WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #3

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OFFICE OF WEST VIR
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NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: Division of Environmental Protection
Office of Air Quality TITLE NUMBER: 45CSR34

CITE AUTHORITY W. Va. Code §§22-5-1 et seq.

AMENDMENT TO AN EXISTING RULE: YES___ NO_X_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

_____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 45CSR34

TITLE OF RULE BEING PROPOSED: Emission Standards for Hazardous Air
Pollutants Pursuant to 40 CFR Part 63

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR THEIR REVIEW.

Roger T Hall
Authorized Signature

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OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

63.00
5/20 W/o Comment

45CSR34

EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS PURSUANT TO 40 CFR PART 63

STATEMENT OF CIRCUMSTANCE

This rule in conjunction with existing rule 45CSR15, establishes general provisions for emission standards for hazardous air pollutants and other regulatory requirements promulgated by USEPA as of June 1, 1994, pursuant to section 112 of the federal Clean Air Act, as amended. This rule codifies general procedures and emission standards for certain stationary sources that emit (or have the potential to emit) one or more of the substances listed as hazardous air pollutants in section 112(b) of the Clean Air Act, as amended. 45CSR34 incorporates hazardous air pollutant standards codified by USEPA under 40 CFR Part 63 whereas the earlier existing rule for hazardous air pollutants, 45CSR15, primarily incorporates hazardous air pollutant standards promulgated by USEPA under 40 CFR Part 61 prior to amendment of the Clean Air Act. The Director intends to incorporate the federal counterpart rules by reference. Promulgation of this rule by the Legislature is necessary for the State to fulfill its responsibilities under the Clean Air Act, as amended.

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: 45CSR34 - Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 63

Type of Rule: X Legislative _____ Interpretive _____ Procedural

Agency: Office of Air Quality

Address: 1558 Washington Street, East
Charleston, WV 25311-2599

1. Effect of Proposed Rule	Annual		Fiscal Year		
	Increase	Decrease	Current	Next	There-after
Estimated Total Cost	$ 23,000	$ -0-	$ 6,000	$ 23,000	$ 25,000
Personal Services	17,000	-0-	4,300	17,000	18,500
Current Expense	6,000	-0-	1,700	6,000	6,500
Repairs and Alterations	-0-	-0-	-0-	-0-	-0-
Equipment	-0-	-0-	-0-	-0-	-0-
Other	-0-	-0-	-0-	-0-	-0-

2. Explanation of above estimates: Most costs anticipated to be incurred in the implementation of federal rules promulgated under 40CFR63 as of July 1, 1994 will be covered under prior budget estimates for implementing Title V of the Clean Air Act, as amended, under 45CSR30 authorized by the Legislature during the 1994 session. In the likely event that the federal emission standards for perchloroethylene dry cleaners must be implemented and enforced outside of the Title V (45CSR30) program, costs for such implementation must be paid from the federal grant award which must in turn be matched with state funds from general revenue and non-Title V fees (40% state/60% federal ratio). The program cost estimates in Item 1 reflect only those estimated costs for state implementation of the dry cleaner standards. Staff time representing approximately 0.5 FTE is anticipated for the regulation of approximately 85 dry cleaning facilities.

3. Objectives of these rules: This rule establishes general provisions for emission standards for hazardous air pollutants and other regulatory requirements pursuant to section 112 of the Clean Air Act, as amended. Promulgation of this rule by the Legislature is necessary for the State to fulfill its responsibilities under the Clean Air Act, as amended.

4. Explanation of overall economic impact of proposed rule.

A. Economic impact on state government.

See Section 2.

B. Economic impact on political subdivisions; specific industries; specific groups of citizens.

No impact above that resulting from the currently applicable federal emission standards. It should be particularly noted, however, that the new federal regulation for coke oven batteries incorporated into this rule by reference, requires special fees to be paid by the regulated facility for dedicated seven-day-per week independent compliance inspections of coke ovens. This rule provides for payment of such inspection costs by the regulated facility.

C. Economic impact on citizens/public at large.

No impact above that resulting from the currently applicable federal emission standards.

Date: August 12, 1994

Signature of agency head or authorized representative:

G. Dale Farley
Chief, Office of Air Quality

DATE: August 12, 1994

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: G. DALE FARLEY
CHIEF, OFFICE OF AIR QUALITY
DIVISION OF ENVIRONMENTAL PROTECTION

LEGISLATIVE RULE TITLE: Series 34 - "Emission Standards for Hazardous Air Pollutants"

1. Authorizing statute(s) citation W. Va. Code §§22-5-1 et seq.

2. a. Date filed in State Register with Notice of Hearing:

June 23, 1994

b. What other notice, including advertising, did you give of the hearing?

Class I legal advertisement filed in a newspaper published in each of the Air Quality Control Regions of West Virginia.

Office of Air Quality mailing list.

c. Date of hearing(s): July 29, 1994

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached X No comments received

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

August 12, 1994

f. Name and phone number of agency person to contact for additional information:

G. Dale Farley, Chief

Office of Air Quality (Phone: 558-2275)

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

   a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

   N/A

   b. Date of hearing: N/A

   c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

   N/A

   d. Attach findings and determinations and reasons:

   Attached N/A

45CSR34

EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS PURSUANT TO 40 CFR PART 63

SUMMARY

Title 45, Series 34 provides authority for the Director to determine and enforce case-by-case MACT standards for major hazardous air pollutant sources in the absence of a federal standard under certain circumstances as required for permit program approval under Title V of the Clean Air Act.

The proposed rule also establishes general provisions for emission standards for hazardous air pollutants (NESHAPS) and other regulatory requirements pursuant to section 112 of the federal Clean Air Act (CAA). The rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the hazardous air pollutants (HAP) in or pursuant to section 112(b) of the CAA. This rule incorporates by reference provisions relating to perchloroethylene dry cleaners, coke ovens, and synthetic organic chemical manufacturing (HON).

TITLE 45
LEGISLATIVE RULE
BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY

SERIES 34
EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
PURSUANT TO 40 CFR PART 63

§45-34-1. General.

1.1. Scope. - This rule establishes general provisions for national emission standards for hazardous air pollutants (NESHAPS) and other regulatory requirements pursuant to section 112 of the federal Clean Air Act as amended in 1990 (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the substances listed as hazardous air pollutants (HAP) in or pursuant to section 112(b) of the CAA. It is the intent of the Director to adopt these standards by reference. It is also the intent of the Director to adopt associated reference methods, performance specifications and other test methods which are appended to these standards.

1.2. Authority. - W.Va. Code §§22-5-1 et seq.

1.3. Filing Date. -

1.4. Effective Date. -

1.5. Incorporation by Reference - Federal Counterpart Regulation. This rule is necessary for the State to fulfill its responsibilities under the Clean Air Act, as amended, and with the exceptions noted, incorporates, by reference, the federal counterpart regulations under 40 CFR Part 63. The Director recommends incorporation by reference.

1.6. Determination of Stringency - Federal counterpart Regulation. - This rule is no more or no less stringent than the federal counterpart regulation.

1.7. Constitutional Takings Determination - The Director has determined that this rule will not result in the constitutional taking of real property.

§45-34-2. Requirements.

2.1. After the effective date of the state permit program under title V of the CAA, no person may modify a major source of hazardous air pollutants, unless the Director determines that the maximum achievable control technology emission limitation under this rule for existing sources will be met.

2.2. After the effective date of the state permit program under title V of the CAA, no person may construct or reconstruct any major source of hazardous air pollutants, unless the Director determines that the maximum achievable control technology emission limitation under this rule for new sources will be met.

2.3. After the effective date of the state permit program under title V of the CAA, the Director shall determine and apply case-by-case maximum achievable control technology standards to existing sources categorized by the Administrator pursuant to Section 112(c)(1) of the CAA for which the Administrator has not promulgated emission standards in accordance with Section 112(d) and 112(e) of the CAA.

2.4. Prior to constructing, reconstructing or modifying any facility subject to this rule, the owner or operator shall obtain a permit in accordance with the applicable requirements of 45CSR13, 45CSR14, 45CSR30 and this rule.

§45-34-3. Definitions.

3.1. "Administrator" shall mean the Administrator of the United States Environmental Protection Agency.

3.2. "Director" shall mean the Director of the West Virginia Division of Environmental Protection.

3.3. "Hazardous air pollutant" shall mean any air pollutant listed pursuant to §112(b) of the CAA as ~~June~~July 1, 1994.

§45-34-4. Adoption of Standards.

4.1. The Director hereby adopts and incorporates by reference the provisions of 40 CFR Part 63 including any reference methods, performance specifications and other test methods which are appended to such standards and contained in 40 CFR Part 63 as in effect on ~~June~~July 1, 1994, for the purposes of implementing a program for national emission standards for hazardous air pollutants for source categories, except as follows:

4.1.a. Part 63.15 is amended to provide that information shall be available to the public in accordance with W.Va. Code §§22-5-1 et seq. and 29B-1-1 et seq.

4.1.b. Any provision related to section 112(r) of the CAA.

4.1.c. Part 63.150 is excluded from adoption.

§45-34-5. Director.

5.1. Any and all references in 40 CFR Part 63 to the "Administrator" is amended to be the "Director" except in the following references which shall remain "Administrator."

5.1.a. Part 63.1(a)(2)

5.1.b. Part 63.1(a)(3)

5.1.c. Part 63.1(b)(2)

5.1.d. Part 63.1(c)(2)(ii)

5.1.e. Part 63.2 pertaining to the definition of:

Administrator

Alternative Emission Limitation

Alternative Emission Standard

Alternative Test Method

Approved Permit Program

Equivalent Emission Limitation

Federally Enforceable

Lesser Quantities

Major Source

Performance Audit

Permitting Authority

Regulation Promulgation Schedule

Responsible Official

5.1.f. Part 63.5(b)(4)

5.1.g. Part 63.5(b)(5)

5.1.h. Part 63.6(g)(i)

5.1.i. Part 63.6(g)(9)(i)

5.1.j. Part 63.6(g)(9)(ii)

5.1.k. Part 63.6(h)(9)

5.1.l. Part 63.7(c)(4)(iii)

5.1.m. Part 63.9(a)(3)

5.1.n. Part 63.9(a)(3)

5.1.o. Part 63.10(3)

5.1.p. Part 63.12(b)(1)

5.1.q. Part 63.12(c)

5.1.r. Part 63.13(a)

5.1.s. Part 63.13(b)

5.1.t. Part 63.52(a)

5.1.u. Part 63.56

5.1.v. Part 63.100 (l)(1)(iii)

5.1.w. Part 63.101(a)

5.1.x. Part 63.102(a)(2)(b)

5.1.y. Part 63.102(b)(3)

5.1.z. Part 63.103(b)(3)(d), pertaining to the second occurrence of the definition of Administrator.

5.1.aa. Part 63.106(a)

5.1.ab. Part 63.111(4) pertaining to the definition of Administrator

5.1.ac. Part 63.150(c)(3)

5.1.ad. Part 63.150(c)(5)(ii)

5.1.ae. Part 63.191(a)

5.1.af. Part 63.192(d)(2)(e)

5.1.ag. Part 63.192(g)(2)(h)

5.1.ah. Part 63.193

5.1.ai. Part 63.301

5.1.aj. Part 63.302(a)(2)

5.1.ak. Part 63.304(b)(3)

5.1.al. Part 63.304(d)

5.1.am. Part 63.307(e)(1)

5.1.an. Part 63.311(g)(2)

5.1.ao. Part 63.313

5.1.ap. Part 63.321

5.1.aq. Part 63.325(a)

5.1.ar. Part 63.325(b)

5.1.as. Part 63.325(c)

§45-34-6. Permits.

6.1. Nothing contained in this rule shall be construed or inferred to mean that permit requirements in accordance with applicable rules shall in any way be limited or inapplicable.

§45-34-7. Inconsistency Between Rules.

7.1. In the event of any inconsistency between this rule and any other existing rule of the West Virginia Division of Environmental Protection, such inconstancy shall be resolved by the determination of the Director and such determination shall be based upon the application of the more stringent provision, term, condition, method, rule or regulation.

§45-34-8. Severability.

8.1. The provisions of this rule are severable and if any provisions or part thereof shall be held invalid, unconstitutional, or inapplicable to any person or circumstance; such invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, sections, or parts of this rule; or their application to any persons or circumstances.

