals or on behalf of the organization he or she represents, on any other aspect of the Notice of Data Availability.

4. EPA will consider all relevant comments submitted concerning the Notice(s) of Proposed Rulemaking and in response to such comments will make such modifications in the proposed rule(s) and preamble(s) as EPA determines are appropriate when issuing a final rule.

5. Recognizing that under the Appointments Clause of the Constitution governmental authority may be exercised only by officers of the United States and recognizing that it is EPA's responsibility to issue final rules, EPA intends to issue final rules that are based on the provisions of the Safe Drinking Water Act, pertinent facts, and comments received from the public.

6. Each party agrees not to take any action to inhibit the adoption of final rule(s) to the extent it and corresponding preamble(s) have the same substance and effect as the elements of this agreement in principle.

2.1 MCLs

MCLs should remain at the levels proposed: 0.080 mg/l for TTHMs, 0.060 mg/l for HAA5, and 0.010 mg/l for bromate.

2.2 Enhanced Coagulation

The proposed enhanced coagulation provisions should be revised as follows:

a. The top row of the TOC removal table (3x3 matrix) should be modified for systems that practice enhanced coagulation by lowering the TOC removal percentages by 5% across the top row, while leaving the other rows the same.

b. SUVA (specific UV absorbance) should be used for determining whether systems would be required to use enhanced coagulation. The use of a raw water SUVA < 2.0 liter/mg-m as a criterion for not requiring a system to practice enhanced coagulation should be added to those proposed in § 141.135(a)(1)(i)–(iv).

c. For a system required to practice enhanced coagulation or enhanced softening, the use of a finished water SUVA < 2.0 liter/mg-m should be added as a Step 2 procedure. Such a criterion would be in addition to the proposed Step 2 procedure, not in lieu of it.

d. The proposed TOC removals for softening systems should be modified by lowering the value for TOC removal in the matrix at alkalinity >120 mg/l and TOC between 2–4 mg/l by 5% (which would make it equal to the value for non-softening systems) and leaving the remaining values as proposed.

e. If a system is required to practice enhanced softening, lime softening plants would not be required to perform lime soda softening or to lower alkalinity below 40–60 mg/l as part of any Step 2 procedure.

f. There is no need to separately address softening systems in the 3x3 matrix or the Step 1 regulatory language, which was identical to enhanced coagulation regulatory language in the proposed D/DBPR. The revised matrix should appear as follows:

TOC (mg/l)	Alkalinity (mg/l)		
	0 – < 60	60 – < 120	≥ 120
2–4	35	25	15
4–8	45	35	25
>8	50	40	30

2.3 Microbial Benchmarking/Profiling

A microbial benchmark to provide a methodology and process by which a PWS and the State, working together, assure that there will be no significant reduction in microbial protection as the result of modifying disinfection practices in order to meet MCLs for TTHM and HAA5 should be established as follows:

A. *Applicability.* The following PWSs to which the IESWTR applies must prepare a disinfection profile:

(1) PWSs with measured TTHM levels of at least 80% of the MCL (0.064 mg/l) as an annual average for the most recent 12 month compliance period for which compliance data are available prior to November 1998 (or some other period designated by the State),

(2) PWSs with measured HAA5 levels of at least 80% of the MCL (0.048 mg/l) as an annual average for the most recent 12 month period for which data are available (or some other period designated by the State)—In connection with HAA5 monitoring, the following provisions apply:

(a) PWSs that have collected HAA5 data under the Information Collection Rule must use those data to determine the HAA5 level, unless the State determines that there is a more representative annual data set.

(b) For those PWSs that do not have four quarters of HAA5 data 90 days following the IESWTR promulgation date, HAA5 monitoring must be conducted for four quarters.

B. *Disinfection profile.* A disinfection profile consists of a compilation of daily *Giardia lamblia* log inactivations (or virus inactivations under conditions to be specified), computed over the period of a year, based on daily measurements of operational data (disinfectant residual concentration(s), contact time(s), temperature(s), and where necessary, pH(s)). The PWS will then determine the lowest average month (critical period) for each 12 month period and average critical periods to create a ''benchmark'' reflecting the lower bound of a PWS's current disinfection practice. Those PWSs that have all necessary data to determine profiles, using operational data collected prior to promulgation of the IESWTR, may use up to three years of operational data in developing those profiles. Those PWSs that do not have three years of operational data to develop profiles must conduct the necessary monitoring to develop the profile for one year beginning no later than 15 months after promulgation, and use up to two years of existing operational data to develop profiles.

C. *State review.* The State will review disinfection profiles as part of its sanitary survey. Those PWSs required to develop a disinfection profile that subsequently decide to make a significant change in disinfection practice (i.e., move point of disinfection, change the type of disinfectant, change the disinfection process, or any other change designated as significant by the State) must consult with the State prior to implementing such a change. Supporting materials for such consultation must include a description of the proposed change, the disinfection profile, and an analysis of how the proposed change will affect the current disinfection.

D. *Guidance.* EPA, in consultation with interested stakeholders, will develop detailed guidance for States and PWSs on how to develop and evaluate disinfection profiles, identify and evaluate significant changes in disinfection practices, and guidance on moving the point of disinfection from prior to the point of coagulant addition to after the point of coagulant addition.

2.4 Disinfection Credit

Consistent with the existing provisions of the 1989 Surface Water Treatment Rule, credit for compliance with applicable disinfection requirements should continue to be allowed for disinfection applied at any point prior to the first customer.

EPA will develop guidance on the use and costs of oxidants that control water quality problems (e.g., zebra mussels, Asiatic clams, iron, manganese, algae) and whose use will reduce or eliminate the formation of DBPs of public health concern.

2.5 Turbidity

Turbidity Performance Requirements. For all surface water systems that use conventional treatment or direct filtration, serve more than 10,000 people, and are required to filter: (a) the turbidity level of a system's combined filtered water at each plant must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month and, (b) the turbidity level of a system's combined filtered water at each plant must at no time exceed 1 NTU. For both the maximum and the 95th percentile requirements. compliance shall be determined based on measurements of the combined filter effluent at four-hour intervals.

Individual Filter Requirements. All surface water systems that use rapid granular filtration, serve more than 10,000 people, and are required to filter shall conduct continuous monitoring of turbidity for each individual filter and shall provide an exceptions report to the State on a monthly basis. Exceptions reporting shall include the following: (1) any individual filter with a turbidity level greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart; and (2) any individual filter with a turbidity level greater than 0.5 NTU at the end of the first 4 hours of filter operation based on 2 consecutive measurements fifteen minutes apart. A filter profile will be produced if no obvious reason for the abnormal filter performance can be identified.

If an individual filter has turbidity levels greater than 1.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of 3 consecutive months, the system shall conduct a self-assessment of the filter utilizing as guidance relevant portions of guidance issued by the Environmental Protection Agency for Comprehensive Performance Evaluation (CPE). If an individual filter has turbidity levels greater than 2.0 NTU based on 2 consecutive measurements fifteen minutes apart at any time in each of two consecutive months, the system will arrange for the conduct of a CPE by the State or a third party approved by the State.

State Authority. States must have rules or other authority to require systems to conduct a Composite Correction Program (CCP) and to assure that systems implement any follow-up recommendations that result as part of the CCP.

2.6 *Cryptosporidium* MCLG

EPA should establish an MCLG to protect public health. The Agency should describe existing and ongoing research and areas of scientific uncertainty on the question of which species of *Cryptosporidium* represents a concern for public health (e.g. *parvum, muris, serpententious*) and request further comment on whether to establish an MCLG on the genus or species level.

In the event the Agency establishes an MCLG on the genus level, EPA should make clear that the objective of this MCLG is to protect public health and explain the nature of scientific uncertainty on the issue of

taxonomy and cross reactivity between strains. The Agency should indicate that the scope of MCLG may change as scientific data on specific strains of particular concern to human health become available.

2.7 Removal of *Cryptosporidium*

All surface water systems that serve more than l 0,000 people and are required to filter must achieve at least a 2 log removal of *Cryptosporidium*. Systems which use rapid granular filtration (direct filtration or conventional filtration treatment—as currently defined in the SWTR), and meet the turbidity requirements described in Section 2.5 are assumed to achieve at least a 2 log removal of *Cryptosporidium*. Systems which use slow sand filtration and diatomaceous earth filtration and meet existing turbidity performance requirements (less than 1 NTU for the 95th percentile or alternative criteria as approved by the State) are assumed to achieve at least a 2 log removal of *Cryptosporidium*.