REGULATION 34 ATTACHMENT

Federal Register
Tuesday
December 29, 1992

Part II

Environmental Protection Agency

40 CFR Part 63
National Emission Standards for Hazardous Air Pollutants; Compliance Extensions for Early Reductions; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–4534–3]

National Emission Standards for Hazardous Air Pollutants; Compliance Extensions for Early Reductions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Regulations governing compliance extensions for early reductions of hazardous air pollutants (HAP's) were proposed in the Federal Register on June 13, 1991. This action promulgates these regulations and implements the provisions of section 112(i)(5) of the Clean Air Act (CAA) (as amended in 1990). This rule establishes requirements and procedures for source owners or operators to obtain compliance extensions from section 112(d) standards and for reviewing agencies to follow in evaluating requests for extensions.

DATES: *Effective Date.* December 29, 1992.

Judicial Review. Under section 307(b)(1) of the CAA, judicial review of the actions taken by this notice is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

ADDRESSES: *Background Information Document.* The background information document (BID) for the promulgated standards may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone number (919) 541–2777. Please refer to "National Emissions Standards for Hazardous Air Pollutants: Compliance Extensions for Early Reductions—Background Information for Promulgated Standards" (EPA–450/3–92–006b). The BID contains (1) a summary of all the public comments made on the proposed standards and EPA's responses to the comments; and (2) a summary of the changes made to the standards since proposal. Also available from the EPA Library are three additional supporting documents. These documents are:

(a) "Enabling Document for Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants" (EPA–450/3–91–013, July 1991);

(b) "Questions and Answers about the Early Reductions Program" (EPA–450/3–92–005, January 1992); and

(c) "Procedures for Establishing Emissions for Early Reduction Compliance Extensions" (EPA–450/3–91–012a, February 1992).

Docket. Docket No. A–90–47, containing supporting information used in developing the promulgated standards, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket Section, Waterside Mall, room M–1500, 1st Floor, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information concerning the Early Reductions Program regulations, contact Mr. David Beck, telephone (919) 541–5421, or Mr. Richard Colyer, telephone (919) 541–5262. The address for both is Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711. For information concerning Method 301, contact Mr. Tony Wayne, telephone (919) 541–3576, Emission Measurement Branch, Technical Support Division (MD–19), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The information presented in this preamble is organized as follows:

I. General Requirements
II. Summary of Changes and Impacts of the Final Rule
III. Supporting Documents
IV. Public Participation
V. Significant Comments and Changes to the Proposed Rule
  A. Definition of Source
  B. Base Year Emissions
  C. Enforceable Commitments
  D. Allowable Emission Reductions
  E. Demonstration of Early Reductions
  F. High-Risk Pollutants
  G. State Authority
  H. Interface With Title V Permits
  I. Interface With Section 112(g) Modifications
  J. Interface With Title I Provisions
  K. Test Methods and Procedures
  L. Other Changes to the Proposed Regulation
VI. Administrative Requirements
  A. Docket
  B. Paperwork Reductions Act
  C. Executive Order 12291
  D. Regulatory Flexibility Act

I. General Requirements

Today's rule applies to any existing source that seeks a 6-year compliance extension from an applicable section 112(d) standard by achieving early emission reductions of HAP's. The compliance extension would be obtained and authorized in accordance with section 112(i)(5) of the CAA.

Section 112(i)(5) allows an existing source to be granted a 6-year extension of compliance with otherwise applicable section 112(d) standards upon demonstration by the owner or operator of the source that a 90 percent reduction in HAP's (95 percent or more in the case of particulates) has been achieved. An enforceable alternative emission limitation reflecting the reduction will be established for the source by a permit issued under Title V of the CAA.

The 90 (95) percent emission reduction must be achieved before proposal of an applicable section 112(d) standard in most cases. However, a source achieving the reduction after proposal of a standard but before January 1, 1994, may qualify for a compliance extension from section 112(d) standards by making an enforceable commitment before proposal of the standard to achieve such a reduction.

State or local air pollution control agencies with Title V permitting authority will review Title V operating permit applications for compliance extensions. They will issue permits containing alternative emission limitations applicable to sources achieving early reductions in lieu of section 112(d) standards in accordance with approved permit programs under Title V of the CAA. The EPA Regional Offices will review permit applications and issue Title V permits for sources located in States that do not have approved Title V permit programs. States will assume the review and permitting activities upon approval of their Title V permit programs, or may be granted delegation of the Early Reductions Program prior to approval of their Title V permit program.

II. Summary of Changes and Impacts of the Final Rule

Based on comments received during the comment period on the proposed rule, few significant changes have been made to the regulation. The significant changes are listed below.

The most significant change to the rule has been to the high-risk list of pollutants. Seventeen pollutants have been added to the list and five pollutants have been deleted. Weighting factors for seven pollutants have been adjusted. A provision was added to ensure that there are no increases in radionuclides as a result of the emission reduction demonstration. Another

provision was added that would "grandfather" sources that already had approved enforceable commitments or alternative emission limits specified by permit from having to revise their post-reduction demonstration if a new pollutant is added to the high-risk list.

Part of the proposed definition of source, which allowed a combination of sources to be considered an Early Reductions source (§ 63.73(a)(4)) has been removed.

The rule has been revised to restrict the combined percent reduction method in demonstrations involving sources with both gaseous and particulate HAP emissions. This provision now only applies to emission points that emit both gases and particulates; emission points that emit only gaseous HAP or only particulate HAP cannot be used in a combined percent reduction demonstration.

Another change to the rule allows the use of EPA average emission factors for equipment leaks to determine base year emissions only if no reductions in equipment leak emissions are claimed as part of the reduction demonstration. The equipment leak source in appendix B has been clarified to be specific to the individual process equipment component types.

There have also been several less significant changes. The definition of "actual emissions" has been clarified to exclude startup and shutdown emissions due to malfunctions. Requiring evidence that curtailments or shutdowns are permanent for the post-reduction demonstration has been removed; evidence is unnecessary, as such reductions will become permit conditions. The suggested statement of commitment in the enforceable commitment has been revised to be consistent with wording in the demonstration requirements section of the regulation. The length of time allowed to provide source test results to support the post-reduction demonstration has been increased to 120 days from 90 after the permit submittal deadline. The term "post-control" has been changed to "post-reduction" throughout the rule to recognize that reductions can be achieved through means other than control technology. Corrections and changes have been made to Method 301, including a broadening of applicability of the method to other media.

The Early Reductions Program is a voluntary program. The primary goal of the Program is to provide a positive impact to the environment by encouraging early reductions of HAP's prior to mandatory regulatory action. As discussed in the proposal preamble, significant environmental benefits can be achieved through early reduction of emissions (56 FR 27338). The environmental benefits accrue because over time the total emission reductions achieved by participants exceed those emission reductions which would be achieved by section 112(d) standards imposed at a later date even if the later standards are more stringent.

There are also potential benefits to companies participating in the Program. The compliance extension will give a company an opportunity to design cost-effective emission reduction approaches for their sources and may reduce the cost of compliance over the long term. The Program allows flexible compliance options and encourages pollution prevention solutions. Companies achieving early reductions of HAP's may also be viewed more favorably by the affected public.

III. Supporting Documents

In addition to the background information document, information pertaining to the development and implementation of the Early Reductions Program can be found in other publications developed by EPA. The preamble to the proposed rule (56 FR 27338) includes a detailed discussion of all the provisions of the rule and presents EPA's decision-making process in developing the Program.

The EPA has published three additional documents to assist industries interested in participating in the Program and also to assist regulatory agencies responsible for implementing the Program. The first document, entitled "Enabling Document for Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants" (EPA–450/3–91–013, July 1991), presents a more detailed description of the Early Reductions Rule. The enabling document includes information useful in both preparing and reviewing Early Reductions submittals.

The second document is titled "Questions and Answers About the Early Reductions Program" (EPA–450/3–92–005, January 1992), and is a compendium of questions dealing primarily with implementation of the Program. The questions were generated by industry, State and local regulatory agencies, trade associations, and other interested parties.

Finally, EPA has produced a procedures document for establishing base year and post-reduction emissions. This document is titled "Procedures for Establishing Emissions for Early Reduction Compliance Extensions" (EPA–450/3–91–012a, February 1992) and provides guidance for establishing emissions from specific source categories for which section 112(d) standards will be developed. Source categories included in this document are: The synthetic organic chemical manufacturing industry, ethylene oxide sterilizers, and chrome electroplaters.

IV. Public Participation

In developing the Early Reductions rule, EPA solicited input from representatives of industry, environmental groups, and State and local air pollution control agencies. Options for the rule's major provisions were presented and discussed with these and other interested parties at a meeting of the National Air Pollution Control Techniques Advisory Committee on January 29, 1991, and at four "roundtable" discussions held in January, February, and March 1991.

In addition, EPA solicited public comments on the proposed rule that was published in the Federal Register on June 13, 1991 (56 FR 27338). Sixty-seven comment letters were received, with most of the letters containing multiple comments. The EPA's responses to these comments can be found in the Background Information Document referenced in the "ADDRESSES" listing above. The major comments received by EPA and the responses thereto are also addressed in this preamble.

The EPA is strongly committed to the success of the Early Reductions Program. Accordingly, EPA has been actively promoting the Program and been disseminating information to public and private organizations. Since proposal of the rule, EPA has conducted a number of workshops to inform interested parties about the Program. In addition, EPA has met with industries and individual companies interested in participating in the Program and with regulatory agencies who will be involved with the implementation of the rule. These workshops and meetings have served as a forum for EPA to field questions on the proposed rule and to better understand the comments and issues of potentially affected parties.

V. Significant Comments and Changes to the Proposed Rule

Individual companies, trade associations, State and local regulatory agencies, and citizens groups all commented on the proposed rule. The most significant comments and EPA's responses to those comments are discussed below. These comments are grouped under the following headings: Definition of Source, Base Year Emissions, Enforceable Commitments,

Allowable Emission Reductions, Demonstration of Early Reduction, High-Risk Pollutants, State Authority, Interface with Title V Permits, Interface with Section 112(g) Modifications, Interface with Title I Provisions, Test Methods and Procedures, and Other Changes to the Proposed Regulations.

A. Definition of Source.

Many comments addressed the source definition. Several commenters contended that the proposed definition was far too broad. They argued that the sources receiving a compliance extension under the Early Reductions Program should be the same sources for which section 112(d) standards are developed.

The commenters' conclusion that EPA should change the definition of source to match that of a section 112(d) source proceeds from an incorrect assumption. The commenter assumes that at the time an owner or operator undertakes to make an early reduction, or enters into an enforceable commitment to do so, he can determine the "source" for purposes of "the otherwise applicable section 112(d) standard."

However, in most instances this will not be possible because of the structure of section 112(i)(5). The Early Reductions provision requires a source owner or operator to make the reductions prior to proposal of a section 112(d) standard, or enter into an enforceable commitment to do so before proposal provided the reductions are demonstrated before January 1, 1994. If the otherwise applicable section 112(d) standard has not yet been proposed and "source" defined for that standard, it would be impossible for an owner or operator to know whether the necessary reductions had been made or could be made to achieve the 90 (95) percent reduction. The only exception is for the equipment leak portion of the upcoming section 112(d) standards for synthetic organic chemical manufacturing plants, discussed below.

As recognized by Senator Durenberger and others, EPA will have broad discretion in defining source for any particular section 112(d) standard. In some cases, a source will be a process unit, in others it will be an entire plant. See 126 Cong. Rec. S16927 (3rd col. daily ed. Oct. 27, 1990). Congress could not have meant to so restrict participation in the Early Reductions Program to those companies who owned or operated emission points that EPA had clearly defined as a source before proposal of a particular section 112(d) standard. Moreover, because it would be impossible at this time to identify all possible sources that may be subject to section 112(d) standards, it is impossible for EPA to list each and every type of source for the Early Reductions Program. The EPA's definition of "source" recognizes the flexibility set forth in the statute. The EPA, or the State authority if operating under a delegated program, must review the applicant's Early Reductions submittal to ensure that it is consistent with one of the regulatory definitions under the Early Reductions Program. Given the limitation described above, EPA developed a definition of source for this provisions designed to encompass the broad definition of source contained in section 112(a), which incorporates the broad definition of section 111(a).

One commenter contended that EPA's definition of source in § 63.73(a)(1) proceeds from an error in equating "source" and "source category", and interprets sources listed in appendix B as "source categories."

The commenter fundamentally misunderstands EPA's definition of source and how it relates to the "source category." As the commenter suggests, EPA is to identify source categories which emit HAP's. The EPA is not saying, however, that it must know each category before it can make the linkage to section 112(i)(5). A "source category" for the purpose of defining industry types to be regulated and the "source" to which a standard specifically applies may be quite different (e.g., in the new source performance standard for electric utilities the applicable "source" is the steam boiler).