Systems may demonstrate that they achieve higher levels of physical removal.

2.8 Multiple Barrier Concept

EPA should issue a risk-based proposal of the Final Enhanced Surface Water Treatment Rule for *Cryptosporidium* embodying the multiple barrier approach (e.g. source water protection, physical removal, inactivation, etc.), including, where risks suggest appropriate, inactivation requirements. In establishing the Final Enhanced Surface Water Treatment Rule, the following issues will be evaluated:

- Data and research needs and limitations (e.g. occurrence, treatment, viability, active disease surveillance, etc.);
- Technology and methods capabilities and limitations;
- Removal and inactivation effectiveness;
- Risk tradeoffs including risks of significant shifts in disinfection practices;
- Cost considerations consistent with the SDWA;
- Reliability and redundancy of systems;
- Consistency with the requirements of the Act.

2.9 Sanitary Surveys

Sanitary surveys operate as an important preventive tool to identify water system deficiencies that could pose a risk to public health. EPA and ASDWA have issued a joint guidance dated 12/21/95 on the key components of an effective sanitary survey. The following provisions concerning sanitary surveys should be included.

I. Definition

(A) A sanitary survey is an onsite review of the water source (identifying sources of contamination using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(B) Components of a sanitary survey may be completed as part of a staged or phased state review process within the established frequency interval set forth below.

(C) A sanitary survey must address each of the eight elements outlined in the December 1995 EPA/STATE Guidance on Sanitary Surveys.

II. Frequency

(A) Conduct sanitary surveys for all surface water systems (including groundwater under the influence) no less frequently than every three years for community systems except as provided below and no less frequently than every five years for noncommunity systems.

—May ''grandfather''sanitary surveys conducted after December 1995, if they address the eight sanitary survey components outlined above.

(B) For community systems determined by the State to have outstanding performance based on prior sanitary surveys, successive sanitary surveys may be conducted no less than every five years.

III. Follow Up

(A) Systems must respond to deficiencies outlined in a sanitary survey report within at least 45 days, indicating how and on what schedule the system will address significant deficiencies noted in the survey.

(B) States must have the appropriate rules or other authority to assure that facilities take the steps necessary to address significant deficiencies identified in the survey report that are within the control of the PWS and its governing body.

Agreed to by:

_____

Name, Organization

_____

Date

Signed By:

Peter L. Cook, National Association of Water Companies
Michael A. Dimitriou, International Ozone Association
Cynthia C. Dougherty, US Environmental Protection Agency
Mary J.R. Gilchrist, American Public Health Association
Jeffrey K. Griffiths, National Association of People with AIDS
Barker Hamill, Association of State Drinking Water Administrators
Robert H. Harris, Environmental Defense Fund
Edward G. Means III, American Water Works Association
Rosemary Menard, Large Unfiltered Systems
Erik D. Olson, Natural Resources Defense Council
Brian L. Ramaley, Association of Metropolitan Water Agencies
Charles R. Reading Jr., Water and Wastewater Equipment Manufacturers Association
Suzanne Rude, National Association of Regulatory Utility Commissioners
Ralph Runge, Chlorine Chemistry Council
Coretta Simmons, National Association of State Utility Consumer Advocates
Bruce Tobey, National League of Cities
Chris J. Wiant, National Association of City and County Health Officials; National Environmental Health Association

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Monday, November 3, 1997

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H.J. Res. 75/P.L. 105–67

To confer status as an honorary veteran of the United States Armed Forces on Leslie Townes (Bob) Hope. (Oct. 30, 1997; 111 Stat. 1452)