The single "source" listed in appendix B also exemplifies this distinction; this source, equipment leaks, is contained within a source category—the synthetic organic chemical manufacturing industry. Furthermore, equipment leaks are a special situation that EPA believes should be addressed separately, as equipment leak emissions arise from the nearly ubiquitous pumps, valves, connectors, and other equipment integrally associated with more traditional "sources", i.e., building, structure, facility or installation. The outcome of a regulatory negotiation involving equipment leaks published by EPA designated equipment leaks as a separate source (56 FR 9318; March 6, 1991). The EPA indicated that it would propose the rule as part of the hazardous organic NESHAP (HON) which will be promulgated under section 112(d). While this standard has not yet been proposed, the publication of the outcome of the regulatory negotiation sufficiently identifies equipment leaks as a distinct source to separate them for the purposes of Early Reductions. The EPA will determine the definition of source for the HON in that rule.

The EPA is allowing the option of including equipment leaks as part of a designated source, leaving the equipment leaks out of the source, or identifying equipment leaks solely as the source.

Indeed, once EPA defines a source category, the issue of the source definition may still remain. In some instances, individual facilities within a source category may constitute an entire source, in other instances each "source" subject to a section 112(d) standard may only constitute a portion of the facility within a source category. Thus, it is the regulated "source" that it is important for purposes of determining otherwise applicable section 112(d) standards, not the source category. Because EPA has not defined source for particular section 112(d) standards (except in one instance), EPA's definition reflects the range of possibilities contemplated by the definition of source in the statute.

Several commenters objected to proposed § 63.73(a)(2) and one argued that a plantwide definition of source was expressly prohibited, citing a floor statement by Senator Durenberger.

Section 111(a)(1) (incorporated into the definition of "existing source" in section 112) defines a "stationary source" as "any building, structure, facility, or installation which emits or may emit any hazardous air pollutant." This term is obviously broad enough to encompass an entire plant or facility. In some instances, a section 112(d) standard may encompass an entire "facility," which certainly includes the concept of a plantwide source.

Moreover, the definition of major source, which covers an entire contiguous area under common ownership or control, may consist of a single stationary source. "Major source" is defined as "* * * any stationary source or group of stationary sources * * *" See CAA section 112(a)(1). Thus, contrary to the commenters assertions, the definition of source under section 112 expressly encompasses a plantwide definition of source, among other configurations. The proposed and final regulations reflect the statutory language.

One commenter also cites a floor statement of Senator Durenberger's as the authoritative basis for the conclusion that a source cannot include an entire plant. However, closer reading of the complete referenced statement also expressly confirms that the source to which a section 112(d) standard might apply could be a specific portion of a facility or encompass an entire

contiguous facility. See 126 Cong. Rec. S 16927 (3rd. col.). If EPA has the discretion to establish a section 112(d) standard for a source that encompasses an entire contiguous facility, then it follows that an entire contiguous facility may be a source under section 112(i)(5).

One commenter objected to the proposed § 63.73(a)(3) because it allows an applicant to define a grouping of points that constitutes a building, structure, facility, or installation as a source. The commenter cites proposal preamble language that explains that emission points having a functional geographical relationship could be defined as a source under this part of the definition and concludes that there is no statutory basis for this type of grouping.

Subparagraph 63.73(a)(3) also directly follows the definition of source in the statute. As noted, a "stationary source" is any "building, structure, facility or installation which emits, or may emit, any hazardous air pollutant." See CAA section 111(a)(3). The phrase "functional or geographical relationship" merely gives meaning to the statutory terms. For example, a "building" suggests a geographical grouping of emission points (it may also have a functional relationship). Likewise, an "installation" suggests some type of unit that undertakes a particular function, such as a wastewater treatment system. As EPA develops section 112(d) standards, it will define "source" for particular standards considering these types of logical groupings of emission points. However, because EPA has not yet defined what will constitute a "source" for any particular section 112(d) standard (with the single exception noted earlier), the language of this rule reflects the range of options available within the statutory definition.

Several commenters contended that subparagraphs (a)(4) and (a)(5) of the proposed definition are contrary to the statute because they allow "bubbling" across two or more separate sources. One commenter noted that previous guidance from EPA precluded the use of "bubbling" to avoid section 112(d) standards.

As discussed in the proposed rule, EPA believes that the provisions of § 63.73(a) (4) and (5) are consistent with the statute and the underlying purposes of the Early Reductions provisions. However, EPA is deleting subparagraph (a)(4) because (a)(4) is redundant with the provisions of (a)(5) as any combination of emission points that would meet the requirement of proposed paragraph (a)(4) would also fit with the language of (a)(5).

The EPA has concluded that unrelated emission points may be considered as a single "source" for purposes of the Early Reductions Program, provided that the emission points are all under common ownership or control, are located "within a contiguous area," such as a common plant site, and constitute a significant level of emissions. The individual emission points to be aggregated do not have to be located next to one another or be functionally related in order to be grouped as a source provided that they are all located within the same contiguous facility.

The conclusion that aggregating unrelated emission points is permissible for purposes of the Early Reductions Program is confirmed not only by the statutory language and case law discussed above, but also by the statutory policies and legislative history of the Early Reductions Program. In section 112(i)(5)(E), Congress authorized a form of emissions trading, i.e., by allowing offsetting reductions of one HAP against reductions of other HAP's for purposes of the Early Reductions Program. Aggregation of emission points is merely another form of emissions trading.[1]

Nevertheless, the rule is not inconsistent with the general emissions trading policy referenced by the commenter (51 FR 43814; December 4, 1986), i.e., that "bubbling" may not be used to avoid a section 112(d) standard. The Early Reductions provision does not provide a mechanism for a source to avoid applicability of a section 112(d) standard. Rather, it provides for a compliance extension in the form of an alternative emission limit for the source for a period of six years in exchange for the source having achieved a certain emissions reduction level by a specified date (either by January 1, 1994 or before proposal of an otherwise applicable section 112(d) standard). The source must meet the section 112(d) standards when the compliance extension has expired.

Moreover, the legislative history indicates that Congress wanted EPA to encourage participation in the Program. See H.R. Rep. No. 101–490, 101st. Cong., 2d Sess. 332 (May 17, 1990) ("In the administration of this provision EPA thus should strive to encourage companies to take advantage of this incentive to reduce emissions early.") In addition, the significance threshold (i.e., 10 tons per year, or 5 tons per year at a contiguous plant site less than or equal to 25 tons per year) is designed to ensure that substantial real reductions are achieved and that the Program is not trivialized. The flexibility afforded through aggregating emission points offers greater incentive to participate in the Early Reductions Program. Greater overall participation in the Program combined with the minimum threshold for early reductions achieved will help ensure that the reductions achieved under the Program are both real and substantial and the concomitant environmental benefits maximized.

The commenter argues further that the random pooling approach that allows for credits undertaken in the past demonstrates that subparagraph (a)(5) is inconsistent with the purposes of the statute. The commenter argues that the justification for random pooling—to encourage greater participation in the Program and thereby reduce air toxics emissions—is not present if a source can include past reductions in the pool. The commenter concludes that any pollution reduction measure undertaken prior to the enactment of the law cannot have been dependent on the incentive of pooling. The commenter acknowledges that past reductions can be credited, but that they should not be pooled with unrelated, uncontrolled emission points to demonstrate an early reduction.

The statute affords a six year extension for those sources that achieve a 90 (95) percent reduction in emissions by a specified time. Those emission reductions may have occurred at any time back to 1987, and in limited instances 1985 or 1986. The commenter assumes that the only time applicants will use the grouping of emissions points under proposed paragraphs (a)(4) and (a)(5) is to get credit for past actions, make no additional reductions, and obtain a 6-year extension for remaining uncontrolled emission points within the Early Reductions source. This will not be the case. The EPA has discussed tentative Early Reduction plans with many companies and has received several enforceable commitments which indicate that the flexible definition of source is encouraging prospective emission reduction projects. In many instances, EPA expects that an applicant will group some recently well-controlled emission points with others, some or all of which may have controls installed on them. The ability to apply credits in excess of 90 (95) percent reduction from

[1] This conclusion is limited to the context of the Early Reductions Program for several reasons. In particular, Congress specifically contemplated netting one hazardous pollutant against another for purposes of this program. Congress indicated in the legislative history that it wishes EPA to encourage participation in this program to obtain early reductions (see discussions below); and the statutory requirement for 90 percent reductions raises quite different factual and policy issues than might be applicable elsewhere.

one point to a point unable to achieve 90 (95) percent by itself, provides an incentive to control the second point enough to cover the shortfall where it would not have otherwise.

For example, suppose the applicant previously controlled a 100 ton emission point "A" to a 98 percent control level, i.e., it now emits 2 tons of HAP's. The applicant also has a second 100 ton uncontrolled emission point "B." Existing control measures for point B indicate that MACT will likely require at least 90 percent reduction. However, a much less expensive technology can reduce those emissions from point B by 85 percent, i.e., to 15 tons. Furthermore, the owner has determined that he would realize a net savings if he could implement 85 percent control now and 10 years later implement MACT, compared with meeting MACT in four years. The extra time gained from a compliance extension would also allow development of process modifications that would completely eliminate HAP emissions from his source. Without proposed paragraph (a)(5), the applicant will have no incentive to install any controls on point B prior to a section 112(d) standard because that point by itself will not be reduced by 90 (95) percent, short of installing MACT controls anyway. However, if it can "credit" an additional five tons from emission point A, it will have an incentive to participate in the Program for both points A and B, and thereby substantially reduce overall air toxics emissions from that source. Without the option of proposed paragraph (a)(5), the source would not seek a compliance extension for point B and would have no incentive to enter the Program, and the emissions from the two points will be 102 tons; by entering both points in the Program using proposed paragraph (a)(5), the source's emissions will be 17 tons, which is greater than a 90 (95) percent reduction from the original 200 tons being emitted by the two points. Moreover, there is no basis in the law for penalizing those that made reductions between 1987 and the passage of the CAA Amendments in defining a source.

The same commenter also objects to pooling emissions that would have occurred anyway, especially shutdowns, to shield points that otherwise would have had to comply with a section 112(d) standard.

There is no basis to require, as the commenter urges, that an applicant certify that any reductions (in particular any shutdowns) would not have occurred but for the Early Reductions provisions of the law. This comment and others are addressed more fully in the section entitled "Allowable Emission Reductions" below.

A number of commenters felt the definition of source should be consistent with the source definition proposed in Title V of the CAA, and therefore be consistent with other sections of the CAA.

The definition of source for purposes of section 112(i)(5) is consistent with the definition of source under section 112 of the CAA. Nothing precludes different definitions or interpretations of the term "source" in other parts of the CAA. The Title V permitting authority will be required to establish permit limits for a facility during the permit process required by the Title V permit program. It may well be that one permit for a contiguous facility may contain permit limits for multiple section 112(d) sources. Whether part of the Early Reductions Program or not, many industrial facilities will be subject to more than one section 112(d) standard and thus may have more than one section 112(d) "source" as part of its permit.

One commenter suggested that the source definition be expanded to cover all sources for which EPA is currently developing standards. Similarly, a second commenter requested that the source definition be revised so that it is linked to the list of categories and subcategories for which section 112(d) standards will be developed.

As noted earlier, EPA has not yet determined what groups of emission points will constitute a source for any particular section 112(d) standard.

The definition of source is set forth in a manner consistent with the broad statutory definition. Section 112 will establish standards for hundreds of different types of industrial processes and other sources that emit HAP's. It is impossible to determine at this time how "source" might be defined for any particular source category to be regulated by a section 112(d) standard. As noted above, the list of potential source categories to be subject to regulation does not necessarily aid in the definition of source. In some instances, an industrial source category (e.g., a particular type of manufacturing process) may have one "source" for purposes of a section 112(d) emission limit. In other instances, multiple sources may be included within any source category, e.g., tanks in a process could be one source and wastewater emissions from the same process may constitute another source within the same source category. The EPA has not yet developed any specific definitions of source to all of the categories listed in 56 FR 28548 (preliminary source category listing).

Included in the source definition is a significance threshold (discussed above) to ensure that application of the flexible source definition results in meaningful reductions of emissions. A number of comments were received regarding the significance threshold.

One commenter believed that § 63.74(b) of the regulation that defines significant emissions unnecessarily restricts participation in the Program by smaller stationary sources. Another commenter agreed that the Early Reductions Program should focus only on major emitters (i.e., 10 tons/yr or 5 tons/yr at less than 25 tons/yr facilities). Another commenter felt that the definition of significant should include only 10 ton/year sources; allowing smaller sources to participate would waste resources on such small sources.

The EPA's definition of source is designed to provide broad flexibility in defining source for purposes of the Early Reduction provisions. The goal is to encourage widespread participation in this Program to achieve early reductions of air toxics emissions. The significance threshold included in 63.73(b) is designed to ensure that significant reductions occur. It is important to point out, however, that the 5/10-ton threshold of significant emissions applies to only subparagraph (a)(4) (formerly (a)(5) in the proposed rule; proposed paragraph (a)(4) has been deleted in the final rule). Thus, any process unit or other entity that meets any definition in (a)(1) through (a)(3) is eligible for an Early Reduction extension, even if it emits less than the 5- or 10-ton threshold. Thus, EPA anticipates that in most instances, even smaller facilities will be able to participate in the Program.

While EPA could have considered other thresholds, such as 3 tons/25 tons per year or 20 percent of any plant's emissions, as suggested by some commenters, the levels chosen are a reasonable attempt to balance the various factors involved, including allowing participation and assuring significant reductions.

One commenter requested clarification of the source definition as it relates to a source that services more than one production unit, such as a wastewater system.

Under § 63.73(a)(3), it is possible to define a unit such as a wastewater treatment system, that serves multiple parts of an entire plant, as a single source.

Given the flexibility of the source definition, one commenter wanted assurance that the source defined for

early reductions would remain constant throughout the compliance extension, regardless of how an applicable section 112(d) standard defined a source. The commenter questioned what would happen if the source defined by an applicable section 112(d) standard is different from the source defined under the Early Reductions Program.

Once an individual source is defined and accepted by EPA as part of the Early Reductions Program, the Early Reduction source will not change as a result of a section 112(d) standard. Any particular section 112(d) standard may apply to the entire Early Reduction source or to a subset of emission points within that source. All emission points included in the defined Early Reduction source are entitled to a 6-year extension from all otherwise applicable section 112(d) standards. At the end of the 6-year period, emission points affected by the earliest applicable section 112(d) standard must meet those standards. Emission points not affected by the earliest section 112(d) standard must continue to meet the alternative emission limitation until 6 years after the compliance date of any section 112(d) standard applicable to the emission point. Any emission points not included in the Early Reduction source definition, but included in the source definition for a section 112(d) standard must achieve reductions according to the compliance schedule in the applicable standard.

Another commenter felt that owners or operators should have the flexibility to redefine sources if significant process changes or production increases were made during the extension period, or if portions of a plant which were shut down restarted.

Once an individual source is defined and accepted by EPA as part of the Early Reductions Program and the source has been granted a 6-year extension by permit, the source cannot be redefined. If a portion of the original source restarts or expands, those emissions must be accounted for in the post-reduction emissions. If part of a source shuts down or curtails production and production capacity is increased at another unit or is replaced by a new unit at the plant site not included as part of the original source, the HAP emissions from the increased production outside of the Early Reduction source must be accounted for as well. This is to ensure that emissions from the source are not simply moved elsewhere in the plant. Owners or operators must give careful consideration to the designation of "source" when applying for the Early Reductions Program in light of potential future expansions.

If a source anticipates increased production in certain areas of its facility, the owner or operator has several options. The flexibility of the source definition allows the applicant to define a source that does not include the portion of the facility that may expand. The applicant may also reduce emissions from the base year by greater than 90 (95) percent, thereby allowing for subsequent increases in emissions that would still meet the required reduction. If owners or operators can anticipate what changes will be made to the source, they may coordinate with the State in determining the most appropriate type of alternative emission limitation (i.e., a numerical emissions limitation for each emission point or other requirement) that may allow more flexibility for expanding one portion of the source. The EPA recognizes that process changes are necessary, but to participate in this Program, overall source emissions must remain at a level that is 90 (95) percent of the base year emissions. The permitting authority may revise or adjust alternative emission limits through permit modifications as appropriate, provided that the overall 90 (95) percent reduction for the source is maintained during the extension.

Finally, one commenter asked for clarification regarding a situation in which a defined source adds a new line identical to that already included in the source definition.

In most cases, new emission points will not be able to participate in the Early Reductions Program. The CAA specifies that a compliance extension may be granted only to an existing source, e.g., those emission points existing in the selected base year. New emission points (those built after the base year) would thus be outside the scope of the previously defined Early Reduction source, and therefore would be subject to section 112(d) standards, if previously proposed.

The only exception occurs when the entire plant site or an entire enclosed building is defined as the source by the applicant and a "new" process unit is constructed within the plant site or building, respectively, and emits less than 10 tons/yr of a single HAP and 25 tons/yr of total HAP's. The new unit must then be included as part of the Early Reduction source and the source must maintain the original 90 (95) percent emission reduction from base year emissions. Emissions from the existing points in the original source must therefore be reduced to compensate for the additional emissions from the new points. If, however, emissions from the new unit exceed 10 tons/yr of a single HAP or 25 tons/yr of total HAP's, the new unit is considered, for the purposes of Early Reductions only, a source by itself and thus would not be part of the original Early Reduction source, regardless of the source definition. The EPA will distinguish between existing sources and new sources in other rules. However, early reductions occur before proposal of section 112(d) standards and before other rules that will distinguish between existing and new sources are finalized. Furthermore, the Early Reductions Program applies only to existing sources. Therefore, EPA had to make an administrative determination for the purposes of Early Reductions that new units emitting greater than 10 tons/yr of a single HAP and 25 tons/yr of total HAP's are new sources. The EPA may distinguish between new sources and existing sources differently in other rulemakings.

B. Base Year Emissions

Two commenters suggested that the base year be different than 1987. One commenter wanted 1984 to be an acceptable base year if data had been submitted to EPA during that year. Another commenter suggested that 1990 would be a more relevant base year since 1990 would be consistent with Title I requirements.

The CAA specifically states that the base year not be earlier than 1987 except that the source may choose 1985 or 1986 as the base year only if the source owner or operator can demonstrate that supporting data pursuant to an information request under section 114 of the CAA were received by EPA prior to November 15, 1990. To provide maximum flexibility to sources, EPA is allowing any base year after 1986 that the owner or operator chooses. However, emission data developed during years other than the base year, including years prior to 1985, can be used for determining base year emissions if the data are representative of operating conditions in the base year. Owners or operators will have to demonstrate the applicability of these data to base year conditions.

Two commenters suggested allowing base year emissions that are substantially greater than previous years as long as the emissions were within permit levels.

The CAA specifically states that base year emissions cannot be "artificially or substantially greater than emissions in other years prior to implementation of emissions reduction measures." Permit levels are simply a maximum acceptable

emission limit and may not reflect "actual and verifiable" emission levels as required by the CAA. Therefore, a comparison of base year emissions to permit levels does not determine the relationship of base year emissions to emissions in other years. Even emissions well within permit levels, but substantially greater than other years would not be allowable. For example, a permit may be written to allow 100 tons per year, but if the source were emitting 30 tons per year in years other than the base year, base year emissions of 60 tons from the source would not be allowable. It is clearly the intent of the CAA to avoid the use of unusually high emission levels to count toward the base year, which would lead to overstating reductions achieved and minimize the benefits to the environment achieved by the Early Reductions Program.

One commenter requested that the term "substantially greater" be clarified.

The determination of "substantially greater" is necessarily subjective. "Substantially greater" will be determined in large part by historical emissions variations of the source and the reasons for the variations. If an application is denied because base year emissions are found to be "substantially greater" than other surrounding years, the reviewer will provide rationale for this determination. Each base year review will be judged on a case-by-case basis. The enabling document ("Enabling Document for Regulations Governing Compliance for Early Reductions of Hazardous Air Pollutants," EPA–450/3–91–013, July 1991) provides guidance to reviewers and submitters to better understand what is "substantially greater." To avoid later problems with this issue, it is recommended that the applicant request a preapplication conference to discuss the specific details surrounding its base year emissions. The preapplication meeting should be held with the appropriate EPA Regional Office and State.

One commenter questioned EPA's requirements for establishing base year emissions. Specifically, the commenter felt applicants should not be required to submit evidence that base year emissions are not artificially high or that emissions reductions due to lower production rates or shutdowns are permanent. The commenter contended that the seriousness of violating section 114 requirements and the threat of enforcement would make it unnecessary to show this type of evidence.

Early reduction applicants will be required to submit evidence demonstrating that base year emissions are not artificially high. Submission of this information provides reasonable assurance desired by the applicant that base year emissions will be acceptable for an Early Reductions demonstration, except in the case of error or submittal of fraudulent information. Prior approval of base year emissions facilitates the Title V review process, where the actual reduction demonstration is made.

The regulation has been changed with regard to providing evidence of lower production rates and shutdowns. Sources will not be required to show evidence that lower production rates or shutdowns are permanent for the extension duration. This will be accomplished by making the shutdown or lower production rate conditions of the Title V permit.

Two commenters also requested guidance in assessing the presence of trace quantities of HAP's. They suggested that there should be a minimum quantity of HAP's present before having to account for these emissions in the base year.

Trace pollutants and impurities will be handled on a case-by-case basis. General policy would be difficult to develop for all pollutants. For example, small quantities of dioxin may be considered significant while the same quantity of another non high-risk pollutant would be considered an inconsequential trace amount. Based on process and product knowledge, owners or operators should be aware of the possible presence of HAP's in their emissions. If trace quantities of HAP's are expected or known to be emitted, owners or operators should account for their presence.

The actual determination of the quantity of emissions may be similar to the determination of small, insignificant emission points. Generally, testing will not be required. The source owner or operator may make conservative assumptions in his calculations to determine the quantity that may be emitted. If trace HAP's are neither expected nor known to be present, then there is no need to make an assessment. The EPA expects participants in the Program to quantify all HAP's reasonably expected to be present.

A number of commenters requested that Toxics Release Inventory (TRI) data be acceptable for base year emissions.

The TRI data alone are not sufficient to support base year emissions. The Early Reductions Program requires more rigorous support for emissions data than is required by the TRI. If the supporting information for the TRI data meets all the requirements of the Early Reductions Program, then that information will be acceptable. Supporting documentation for the Early Reductions Program must stand on its own merit.

Various commenters representing industry asked that EPA allow the use of average emission factors when estimating base year emissions from equipment leaks.

Average EPA equipment leak emission factors generally may not be used in establishing base year emissions. Use of EPA-average emission factors for base year emissions would artificially inflate the base year estimate. Subsequent use of a more source-specific method for the post-reduction demonstration would result in lower estimated emissions, but in fact would only be a "paper" reduction. As mentioned in the preamble to the proposed regulation, source owners or operators can establish emission levels for equipment leaks using any procedure except for average emission factors established in the document entitled "Protocols for Generating Unit Specific Emission Estimates for Equipment Leaks of VOC and VHAP," EPA–450/3–88–010, October 1988.

The EPA has reconsidered disallowing use of average emission factors to establish equipment leak emissions only in the case where no equipment leak emission reduction will be claimed; i.e., equipment leak emissions are the same in the base year and the post-reduction year.

The EPA is allowing this exception because it will result in greater actual emission reductions from the source. The source will have to control non-equipment leak emission points to a greater extent to compensate for the over-estimate of the post-reduction equipment leak emissions. In addition, it is noted that equipment leaks must be less than 10 percent of base year source emissions, or the source could not achieve a 90 percent overall reduction.

Appendix B has also been clarified to better describe the equipment leak "source." The negotiated regulation for equipment leaks (56 FR 9315, March 6, 1991) will require that certain equipment in HAP service within a process unit to which the equipment leak standards are applicable must be viewed as a whole. This is the case for valves, pumps, and connectors within a process unit, which must be considered together, as the regulation is written in terms of percent leaking components across a process unit. That is, valves, pumps, and connectors cannot be split up such that some of the valves in a process unit have an Early Reduction alternative emission limitation and the rest meet the section 112(d) standard. For example, it must be that either all

valves within a process unit are in the Early Reduction Program or none are. The logic for requiring inclusion of all the valves, pumps, or connectors from a process unit, does not extend to the other equipment covered by the equipment leak rule, such as pressure relief devices or product accumulator vessels, which will be subject to individual standards applicable to each device or vessel, and not all devices or vessels as a group. Equipment subject to such "piece-specific" standards could individually be assigned alternative emission limits as part of an Early Reductions source or meet the section 112(d) standard, and are not constrained by the process unit coverage.

Two commenters were concerned that the review process would result in delays and suggested that base year emissions by accepted if EPA did not complete the review in a specified time frame.

It is EPA's goal to review all enforceable commitments and submittals within the times identified in the rule. However, EPA intends to adequately review all submittals, and will take whatever time is necessary to ensure that the applications are complete and verifiable. The EPA will not automatically accept base year emissions that have not been reviewed due to time constraints. The purpose of reviewing base year emissions early is to provide some assurance to the submitter that the base year emissions for Early Reductions will be approved at permit review.