Last List October 30, 1997

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9 Parts:			
●1–199	(869–032–00023–9)	39.00	Jan. 1, 1997
●200–End	(869–032–00024–7)	33.00	Jan. 1, 1997
10 Parts:			
●0–50	(869–032–00025–5)	39.00	Jan. 1, 1997
●51–199	(869–032–00026–3)	31.00	Jan. 1, 1997
●200–499	(869–032–00027–1)	30.00	Jan. 1, 1997
●500–End	(869–032–00028–0)	42.00	Jan. 1, 1997
●**11**	(869–032–00029–8)	20.00	Jan. 1, 1997
12 Parts:			
●1–199	(869–032–00030–1)	16.00	Jan. 1, 1997
●200–219	(869–032–00031–0)	20.00	Jan. 1, 1997
●220–299	(869–032–00032–8)	34.00	Jan. 1, 1997
●300–499	(869–032–00033–6)	27.00	Jan. 1, 1997
●500–599	(869–032–00034–4)	24.00	Jan. 1, 1997
●600–End	(869–032–00035–2)	40.00	Jan. 1, 1997
●**13**	(869–032–00036–1)	23.00	Jan. 1, 1997
14 Parts:			
●1–59	(869–032–00037–9)	44.00	Jan. 1, 1997
●60–139	(869–032–00038–7)	38.00	Jan. 1, 1997
140–199	(869–032–00039–5)	16.00	Jan. 1, 1997
●200–1199	(869–032–00040–9)	30.00	Jan. 1, 1997
●1200–End	(869–032–00041–7)	21.00	Jan. 1, 1997
15 Parts:			
0–299	(869–032–00042–5)	21.00	Jan. 1, 1997
●300–799	(869–032–00043–3)	32.00	Jan. 1, 1997
●800–End	(869–032–00044–1)	22.00	Jan. 1, 1997
16 Parts:			
●0–999	(869–032–00045–0)	30.00	Jan. 1, 1997
●1000–End	(869–032–00046–8)	34.00	Jan. 1, 1997
17 Parts:			
●1–199	(869–032–00048–4)	21.00	Apr. 1, 1997
●200–239	(869–032–00049–2)	32.00	Apr. 1, 1997
●240–End	(869–032–00050–6)	40.00	Apr. 1, 1997
18 Parts:			
●1–399	(869–032–00051–4)	46.00	Apr. 1, 1997
●400–End	(869–032–00052–2)	14.00	Apr. 1, 1997
19 Parts:			
●1–140	(869–032–00053–1)	33.00	Apr. 1, 1997
●141–199	(869–032–00054–9)	30.00	Apr. 1, 1997
●200–End	(869–032–00055–7)	16.00	Apr. 1, 1997
20 Parts:			
●1–399	(869–032–00056–5)	26.00	Apr. 1, 1997
●400–499	(869–032–00057–3)	46.00	Apr. 1, 1997
●500–End	(869–032–00058–1)	42.00	Apr. 1, 1997
21 Parts:			
●1–99	(869–032–00059–0)	21.00	Apr. 1, 1997
●100–169	(869–032–00060–3)	27.00	Apr. 1, 1997
●170–199	(869–032–00061–1)	28.00	Apr. 1, 1997
●200–299	(869–032–00062–0)	9.00	Apr. 1, 1997
●300–499	(869–032–00063–8)	50.00	Apr. 1, 1997
●500–599	(869–032–00064–6)	28.00	Apr. 1, 1997
●600–799	(869–032–00065–4)	9.00	Apr. 1, 1997
●800–1299	(869–032–00066–2)	31.00	Apr. 1, 1997
●1300–End	(869–032–00067–1)	13.00	Apr. 1, 1997
22 Parts:			
1–299	(869–032–00068–9)	42.00	Apr. 1, 1997
●300–End	(869–032–00069–7)	31.00	Apr. 1, 1997
●**23**	(869–032–00070–1)	26.00	Apr. 1, 1997
24 Parts:			
●0–199	(869–032–00071–9)	32.00	Apr. 1, 1997
200–499	(869–032–00072–7)	29.00	Apr. 1, 1997
500–699	(869–032–00073–5)	18.00	Apr. 1, 1997
●700–1699	(869–032–00074–3)	42.00	Apr.1, 1997
●1700–End	(869–032–00075–1)	18.00	Apr. 1, 1997
●**25**	(869–032–00076–0)	42.00	Apr. 1, 1997
26 Parts:			
●§§ 1.0-1–1.60	(869–032–00077–8)	21.00	Apr. 1, 1997
●§§ 1.61–1.169	(869–032–00078–6)	44.00	Apr. 1, 1997
●§§ 1.170–1.300	(869–032–00079–4)	31.00	Apr. 1, 1997
●§§ 1.301–1.400	(869–032–00080–8)	22.00	Apr. 1, 1997
●§§ 1.401–1.440	(869–032–00081–6)	39.00	Apr. 1, 1997
●§§ 1.441-1.500	(869-032-00082-4)	22.00	Apr. 1, 1997
●§§ 1.501–1.640	(869–032–00083–2)	28.00	Apr. 1, 1997
●§§ 1.641–1.850	(869–032–00084–1)	33.00	Apr. 1, 1997
●§§ 1.851–1.907	(869–032–00085–9)	34.00	Apr. 1, 1997
●§§ 1.908–1.1000	(869–032–00086–7)	34.00	Apr. 1, 1997
●§§ 1.1001–1.1400	(869–032–00087–5)	35.00	Apr. 1, 1997
●§§ 1.1401–End	(869–032–00088–3)	45.00	Apr. 1, 1997
●2–29	(869–032–00089–1)	36.00	Apr. 1, 1997
30–39	(869–032–00090–5)	25.00	Apr. 1, 1997
●40–49	(869–032–00091–3)	17.00	Apr. 1, 1997
●50–299	(869–032–00092–1)	18.00	Apr. 1, 1997
300–499	(869–032–00093–0)	33.00	Apr. 1, 1997
500–599	(869–032–00094–8)	6.00	[4] Apr. 1, 1990
●600–End	(869–032–00095–3)	9.50	Apr. 1, 1997
27 Parts:			
1–199	(869–032–00096–4)	48.00	Apr. 1, 1997