Finally, a number of commenters suggested that once base year emissions are accepted by EPA, there should be no further review or auditing of the data.

Acceptance of base year emissions data does not provide an absolute shield against revision should the data later be found incorrect. Reviewers and commenters are urged to present any criticisms during the early review period regarding base year data. Applicants can make appropriate modifications at that point and proceed with reasonable confidence that their emissions are acceptable. Base year emissions that have been reviewed and approved are still subject to additional review if errors or fraud are discovered at a later date. Discovery of incorrect or fraudulent information in the emission data or supporting materials after initial approval could potentially invalidate the base year and/or require the applicant to make revisions.

C. Enforceable Commitments

Two commenters suggested that there be no penalty for failure to meet an enforceable commitment. They proposed that sources failing to meet the commitment simply be allowed to revert back to the requirements of an applicable section 112(d) standard.

Sources that make an enforceable commitment to achieve early reductions can revoke the commitment without penalty up to December 1, 1993. These sources would thus be subject only to the applicable section 112(d) standard. This allows the source a considerable amount of time to attempt to achieve the promised reductions. But, if the source is unable to achieve those reductions, they may terminate their participation in the Early Reductions Program without sanction, provided they do so by the required deadline. Other participants in the discussions leading up to proposal of this rule expressed the concern that Congress intended that commitments are to be kept, and that once made, they could never be revoked. To give any meaning to the "enforceable" part of enforceable commitment, there must be something that is enforceable. The EPA believes that if after given every opportunity to revoke the commitment if necessary, the unrevoked commitment is enforceable. The EPA feels that the suggested compromise between the competing positions is reasonable.

If those who achieve the committed reductions prior to January 1, 1994 subsequently increase emissions in violation of their Title V permit conditions (or in violation of the enforceable commitment if the permit has not yet been issued), they would not have to revert to meeting the section 112(d) standard. They would be subject to an appropriate penalty, but would continue to maintain the considerable benefits of continuing in the Early Reductions Program. Likewise, those who indicate that they are continuing in the Program by not revoking their commitment prior to December 1, 1993, but who fail in their performance by not achieving the reductions committed to prior to January 1, 1994, will likewise be subject to an appropriate penalty. The EPA will use enforcement discretion to determine the severity of penalties, based on the efforts made to achieve the reductions.

One commenter recommended that a grace period be allowed for sources that cannot make their enforceable commitments on time due to external forces such as delays in test results.

The CAA requires that the reductions specified in the commitment must be achieved by January 1, 1994 to receive a section 112(d) compliance extension. The Early Reductions regulation allows test data to be received as late as March 31, 1994 to demonstrate that the reductions have been achieved. The reductions, however, must have been achieved by the date specified by the CAA. If a source cannot achieve the reductions required by the enforceable commitment, the applicant may rescind the commitment as late as December 1, 1993 without penalty. Therefore, the applicant should have adequate time to assess whether or not the source can achieve the reductions and to take whatever action he deems appropriate.

Another commenter suggested that the rule should assure that companies that make good faith efforts to comply with the requirements of the Early Reductions Program not be subject to enforcement action if errors or mistakes are discovered in the enforceable commitment either by EPA or the company.

The EPA will use its enforcement discretion for cases where companies make an honest mistake in their estimation of the base year emission data or supporting materials. In such instances, companies may be required to revise their base year and make additional reductions in order to achieve 90 (95) percent emission reductions. Alternatively, they may rescind their commitment without penalty prior to December 1, 1993. Sources found submitting false or fraudulent information in their commitment for early reductions, even after initial approval of their base year submission, shall be subject to enforcement action under section 113 of the CAA or other Federal statutes.

One commenter questioned the authority of the reviewing agency to challenge the control plan proposed as part of an enforceable commitment.

The control plan outlined in the enforceable commitment is a general, nonbinding strategy that the source will implement to reduce emissions and is not enforceable. The owner or operator develops the plan with the goal of reducing emissions by 90 (95) percent. As the owner or operator implements the plan, however, he may discover that the emission reduction can be better met with another control strategy. The control plan presented in the enforceable commitment must, therefore, remain somewhat flexible. The general plan is required to assure the reviewing authority that the reductions can be achieved and that the source owner has given serious consideration to achieving early reductions. The control plan will not likely be questioned or the cause for denial unless it indicates that the required reductions will not be met or the plan does not appear reasonable. The ultimate test will not be whether or

not the described control plan will be followed but a demonstration that the reductions have actually occurred.

One commenter requested clarification of the time limit given for submitting revised data for an enforceable commitment.

Within 90 days of receiving comments indicating deficiencies in a submittal, a source owner or operator must either revise and resubmit the submittal or notify the permitting authority that a revised submittal eventually will be sent; otherwise the submittal will be considered by EPA to be withdrawn. This allows the reviewing agency to recognize in a timely fashion which commitments will be revised and which will be rescinded. Because of the large number of applications expected to be received by EPA, a deadline for resubmittal or notification of intent to continue in the program is necessary to expedite the review process and to identify those sources that do not wish to pursue their reduction demonstration. A withdrawal alerts the reviewing agency not to pursue penalties after January 1, 1994 if the source fails to meet the required reductions. Base year emissions that are submitted for early review and not as part of an enforceable commitment do not have a deadline for resubmittal. The regulation has been clarified to distinguish the difference between resubmittal schedules.

D. Allowable Emission Reductions

Several regulatory agencies and citizens groups felt that only voluntary reductions should be credited toward demonstration of early reductions.

It is clearly the intent of the CAA to credit sources for emissions reductions accomplished by any means, as long as the emission reductions are actual and verifiable and made prior to proposal of an applicable standard or, in the case of an enforceable commitment, by January 1, 1994. According to the legislative history of the CAA, the Early Reductions Program initially was limited to voluntary reductions. Some commenters on the draft legislation suggested that limiting qualified reductions was unfair. For example, facilities located in States with extensive air toxics programs would not be able to benefit from early reductions. After considering this and other comments there was a deliberate change to the CAA Amendments to allow any reductions in emissions after the base year. The EPA interprets this change as the intent of Congress to expand the Program to allow all early reductions, regardless of how they are achieved.

One commenter felt that HAP emission reductions resulting from State or Federal regulatory programs designed to control VOC (such as New Source Performance Standards or PSD) should not be credited towards Early Reduction demonstrations. The commenter suggested that only reductions achieved to control air toxics should be used for this Program, not reductions achieved to reduce non-toxic VOC. Another commenter asked for clarification as to whether offsets used in New Source Review are creditable for the Early Reductions Program.

The statute provides that the Administrator shall issue a permit to a source that achieves a 90 (95) percent reduction in emissions of HAP's that allows the source to meet an alternative emission limit reflecting the 90 (95) percent reduction in lieu of the otherwise applicable standard issued under section 112(d) if the reduction is made before the proposal of a section 112(d) standard or if the source enters into an enforceable commitment before proposal of the standard and makes such reductions before January 1, 1994. The statute further provides the reduction will be determined with respect to verifiable and actual emissions in a base year not earlier than calendar year 1987. There is no limitation in the statute as to the reasons those reductions were made.

There were also comments pertaining to the definition of "malfunction," particularly with regard to how startups and shutdowns will be credited towards base year emissions.

Scheduled startups and shutdowns are considered routine. Emissions created by these routine operations can be counted toward base year emissions. However, startups and shutdowns associated with malfunctions are not routine and cannot be included with base year emissions. "Actual emissions" as defined in the proposed rule do not include excess emissions from a malfunction. Likewise, other emissions from startups and shutdowns directly attributed to the malfunction should not be included. In order to clarify this exclusion, the definition of actual emissions in the Early Reduction regulation has been modified to read "* * * does not include excess emissions from a malfunction or any startups and shutdowns associated with a malfunction."

Another commenter contended that the definition of malfunction would allow sources to earn credit for poor maintenance. Since the definition states that failures caused by poor maintenance shall not be considered malfunctions, the commenter felt sources could inflate base year emissions and also obtain reductions by performing maintenance on neglected process units.

Sources will not be allowed to credit emission reductions if the base year emissions were in violation of emission standards. However, emissions that result from poor maintenance, careless operation, or any other preventable upset conditions or preventable equipment breakdown that are not in violation of any emission standard are not considered malfunctions and can be credited toward base year emissions. Thus, the Early Reductions Program provides an incentive for sources to improve their maintenance and operation practices (which would not otherwise be required), resulting in a net benefit to the environment.

E. Demonstration of Early Reductions

Sources will be granted compliance extensions if they demonstrate reductions of HAP's of 90 (95) percent. A number of comments were received on how that demonstration should be made.

One commenter suggested that sources be granted compliance extensions if they achieve 90 (95) percent reduction of one or more specific HAP's.

The CAA specifies that 90 (95) percent reduction of all HAP's from the defined source must be achieved. Selective HAP reduction is not allowed. The Early Reductions Program allows flexibility in defining the source, but that flexibility cannot be extended to specific pollutants within the source, with the exclusion of others.

Two commenters recommended that emissions be expressed as emissions/pound of product rather than a specific quantity per year. They felt that this would overcome problems with fluctuating production rates, particularly when establishing the base year emission level.

The statute requires 90 (95) percent reduction from base year emissions. Thus, the Early Reductions Program is concerned with absolute reductions from base year emissions, not a percent reduction from what current emissions would have been. The alternative emission limit will reflect a specific emission level that is 90 (95) percent less than base year. Sources with fluctuating production must consider future increases in emissions, and make adjustments accordingly.

Several commenters urged EPA to require particulates to be controlled to 95 percent, and not allow averaging with gaseous pollutants. Other commenters supported the weighted

average approach for gaseous and particulate mixtures.

At proposal EPA recognized that there may be sources that have already achieved 95 to 99 percent reduction in particulates through control measures employed prior to the earliest allowable base year, but that have significant potential reductions from relatively uncontrolled gaseous HAP emissions. If, for an Early Reductions demonstration, such sources were required to reduce gaseous HAP's by 90 percent as well as reduce the remaining particulate emissions by another 95 percent, the source may find it impossible to reduce particulate emissions further or find that further reductions likely would exceed requirements of an applicable section 112(d) standard for the particulate emissions. In either case the source would not seek a compliance extension and thus would not make early reductions of the gaseous HAP's.

A telephone query from a potential applicant exemplified this problem. This source coats metal parts and has vents that release both gases and particulates. In this case particulates are very tightly controlled (prior to the earliest possible base year) but gases are not. The source was interested in making early reductions by reducing the gases by 90 percent, but if it also had to achieve an additional 95 percent reduction in the already tightly controlled particulates, it would not be able to enter the Program.

The EPA recognized that it would be beneficial from an environmental standpoint to allow a reduction in the gases without requiring an additional 95 percent for the particulates; i.e., without some allowance for this situation, the source would not enter the Program and no reductions would be achieved in the gaseous HAP's until required by a section 112(d) standard. The EPA therefore proposed to allow a source to average the required reductions for gases and particulates; particulates could be reduced by less than 95 percent as long as compensating reductions were achieved in gaseous HAP's. The overall target reduction to be achieved would be between 90 and 95 percent and would be determined by the relative amounts of gases and particulates emitted from the source in the base year. This averaging method still would require the same amount of overall HAP emission reduction as would the separate 90 and 95 percent requirements.

The proposed averaging method could have been used at any source, whether the gases and particulates were emitted from different emission points or the same emission point. However, based on commenters' concerns, EPA has reconsidered the applicability of the averaging method, and has narrowed the scope.

The statutory language, in section 112(i)(5), explicitly requires 95 percent reduction of particulate HAP's and 90 percent of gaseous HAP's. The EPA, however, feels that Congress did not consider or was not aware of emission points that emitted both gases and particulates and that different controls are required for each, and therefore did not provide for this situation. Furthermore, EPA believes that it would be beneficial to allow a weighted average for gases and particulates, when emitted from the same points, especially where only small quantities of one are emitted with respect to the other, in light of the alternative of no early emission reduction.

Therefore, the final rule allows the use of averaging at sources in which the gases and particulates are emitted from the same points. For example, if 3 emission points at the source emit both gases and particulates, these emission points could be aggregated to establish a combined percent reduction between 90 and 95 percent, e.g., the 3 points could achieve 94 percent reduction overall. The combined percent reduction would depend on the relative amounts of gases and particulates emitted by the points. By restricting the use of averaging gaseous and particulate emission reductions, EPA notes that some sources emitting either gases or particulates from different vents may now be unable to achieve the required early reduction if averaging were not allowed. In these cases, because emissions are emitted from different points, the source should be defined to exclude those points that create the difficulty in emission reduction. However, the source must still conform to one of the allowable definitions in the regulation.