Title	Stock Number	Price	Revision Date
200–End	(869–032–00097–2)	17.00	Apr. 1, 1997
28 Parts:			
*1-42	(869–032–00098–1)	36.00	July 1, 1997
●43-end	(869-032-00099-9)	30.00	July 1, 1997
29 Parts:			
●0–99	(869–032–00100–5)	27.00	July 1, 1997
●100–499	(869–032–00101–4)	12.00	July 1, 1997
●500–899	(869–032–00102–2)	41.00	July 1, 1997
●900–1899	(869–032–00103–1)	21.00	July 1, 1997
●1900–1910 (§§ 1900 to 1910.999)	(869–032–00104–9)	43.00	July 1, 1997
1910 (§§ 1910.1000 to end)	(869–032–00105–7)	29.00	July 1, 1997
●1911–1925	(869–032–00106–5)	19.00	July 1, 1997
1926	(869–028–00115–7)	30.00	July 1, 1996
●1927–End	(869–032–00108–1)	40.00	July 1, 1997
30 Parts:			
●1–199	(869–032–00109–0)	33.00	July 1, 1997
200–699	(869–032–00110–3)	28.00	July 1, 1997
●700–End	(869–032–00111–1)	32.00	July 1, 1997
31 Parts:			
●0–199	(869–032–00112–0)	20.00	July 1, 1997
200–End	(869–028–00121–1)	33.00	July 1, 1996
32 Parts:			
1–39, Vol. I		15.00	[2] July 1, 1984
1–39, Vol. II		19.00	[2] July 1, 1984
1–39, Vol. III		18.00	[2] July 1, 1984
1–190	(869–032–00114–6)	42.00	July 1, 1997
●191–399	(869–032–00115–4)	51.00	July 1, 1997
●400–629	(869–032–00116–2)	33.00	July 1, 1997
●630–699	(869–032–00117–1)	22.00	July 1, 1997
●700–799	(869–032–00118–9)	28.00	July 1, 1997
●800–End	(869–032–00119–7)	27.00	July 1, 1997
33 Parts:			
1–124	(869–032–00120–1)	27.00	July 1, 1997
125–199	(869–032–00121–9)	36.00	July 1, 1997
●200–End	(869–028–00130–1)	32.00	July 1, 1996
34 Parts:			
●1–299	(869–032–00123–5)	28.00	July 1, 1997
●300–399	(869–032–00124–3)	27.00	July 1, 1997
●400–End	(869–032–00125–1)	44.00	July 1, 1997
35	(869–032–00126–0)	15.00	July 1, 1997
36 Parts			
●1–199	(869–032–00127–8)	20.00	July 1, 1997
200–299	(869–032–00128–6)	21.00	July 1, 1997
*300–End	(869–032–00129–4)	34.00	July 1, 1997
●**37**	(869–032–00130–8)	27.00	July 1, 1997
38 Parts:			
0–17	(869–028–00138–6)	34.00	July 1, 1996
18–End	(869–032–00132–4)	38.00	July 1, 1997
39	(869–028–00140–8)	23.00	July 1, 1996
40 Parts:			
1–49	(869–032–00134–1)	31.00	July 1, 1997
●1–51	(869–028–00141–6)	50.00	July 1, 1996
●52	(869–028–00142–4)	51.00	July 1, 1996
●53–59	(869–028–00143–2)	14.00	July 1, 1996
60	(869–028–00144–1)	47.00	July 1, 1996
61–62	(869–032–00140–5)	19.00	July 1, 1997
63–71	(869–032–00141–3)	57.00	July 1, 1997
●72–80	(869–028–00146–7)	34.00	July 1, 1996
*●81–85	(869–032–00143–0)	32.00	July 1, 1997
86	(869–028–00148–3)	46.00	July 1, 1996
●87-135	(869–032–00145–6)	40.00	July 1, 1997
●136–149	(869–032–00146–4)	35.00	July 1, 1997
●150–189	(869–028–00151–3)	33.00	July 1, 1996
●190–259	(869–028–00152–1)	22.00	July 1, 1996
260–265	(869–032–00149–9)	29.00	July 1, 1997
●260–299	(869–028–00153–0)	53.00	July 1, 1996
*●300–399	(869–032–00151–1)	27.00	July 1, 1997
●400–424	(869–032–00152–9)	33.00	[6] July 1, 1996
●425–699	(869–032–00153–7)	40.00	July 1, 1997