One commenter stated that EPA should not expect emissions testing as the basis for demonstrating post-reduction emissions.

Sources will be required to adequately document post-reduction emissions before being granted an alternative emission limit. The EPA requires the best available data to demonstrate emissions. Direct measurement of emissions is the presumed best demonstration for many cases. However, test data will not be required to demonstrate all emissions. Calculations based on engineering principles, emission factors, or material balances may be acceptable if the applicant demonstrates to the satisfaction of the permitting authority that: (1) No test method exists; (2) it is not technologically or economically feasible to perform source tests; (3) it can be demonstrated that the accuracy of a calculated estimate is comparable to source testing; or (4) emissions from one or more set of points are insignificantly small compared to total source emissions. The EPA agrees that in some situations (e.g., storage tank emissions or batch operations using solvent HAP's) calculations or mass balances generally will be acceptable and may be the preferred method of establishing emissions.

Another commenter opposed any efforts by EPA to require continuous emissions monitoring to document early reductions.

Continuous emission monitoring (CEM) is not a general requirement of the Early Reductions Program to document that the source has achieved sufficient reductions. General monitoring requirements for permit provisions, including, but not specifically, alternative emission limitations established for the Early Reductions Program, will be established according to the requirements of Title V of the CAA. Section 504 of Title V states that continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance. Therefore, if other acceptable means for determining compliance are available, CEM will not be required. Nothing in the CAA, however, prevents the requirement of CEM for the Early Reductions Program and if no other acceptable methods are available, CEM may be required.

Two commenters requested clarification of the term "sufficiently variable" used in § 63.78(b)(4) as the basis for denial. The commenters were concerned that batch processes would not be able to qualify for compliance extensions because of the inherent variability of batch systems.

The term "sufficiently variable" has been removed from the language of the regulation. The EPA recognizes that batch processes are inherently variable, and that variability alone should not be a reason for denial. The reason for denial will now read: "The emission of hazardous air pollutants or the performance of emission control measures is unreliable so as to preclude determination that the required reductions have been achieved or will continue to be achieved during the extension period."

F. High-Risk Pollutants

1. Summary

Section 112(i)(5)(E) specifies that with respect to pollutants for which high risks of adverse public health effects may be associated with exposure to small quantities, the Administrator shall limit the use of offsetting reductions in emissions of other HAP's from the source as counting towards the 90 (95) percent reduction in such high-risk pollutants. In the final rule, the number of pollutants on the high-risk list is 47, rather than 33 as proposed. The 14 additional pollutants are listed in Table 1.

TABLE 1. LIST OF POLLUTANTS ADDED TO HIGH-RISK LIST

CAS No.	Chemical	Weighting factor
53963	2-Acetylaminofluorene	100
532274	2-Chloroacetophenone	100
334883	Diazomethane	10
96128	1,2-Dibromo-3-chloropropane	10
79447	Dimethylcarbamoyl chloride	100
122667	1,2-Diphenylhydrazine	10
151564	Ethylene imine (Aziridine)	100
77474	Hexachlorocyclopentadiene	10
0	Manganese compounds	10
60344	Methyl hydrazine	10
0	Nickel compounds	10
684935	N-Nitroso-N-methylurea	1000
62759	N-Nitrosodimethylamine	100
56382	Parathion	10
7803512	Phosphine	10
7723140	Phosphorus	10
8001352	Toxaphene	100

These pollutants have been added to the list since proposal for a number of reasons including changes to the methodology EPA used to select the pollutants and updated health effects information. Five pollutants which were proposed for the high-risk list have been deleted. These are benzotrichloride; chloroprene; 1,1,2,2-tetrachloroethane; 2,4-toluene diisocyanate; and vinylidene chloride. The final list of high-risk pollutants and their weighting factors are shown in Table 2.

TABLE 2. LIST OF HIGH-RISK POLLUTANTS

CAS No.	Chemical	Weighting factor
53963	2-Acetylaminofluorene	100
107028	Acrolein	100
79061	Acrylamide	10
79107	Acrylic acid	10
107131	Acrylonitrile	10
0	Arsenic compounds	100
1332214	Asbestos	100
71432	Benzene	10
92875	Benzidine	1000
0	Beryllium compounds	10
542881	Bis(chloromethyl) ether	1000
106990	1,3-Butadiene	10
0	Cadmium compounds	10
57749	Chlordane	100
532274	2-Chloroacetophenone	100
0	Chromium compounds	100
107302	Chloromethyl methyl ether.	10
0	Coke oven emissions	10
334883	Diazomethane	10
132649	Dibenzofuran	10
96128	1,2-Dibromo-3-chloropropane.	10
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether).	10
79447	Dimethylcarbamoyl chloride.	100
122667	1,2-Diphenylhydrazine	10
106934	Ethylene dibromide	10
151564	Ethylenimine (Aziridine)	100
75218	Ethylene oxide	10
76448	Heptachlor	100
118741	Hexachlorobenzene	100
77474	Hexachlorocyclopentadiene.	10
302012	Hydrazine	100
0	Manganese compounds	10
0	Mercury compounds	100
101688	Methylene diphenyl diisocyanate (MDI).	10
60344	Methyl hydrazine	10
624839	Methyl isocyanate	10
0	Nickel compounds	10
62759	N-Nitrosodimethylamine	100
684935	N-Nitroso-N-methylurea	1000
56382	Parathion	10
75445	Phosgene	10
7803512	Phosphine	10
7723140	Phosphorus	10
75558	1,2-Propylenimine	100
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin.	100,000
8001352	Toxaphene (chlorinated camphene).	100
75014	Vinyl chloride	10

The specific changes made to the methodology and the rationale for specific pollutants being added to or deleted from the list are described below.

2. Methodology for Selecting Pollutants for the High-Risk List

The methodology used to formulate the list of high-risk pollutants, the list itself, and the weighted offsetting scheme are a direct response to the mandate in section 112(i)(5)(E) of the Act. The high-risk list and the weighted offsetting scheme may not be applicable to, or appropriate for, other sections in Title III of the Act. Other provisions of section 112, such as establishing lesser quantity emission rates under section 112(a) and identifying the relative hazards to human health from emissions of each of the listed hazardous air pollutants under 112(g) may also require the ranking of pollutants. The approach for identifying the high-risk pollutants may or may not be found to be appropriate for these or other provisions. The selection of today's approach for the purposes of section 112(i)(5)(E) is not intended to establish a precedent for other provisions or preclude the consideration of other alternative methodologies.

As presented in the preamble to the proposed rule, EPA used a number of criteria for selecting pollutants for the high-risk list. First, as specified by the CAA, chlorinated dioxins and furans (as listed in section 112(b)) were included on the high-risk list. Second, pollutants classified by EPA as Group A carcinogens (known human carcinogens) were judged to be of sufficient concern to be listed as high-risk. Third, as a way to systematically screen the remaining HAP's listed in section 112(b), EPA employed a three-tiered screening analysis for selecting high-risk pollutants.

In the first tier, health effects data were examined to rank pollutants based solely on health effects. The health

endpoints considered were carcinogenicity, reproductive and developmental toxicity, acute lethality, and systemic effects other than acute lethality (e.g., neurologic disorders). Consideration of health effects alone, however, was judged insufficient to address section 112(i)(5)(E) which describes high-risk pollutants as those for which high risks of adverse public health effects may be associated with exposure to small quantities. Accordingly, tier 2 of the analysis was exposure modeling using EPA's Human Exposure Model (HEM). The HEM provided an estimate of the ambient concentration 500 meters from a source emitting 10 tons per year at an average height of 10 meters under median meteorological conditions. As described in the preamble to the proposed rule, the ambient concentration predicted by the HEM was compared to selected risk levels to screen for pollutants likely to have an adverse effect at the exposure level that was modeled. For carcinogens, the modeled ambient concentration was compared to the concentration of each carcinogen that would result in an increase in cancer risk of one in ten thousand to the most exposed individual. For noncarcinogens, the modeled ambient concentration was compared to either (1) a level one order of magnitude greater than a verified inhalation reference concentration or oral reference dose, (2) a lowest observed effect level (LOEL) divided by an uncertainty factor of 100, or (3) the dose or concentration of a chemical that causes death in 50 percent of the exposed population (LD_{50} or LC_{50}) divided by an uncertainty factor of 1000.

Tier 3, which considered actual pollutant emissions as reported to the TRI, was intended to determine whether the pollutants were actually emitted at levels that could reasonably be expected to adversely affect public health. Pollutants with a low exposure potential were consequently eliminated from the high-risk list.

Several commenters stated that it was inappropriate to eliminate pollutants from the high-risk list based on emissions data. The commenters contended that use of the TRI is inappropriate because not all pollutants are reported, only large facilities in the manufacturing sector report to the inventory, and not all types of source categories are covered. The commenters felt that EPA should not eliminate substances because they are not currently in common use and that the tier 3 screen should be dropped from the analysis.

The EPA agrees with the commenters' concerns regarding use of the TRI and has consequently dropped tier 3 from the analysis. The EPA also agrees that chemicals not currently in common use should still be listed as high risk in case production of that chemical is resumed at a later date. The EPA now believes that tiers 1 and 2 adequately identify those pollutants that could reasonably be expected to adversely affect public health and thus limited the offsetting of these pollutants in the Early Reductions Program. The impact of dropping tier 3 is that the following pollutants have been added to the high-risk list: 2-acetylaminofluorene; 1,2 diphenyl hydrazine; toxaphene; nickel compounds; N-nitrosodimethylamine; ethylene imine (aziridine); dimethylcarbamoyl chloride; phosphorus and diazomethane.

Many commenters recommended changes to the parameters chosen for the tier 2 exposure analysis. Several commenters felt that the exposure assumptions were not conservative for several reasons including the meteorological data, the stack parameters, and the limitations of the HEM. One commenter stated that one year of meteorological data is not representative and that downwash was not considered. Two commenters suggested a shorter stack height of 3.5 meters and a 20 meter distance to the nearest residence. Another commenter recommended that the modeling use more realistic assumptions about the pollutants and emission sources. One commenter contended that the HEM is too simplistic because it does not consider actual exposure, short-term exposures or population activity patterns. Other commenters made suggestions which would make the analysis less conservative. Two commenters felt that the 500 meter distance to the nearest residence was too close. One of these commenters suggested a distance of 3000 meters and a 10 year population residence time (rather than the 70 year lifetime exposure associated with the cancer potency factor).

The second tier of the screening analysis to select the high-risk pollutants was a generic exposure modeling exercise. The EPA intended that the modeling results be used to determine which pollutants merited further analysis based on exposure potential. The EPA did not use the modeling results to estimate actual risk levels, but did use the modeling results to differentiate between pollutants. The EPA still considers the use of generic modeling parameters appropriate for this analysis because a wide range of emission release and exposure scenarios across many varied source categories are anticipated under the Early Reductions Program.

The HEM was used to estimate a theoretical downwind concentration of a typical HAP. Because the pollutants are released from various types of sources with variable stack parameters (stack height, emission velocity, distance to nearest residence, etc.) there was no attempt made to model site-specific conditions. Meteorological data used were representative of between 2 and 10 years of data from the selected meteorological station. A 10 meter stack height was chosen to represent a chemical plant. For the proposed rule, the modeling parameters also assumed a 70-year continuous exposure and a 500 meter distance to the nearest residence. Upon re-evaluation, EPA has made changes to these two parameters.

First, the assumption that exposure to a pollutant occurs continuously over a 70-year period has been changed to 33 years for the purposes of this rulemaking. Thirty-three years is a duration representative of the 95th percentile for the number of years an individual would remain at the same residence, based on data on population mobility and mortality. The 33-year duration was selected for use in this analysis as representative of a reasonable worst case approach to assessing exposure duration. Second, EPA reconsidered the choice of 500 meters to the nearest residence and has revised the analysis using a 200 meter distance. The 200 meter distance to the nearest residence is the distance that has been most often used by EPA for analyses estimating exposure to emissions from point sources. This distance represents a reasonable worst case for point source and is judged to represent a reasonable worst case for facilities that are anticipated to participate in the Early Reductions Program. The net impact of these changes was the addition of hexachlorocyclopentadiene, phosphine, parathion, and manganese compounds to the list.

Four commenters disagreed with the one in ten thousand presumptive risk benchmark for carcinogens, stating that it was not conservative enough. One commenter recommended that EPA include every carcinogen with a potency factor greater than 1.35×10^{-8} $(\mu g/m^3)^{-1}$ based on modeling a 3.5 meter stack. Another commenter argued that Congress intended that sources with risk levels of one in one million be controlled. In contrast, one commenter recommended the benchmark be lowered to one in one thousand. This

commenter believes that the one in ten thousand risk benchmark is inconsistent with the "Savings Provision" in section 112(q)(1), where standards promulgated under section 112 in effect prior to the 1990 amendments are to remain in force unless revised by EPA.