●700–789	(869–028–00157–2)	33.00	July 1, 1996
●790–End	(869–032–00155–3)	19.00	July 1, 1997
41 Chapters:			
1, 1–1 to 1–10		13.00	[3] July 1, 1984
1, 1–11 to Appendix, 2 (2 Reserved)		13.00	[3] July 1, 1984
3–6		14.00	[3] July 1, 1984
7		6.00	[3] July 1, 1984
8		4.50	[3] July 1, 1984
9		13.00	[3] July 1, 1984
10–17		9.50	[3] July 1, 1984
18, Vol. I, Parts 1–5		13.00	[3] July 1, 1984
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18, Vol. III, Parts 20–52		13.00	[3] July 1, 1984
19–100		13.00	[3] July 1, 1984
1–100	(869–032–00156–1)	14.00	July 1, 1997
101	(869–028–00160–2)	36.00	July 1, 1996
102–200	(869–032–00158–8)	17.00	July 1, 1997
201–End	(869–032–00159–6)	15.00	July 1, 1997
42 Parts:			
●1–399	(869–028–00163–7)	32.00	Oct. 1, 1996
●400–429	(869–028–00164–5)	34.00	Oct. 1, 1996
●430–End	(869–028–00165–3)	44.00	Oct. 1, 1996
43 Parts:			
●1–999	(869–028–00166–1)	30.00	Oct. 1, 1996
●1000–end	(869–028–00167–0)	45.00	Oct. 1, 1996
●**44**	(869–028–00168–8)	31.00	Oct. 1, 1996
45 Parts:			
●1–199	(869–028–00169–6)	28.00	Oct. 1, 1996
●200–499	(869–028–00170–0)	14.00	[5] Oct. 1, 1995
●500–1199	(869–028–00171–8)	30.00	Oct. 1, 1996
●1200–End	(869–028–00172–6)	36.00	Oct. 1, 1996
46 Parts:			
●1–40	(869–028–00173–4)	26.00	Oct. 1, 1996
●41–69	(869–028–00174–2)	21.00	Oct. 1, 1996
●70–89	(869–028–00175–1)	11.00	Oct. 1, 1996
●90–139	(869–028–00176–9)	26.00	Oct. 1, 1996
●140–155	(869–028–00177–7)	15.00	Oct. 1, 1996
●156–165	(869–028–00178–5)	20.00	Oct. 1, 1996
●166–199	(869–028–00179–3)	22.00	Oct. 1, 1996
●200–499	(869–028–00180–7)	21.00	Oct. 1, 1996
●500–End	(869–028–00181–5)	17.00	Oct. 1, 1996
47 Parts:			
●0–19	(869–028–00182–3)	35.00	Oct. 1, 1996
●20–39	(869–028–00183–1)	26.00	Oct. 1, 1996
●40–69	(869–028–00184–0)	18.00	Oct. 1, 1996
●70–79	(869–028–00185–8)	33.00	Oct. 1, 1996
●80–End	(869–028–00186–6)	39.00	Oct. 1, 1996
48 Chapters:			
●1 (Parts 1–51)	(869–028–00187–4)	45.00	Oct. 1, 1996
●1 (Parts 52–99)	(869–028–00188–2)	29.00	Oct. 1, 1996
●2 (Parts 201–251)	(869–028–00189–1)	22.00	Oct. 1, 1996
●2 (Parts 252–299)	(869–028–00190–4)	16.00	Oct. 1, 1996
●3–6	(869–028–00191–2)	30.00	Oct. 1, 1996
●7–14	(869–028–00192–1)	29.00	Oct. 1, 1996
●15–28	(869–028–00193–9)	38.00	Oct. 1, 1996
●29–End	(869–028–00194–7)	25.00	Oct. 1, 1996
49 Parts:			
●1–99	(869–028–00195–5)	32.00	Oct. 1, 1996
●100–185	(869–028–00196–3)	50.00	Oct. 1, 1996
●186–199	(869–028–00197–1)	14.00	Oct. 1, 1996
●200–399	(869–028–00198–0)	39.00	Oct. 1, 1996
●400–999	(869–028–00199–8)	49.00	Oct. 1, 1996
●1000–1199	(869–028–00200–5)	23.00	Oct. 1, 1996
●1200–End	(869–028–00201–3)	15.00	Oct. 1, 1996
50 Parts:			
●1–199	(869–028–00202–1)	34.00	Oct. 1, 1996
●200–599	(869–028–00203–0)	22.00	Oct. 1, 1996
●600–End	(869–028–00204–8)	26.00	Oct. 1, 1996
CFR Index and Findings Aids	(869–032–00047–6)	45.00	Jan. 1, 1997