The exposure modeling exercise conducted as part of tier 2 of the screening analysis was used as a tool to identify pollutants that could potentially cause a high risk to public health (under the exposure scenario that was modeled). The EPA has decided that for carcinogens a one in ten thousand presumptive risk level is appropriate for this analysis. This decision is based primarily on guidance concerning acceptable risk discussed in the benzene NESHAP promulgated on September 14, 1989 (54 FR 38044). In the preamble to the benzene decision, the use of the one in ten thousand benchmark is described—"EPA will consider the extent of the estimated risk were an individual exposed to the maximum level of pollutant for a lifetime. The EPA will generally presume that if the risk to that individual is no higher than approximately one in ten thousand, that risk level is considered acceptable and EPA then considers the other health and risk factors to complete an overall judgment on acceptability. The presumptive level provides a benchmark for judging the acceptability of maximum individual risk, but does not constitute a rigid line for making that determination." In the case of the screening analysis for high-risk pollutants under the Early Reductions provisions, EPA believes the one in ten thousand presumptive risk level has been used appropriately. The commenters are reminded that the generic exposure analysis was not meant to estimate the actual risk from any one type of source category, but rather was used to differentiate between pollutants based on relative toxicities.

The EPA recognizes that other modeling assumptions could have been used that would have resulted in either more or fewer pollutants exceeding the presumptive risk level. However, EPA does not agree with the commenter's suggestion that every carcinogen with a potency factor greater than 1.35×10^{-5} $(\mu g/m^3)^{-1}$ should be considered high risk.

With respect to the comment that Congress intended that sources posing risks of one in one million be controlled, the commenter is referring to section 112(f)(A), the so-called "residual risk" provisions. In this provision it is stipulated that additional emission standards must be promulgated if a source's emissions pose a risk greater than one in one million after application of control technology (as stipulated in section 112(d)). The commenter is reminded that the Early Reductions Program provides an extension of the compliance time for applying control technology that is stipulated by standards promulgated under section 112(d). After the compliance time extension, facilities participating in the Early Reductions Program must still apply the required technology if their emissions exceed specified levels. In addition, facilities that participate in the Early Reductions Program are not exempted from a residual risk test under section 112(f), so the commenter's concern that the intent of Congress is not being fulfilled is unwarranted.

With respect to the Savings Provision of section 112(q)(1) the commenter is reminded that today's rule is not an emission standard, but procedures for obtaining an Early Reductions compliance extension. The use of the presumptive risk benchmark of one in ten thousand in the screening analysis for selecting high-risk pollutants has no bearing on NESHAP that have already been promulgated.

Two commenters questioned the benchmarks chosen for health effects other than cancer. These commenters felt that neither the LOEL divided by a safety factor of 100 nor the LD_{50} divided by a safety factor of 1000 were conservative enough. The commenters also thought that using a value one order of magnitude above the reference concentration was not conservative enough.

As stated in the preamble to the proposed rule, uncertainty factors were applied to the health effects benchmarks since the LOEL and LD_{50} values represent levels at which health effects are known to occur. These uncertainty factors were meant to account for variables such as interspecies variations and sensitive subpopulations, but do not incorporate all the factors typically used in developing reference concentrations. The uncertainty factors used to develop an inhalation reference concentration are typically applied to a lowest observed adverse effect level (LOAEL) or no observed adverse effects level (NOAEL). The resulting reference concentration represents a level at which the potential for adverse public health effects is considered to be negligible. However, the purpose of this analysis was to identify pollutants whose emissions could potentially present a high risk, not a de minimis risk. Therefore, the uncertainty factors used in this analysis were not meant to account for all the factors typically used in developing an inhalation reference concentration. For this analysis, EPA made a judgment that if a source's emissions were such that a LOEL or LD_{50} could potentially be exceeded (after application of the uncertainty factors and under the modeling scenario used) then the pollutant could be considered high risk. In this application, EPA believes uncertainty factors of 100 and 1000 to be appropriate. Similarly, with respect to using a value one order of magnitude above the reference concentration, EPA believes this to be an appropriate estimate of a level at which health effects could potentially be significant enough to be regarded as high risk.

Two commenters strongly urged EPA to confine the selection of carcinogens for the high-risk list to consideration of carcinogenic potency and not make use of the weight-of-evidence classification. Three commenters objected to the addition of four Group A carcinogens to the list after the pollutants had been excluded by the 3-tiered process. On the other hand, two other commenters recommended that EPA prioritize the high-risk list using a qualitative rather than quantitative approach (i.e., use weight-of-evidence reviews for identifying substances rather than potency factors).

The EPA believes it appropriate for identification of high-risk pollutants to consider both the weight of evidence and carcinogenic potency of a pollutant. The EPA stands by the decision to list Group A carcinogens as high risk based on the fact that these are known human carcinogens. The EPA judged that emissions of known human carcinogens are of sufficient concern that use of offsetting reductions in other less hazardous pollutants under an Early Reduction demonstration should be limited. Three of the pollutants (benzidine, bis(chloromethyl)ether, and chloromethyl methyl ether) are extremely potent carcinogens and were excluded from the 3-tiered process at tier 3. This means that, according to the 1989 TRI, these pollutants were not emitted by any reporting facility in quantities sufficient to exceed the risk benchmark level proposed by EPA. In spite of this, EPA felt it prudent to list them as high risk in case a source's emissions changed in the future. As discussed above, since proposal of the high-risk list, EPA has decided to eliminate tier 3 from the screening analysis. As a result, even if EPA had decided not to use weight of evidence as a criterion, these carcinogens would still be listed as high-risk pollutants. Benzene was also included on the list even though the risk benchmark level

was not exceeded when a 10 tons per year emission rate was modeled. The rationale for this decision was that in addition to being a known human carcinogen, benzene is a very high volume chemical and emissions in excess of 10 tons per year are not uncommon. The EPA believes that offsetting emissions of this known human carcinogen with less hazardous pollutants should also be limited.

Two commenters suggested that EPA revise the selection criteria to include only known human carcinogens (Group A), probable human carcinogens (Group B1), and noncarcinogens for which chronic human health effects can be expected to occur at extremely low levels of exposure.

In selecting pollutants for the high-risk list, EPA considered weight-of-evidence, potency and exposure potential of the pollutant. As described above, a weight-of-evidence classification of Group A (known human carcinogen) was deemed sufficient to list a pollutant as high-risk. The EPA does not agree with the commenters suggestion that Group B2 and Group C carcinogens should not be considered for or included on the high-risk list. In order to be listed, however, carcinogens other than Group A had to pass tier 2 of the analysis which considered potency and exposure potential.

The EPA also disagrees with the commenters suggestion that only chronic human health effects should be considered. Section 112(b) of the CAA describes HAP's as those pollutants which present, or may present, a threat of adverse human health effects including substances which are carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic. Thus, EPA believed it appropriate to assess (and include on the high-risk list, where appropriate) pollutants that are acutely as well as chronically toxic.

3. Weighted Index for High-Risk Pollutants

In the proposed rule, EPA described an indexed offsetting system based on the toxicity of the high-risk pollutants relative to each other.

Several commenters believe that the weighted index system conflicts with the CAA because it allows offsetting of high-risk pollutants with non-high risk pollutants. The commenters state that high-risk pollutants should not be allowed to be offset by non-high risk pollutants, or only be allowed when high-risk pollutants are emitted in trace amounts. Other commenters agreed with the weighting factor concept and the ability to offset high-risk pollutants.

In the final rule, a number of weighting factors have been adjusted as described below, but the weighting factor system as a whole is essentially unchanged. Contrary to several commenters contentions, the high-risk pollutant strategy does not conflict with section 112(i)(5)(E). That provision requires the Administrator to limit, by regulation, the use of offsetting reductions of other HAP's in counting towards the 90 (95) per cent reduction of high-risk pollutants. The statute does not say or even imply that the regulation must prohibit such offsetting reductions.

In response to the comment that these offsets should only be allowed when these pollutants are emitted in trace amounts, EPA notes that the weighting system effectively restricts the offsetting of emissions of the high-risk pollutants. Such a large reduction of a non-high risk pollutant is needed to offset a high-risk pollutant (up to 100,000 to 1) that only relatively trace amounts could be traded. Even in situations where the pollutant concentrations are relatively large (i.e., not trace amounts), it is appropriate to allow offsetting as long as the weighting factor system is followed. If one ton of a HAP with a weighting factor of 100 is offset with a 10 ton reduction in a pollutant with a weighting factor of 10, the offset generally should provide a similar degree of risk reduction. Consequently, EPA believes such offsets should not be prohibited. Note that these relative trades deal with decreases in the high-risk pollutants. It is not envisioned that any successful Early Reduction submittal will include any increase in high-risk pollutants other than incidental trace amounts.

Several commenters stated that trading among pollutants with different types of health effects is inappropriate. The commenters recommend using critical health effects and toxic potency information to place the listed pollutants into categories, with trading allowed within a category. Trading across categories would be allowed only for categories based on similar health effects. Weighting factors based on relative potencies would be used in such tradeoffs.

The development of the weighting system and the decision to allow trading between carcinogens and noncarcinogens is intended to provide flexibility to the participating facilities in achieving their emission reduction goals. As such, it is a policy decision and not one based purely on scientific grounds. If trading between pollutants with different health endpoints was restricted, this could potentially exclude some facilities from participating in the Early Reductions Program. The EPA feels that such restrictions would not benefit the goals of the Program as a whole.

Several comment letters made reference to the development of weighting factors for the high-risk pollutants. One commenter recommended the weighting factors be based on weight of evidence classification. On the other hand, three commenters recommended the weighting factors be based only on potency as described by the cancer potency factor. Another commenter further suggested that the cancer potency factor be multiplied by one million to arrive at the weighting factor. Finally, one commenter suggested a combination approach where both weight-of-evidence and potency would be considered. In this approach, pollutants with the same weight-of-evidence classification and having potency factors within an order of magnitude would be grouped together.

The weighting factor system has been revised slightly since the high-risk list was proposed. In the final rule, carcinogens, with a Group C classification (possible human carcinogens) have been assigned a lower weight. Greater uncertainty exists regarding the evidence for a Group C classification than that existing for chemicals classified as Group A (known human carcinogen) or B (probably carcinogenic to humans). A Group C classification is defined by positive carcinogenicity in a single experiment, a tumor response of marginal statistical significance, or finding benign tumors only. A Group B classification, whereas, is defined by carcinogenicity in two or more animal species, strains, or experiments, either with or without limited human evidence. Group A is reserved for known human carcinogens. The greater uncertainty regarding a Group C classification is reflected in a lower weighting factor. As a result, two Group C carcinogens (1,1,2,2-tetrachloroethane and vinylidene chloride) have been assigned weighting factors of 1 rather than 10 as proposed. The EPA does not feel, however, that chemicals classified in Group B should necessarily be weighted lower than those classified as Group A. With respect to Group B chemicals, a sound foundation exists regarding carcinogenicity in animals, but the human data are either inconclusive or of limited value, most likely reflecting the difficulty of obtaining quality epidemiologic data. For this weighting

system then, chemicals classified as Group A or B are combined and ranked by potency.

For carcinogens, the actual weighting factors are based on the potency of the high-risk carcinogens relative to carcinogens not on the high-risk list. This approach is the same as was proposed. Multiplying the potency factors by one million as one commenter suggested to calculate weighting factors would result in the same relative ranking of the pollutants, but higher weighting factors. The EPA believes that basing the weighting factors on the differences between the potency of the high-risk carcinogens and the geometric mean potency of the group of carcinogens not on the high-risk list is more justifiable.

Three commenters questioned EPA's policy decision concerning the weighting factors for noncarcinogens. The commenters believe that EPA must assess many additional factors when ranking the hazards of noncarcinogens. These factors include the severity of effect, its reversibility, and chemical properties such as the half-life of volatile compounds in air, vapor pressure, persistence, and bioaccumulation potential.