Title	Stock Number	Price	Revision Date
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[1] Because Title 3 is an annual compilation, this volume and all previous volumes should be retained as a permanent reference source.

[2] The July 1, 1985 edition of 32 CFR Parts 1–189 contains a note only for Parts 1–39 inclusive. For the full text of the Defense Acquisition Regulations in Parts 1–39, consult the three CFR volumes issued as of July 1, 1984, containing those parts.

[3] The July 1, 1985 edition of 41 CFR Chapters 1–100 contains a note only for Chapters 1 to 49 inclusive. For the full text of procurement regulations in Chapters 1 to 49, consult the eleven CFR volumes issued as of July 1, 1984 containing those chapters.

[4] No amendments to this volume were promulgated during the period Apr. 1, 1990 to Mar. 31, 1997. The CFR volume issued April 1, 1990, should be retained.

[5] No amendments were promulgated during the period October 1, 1995 to September 30, 1996. The CFR volume issued October 1, 1995 should be retained.

[6] No amendments to this volume were promulgated during the period July 1, 1996 to June 30, 1997. The volume issued July 1, 1996, should be retained.

TABLE OF EFFECTIVE DATES AND TIME PERIODS—NOVEMBER 1997

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
November 3	November 18	December 3	December 18	January 2	February 2
November 4	November 19	December 4	December 19	January 5	February 2
November 5	November 20	December 5	December 22	January 5	February 3
November 6	November 21	December 8	December 22	January 5	February 4
November 7	November 24	December 8	December 22	January 6	February 5
November 10	November 25	December 10	December 26	January 9	February 9
November 12	November 28	December 12	December 29	January 12	February 10
November 13	November 28	December 15	December 29	January 12	February 11
November 14	December 1	December 15	December 29	January 13	February 12
November 17	December 2	December 17	January 2	January 16	February 17
November 18	December 3	December 18	January 2	January 20	February 17
November 19	December 4	December 19	January 5	January 20	February 17
November 20	December 5	December 22	January 5	January 20	February 18
November 21	December 8	December 22	January 5	January 20	February 19
November 24	December 9	December 24	January 8	January 23	February 23
November 25	December 10	December 26	January 9	January 26	February 23
November 26	December 11	December 26	January 12	January 26	February 24
November 28	December 15	December 29	January 12	January 27	February 26