In assigning weighting factors to the high-risk pollutants, EPA attempted to base the factors on the relative toxicity of the compounds. For the carcinogens, the cancer potency factor is a straightforward measure of relative toxicity and was used in conjunction with the weight of evidence classification to develop the weighting factors. For the noncarcinogens, however, there is not a comparable measure of toxicity that can be used consistently for pollutants with different health effects. In the absence of such a measure, EPA proposed to assign a weighting factor of 10 to the noncarcinogens on the high-risk list. Many of the carcinogens were also assigned a weighting factor of 10. The EPA chose a weighting factor of 10 for the noncarcinongens in recognition that noncancer health effects can be as seriously debilitating as cancer. Another alternative would have been to assign these pollutants a weighting factor of 1 because other indices were not available. The EPA rejected this option because only by assigning a weighting factor greater than 1 is offsetting limited between these noncarcinogens and other pollutants not on the high-risk list. In the final rule, three noncarcinogens were assigned weighting factors greater than 10. The rationale for increasing the weighting factor from 10 to 100 for mercury is based on consideration of persistence in the environment and bioaccumulation, as discussed below. After a review of the scientific data, two other noncarcinogens (acrolein and 2-chloroacetophenone) have been assigned weighting factors of 100 rather than 10 in the final rule to provide an adequate margin of safety from adverse health effects. This decision is explained fully in a memorandum to the docket entitled "Need for Additional Weighting of Two Chemicals".

Four commenters believe EPA should establish more weighting factor categories to reflect more accurately the different toxicity levels of the various pollutants. On the other hand, two commenters believe more pollutants should be grouped together so that there is not such a wide range in weighting factors.

The EPA has reviewed the weighting factor categories and still finds four separate categories to be appropriate. As described in the comment above concerning weighting factors there were some adjustments made to the placement of certain pollutants. However, the general categories with weighting factors of 100,000; 1000; 100; and 10 are still believed to be appropriate. The difference between the most toxic carcinogen and the least toxic carcinogen with a weighting factor of 10 is about a factor of 35 (with the exception of one pollutant). Given the uncertainties inherent in the health data, EPA does not feel that this is enough of a difference to warrant another weighting factor category.

Another commenter suggested that the weighting factor could be customized for each facility by relating the weighting factor to the degree to which a reference concentration is exceeded. The commenter believed that this approach would emphasize reductions in cases where reference concentrations may be exceeded and assigns less weight to high-risk pollutants in cases where the reference concentrations are not likely to be exceeded.

There are several reasons why EPA prefers that weighting factors not be customized for each participating facility. The primary reason is that the weighting factors reflect the differences in the toxicity of the pollutants regardless of emission rates. For example, if facility X emits 50 tons of benzidine, a 1000 to 1 trade is necessary with a HAP not on the high-risk list. If facility Y emits 1 ton of benzidine, a 1000 to 1 offset is also required. The EPA believes this will emphasize reductions in the high-risk pollutants even if these emissions are small. In addition, participation in the Early Reductions Program is available to all facilities throughout the Nation. The EPA prefers that for consistency in program implementation the weighting factors for the high-risk pollutants not be customized for each participating facility. In addition, such customizing can greatly complicate the application preparation and review process; facilities and reviewing agencies may not have the expertise or resources to either perform or review site-specific modeling analyses and determine appropriate weighting factors.

Four commenters discussed pollutants that persist in the environment and/or bioaccumulate. These commenters recommended that any pollutants identified as persistent or bioaccumulative be added to the list. The commenters further suggested that an additional weighting factor of 10 be applied to these pollutants. After consideration of public comments, EPA has decided to adjust the weighting factors for chlordane, heptachlor, hexachlorobenzene, mercury compounds, and toxaphene from 10 to 100 based on persistence in the environment and bioaccumulation. The weighting factors for these particular pollutants were increased based on persistence and bioaccumulation data compiled for EPA in support of the CAA Great Waters Study.

4. Additions/Deletions to the High-Risk List

In addition to the changes to the high-risk list described above, EPA added four pollutants to the list and deleted three pollutants on the basis of health effects data. Methyl hydrazine, 2-chloroacetophenone, and 1,2-dibromo-3-chloropropane were added based on newly available or revised RfCs. N-nitroso-N-methlyurea was added because a unit risk estimate is available in a health assessment document. Benzotrichloride was deleted from the list because an inhalation potency factor was unavailable. Further review of the studies supporting the listing of chloroprene led to the determination that the primary study was not acceptable and, therefore, chloroprene was removed from the list. The RfC for 2,4-toluene diisocyanate is undergoing review based on new data and, therefore, 2,4-toluene diisocyanate was removed from the list.

Two commenters stated that when pollutants are added to the list, a source should not be exempt from further reducing those pollutants, but the source should be given up to three years to adjust its emissions to continue to qualify for the Early Reduction extension or else comply with the emissions standard under section

112(d). Other commenters believe the changes to the high-risk pollutant list should not affect the status of a previously submitted commitment or application.

The EPA has decided that sources with an approved enforceable commitment, or an approved permit specifying an alternative emission limit, will not be affected when a HAP is either added to the list in section 112(b), or is newly designated as a high-risk pollutant. The EPA expects to update the list of high-risk pollutants as the science requires. It is conceivable that a source would have to revise a post-reduction demonstration with each revision of the list. This requirement could add significantly to administrative burden for both the source and the reviewing agency. Given that the source will be in full compliance with the emission standards under section 112(d) at the end of the six year extension, EPA feels this additional administrative burden is unnecessary.

5. Comments on Specific High-Risk Pollutants

The EPA received one comment asking why lead was not listed as a high-risk pollutant.

Airborne lead emissions are currently regulated by a National Ambient Air Quality Standard (NAAQS). The EPA is currently reviewing the data the NAAQS is based on and expects to make a decision on revising the standard in the near future. Given this, and other policy considerations regarding identifying a criteria pollutant as high risk, at this time EPA believes it is appropriate to leave lead compounds off the high-risk list.

One commenter urged EPA to add radionuclides to the high-risk list.

The EPA did not add radionuclides to the high-risk list because radionuclide emissions are measured in terms of activity rather than mass and it would be extremely difficult to equate the two for the purpose of offsetting. The EPA recognizes however, that radionuclides could potentially be present in trace amounts from some combustion sources. To account for this, language has been added to the final rule that stipulates that if a radionuclide source is included in the emissions pool, EPA will not allow increases in radionuclide emissions under any post-reduction scenario.

Numerous commenters requested that specific pollutants be removed from the high-risk list. Most of the commenters took issue with the scientific basis of EPA potency factors or other specifics of the scientific studies that document the health effects. As stated above, three chemicals were deleted from the list because of health effects data and two were assigned weighting factors of one because of their Group C cancer classification. All other requests to delete pollutants from the list were denied. The rationale supporting the specific determinations are addressed in the BID.

G. State Authority

A number of commenters recommended that States be delegated authority for implementing the Early Reductions Program even before States are given permitting authority under title V of the CAA.

The EPA specifically solicited comment on whether this Program should be delegated to the States. Based on the comments received, EPA is proceeding to establish the criteria for delegating the Early Reductions Program to those States that seek delegation in advance of having a title V operating permit program. Section 112(l) of the CAA authorizes the Administrator to approve a State program for the implementation and enforcement of the emission standards and other requirements of the section, including partial delegation of the Program. That is, EPA anticipates that it will, if a state so desires, delegate to a State the authority to develop and implement the Early Reductions Program. The EPA anticipates that it will publish delegation guidance in the near future that will be useful to the States in developing programs for submittal.

Of course, until such time as a State has an approved State program under title V, it cannot issue a title V permit. See CAA section 112(l)(9). Therefore, the Administrator cannot delegate his authority to issue a permit establishing an alternative emission limit under section 112(i)(5) until such time as the state has an approved title V permit program.

Various comments were received pertaining to a State's authority to impose stricter requirements for compliance extensions than those specified in the rule.

The CAA states in section 112(i)(5)(A) that "Nothing in this paragraph shall preclude a State from requiring reductions in excess of those specified in this subparagraph as a condition of granting the extension * * *. Although not specifically stated, it is implied that the excess reductions can only be required as a condition of the State granting the extension. The CAA, therefore, implies that when the State is the permitting authority, the State may require greater than 90 (95) percent reduction as a condition for granting the extension. As long as EPA (administered through the Region) remains the permitting authority, the CAA specifies 90 (95) percent reduction.

Finally, two commenters contended that States should have the option of not allowing facilities in their States to participate in the Program or denying alternative emission limits.

The Early Reductions Program is a national program mandated by Congress through the CAA and as such, States do not have the authority to disallow participation. However, States do have the power to impose additional or stricter State standards or require greater than 90 (95) percent reduction as a condition of granting an Early Reductions compliance extension under their title V State permitting program.

H. Interface With Title V Permits

One commenter was concerned that the Early Reductions rule required compliance extensions to be in the form of a title V permit. Since there is a chance that the regulations for operating permits will not be finalized until after the first set of section 112(d) standards are proposed, the commenter believed that it may be too late to apply for a compliance extension for all sources covered by the section 112(d) standards.

The regulation allows sources covered by standards proposed prior to January 1, 1994, to submit an enforceable commitment prior to proposal of the standard. The source is then allowed until January 1, 1994, to achieve the reductions and may submit a permit application as late as December 1, 1993. Sources which have already achieved the required reduction prior to proposal of an applicable section 112(d) standard must submit a permit application containing the reduction demonstration prior to such proposal; or if a Federal or State permitting program is not yet in place, the permit application for the Early Reductions source may be submitted up to 120 days after the permitting authority has established a permitting program under title V. In the latter situation, even though the permit application would have to be submitted after proposal, the source owner or operator must still document that the required early reductions were achieved prior to proposal of the applicable section 112(d) standard. In the event that such documentation cannot be provided, the source's Early Reductions demonstration would be disallowed and the source would have to meet the section 112(d) standard.

It has become apparent recently that no comprehensive title V permitting mechanism, either a federal rule for

issuing title V permits or an approved State program will be available in time to process permit applications for enforceable commitments which are due by December 1, 1993. In addition, it may be some time before any source achieving reductions prior to proposal of an early section 112(d) standard could submit a permit application. In both cases the owner or operator may not know if he would be granted a compliance extension in time enough to meet the section 112(d) standard if his Early Reductions demonstration were disapproved. Therefore, EPA is considering options to deal with this developing problem.

One option is for EPA to promulgate quickly a rule for interim federal issuance of title V specialty permits. The rule would apply only to Early Reductions permit applications that could not be processed due to lack of an applicable comprehensive title V program. Permits issued under the specialty program would encompass only the Early Reductions source at a facility and only the hazardous air pollutant emissions from that source. All other Act requirements applicable to the Early Reductions source would be handled through the comprehensive title V permitting process as it becomes available. A future Federal Register notice will describe EPA's proposed action on this matter.

Another commenter noted that there may be a gap between the time a permit application is approved and when a title V permit is issued. They suggested that alternative emission limitations be enforceable once permit applications are approved.

Permits do not have separate approval and issuance dates. When the proposed permit completes review, including federal oversight, the permit is considered valid at that time. Therefore, the date of approval and date of issuance are the same and there is no time gap.

One commenter suggested that EPA establish a policy for applications under review during the time that States receive final approval of a State title V program. The commenter felt that the reviewing agency should remain the same throughout the review and issuance of a permit.

The EPA generally agrees with the commenter that title V permit applications undergoing review by EPA for an Early Reductions demonstration and alternative emission limits should not have to be processed twice—once by EPA and then by the State. In most cases, this should not occur. However, there may be some situations where a State has received approval of its comprehensive title V permitting program during the time that EPA is reviewing a permit application submitted by a source to EPA for an Early Reductions demonstration. The EPA will address this situation in the upcoming Federal Register proposal described above to deal with the permit mechanism for Early Reductions demonstrations.

Briefly, the EPA does not believe that permit issuance should be substantially delayed as a result of the transition to State responsibility for permitting. Owners or operators must know in a timely fashion whether their sources will be granted a compliance extension. If an extension denial occurs, the source will have to meet the applicable section 112(d) standard on schedule, and if substantial delays occur, it will mean less time for the source to prepare to meet the 112(d) standard.

The anticipated Early Reductions specialty permit rule will address when EPA will retain permit issuance even after a State receives approval for its comprehensive title V permit program, as well as when such review and specialty permit issuance will be transferred to the State after submittal to EPA by the source owner or operator. It is envisioned that in the event of such transfer, the State will adhere as closely as possible to the original review timetable established by EPA.

Several commenters expressed additional concerns with the timing of State title V programs. Commenters wanted assurances that any Early Reduction permit application approved by EPA (vs. the State) would be included in any future State title V operating permit without further negotiation.

Alternative emission limitations for Early Reductions sources remain in effect for the duration of the 6-year compliance extension. Because permits must be renewed after 5 years, the State would be the reviewing agency at that point. However, the alternative emission limitations, once granted, continue to be permit conditions until the compliance extension expires, in which case, applicable section 112(d) standards then take effect.

One commenter suggested that base-year review should be eliminated because it could potentially stress the reviewing capabilities of EPA and the States. In the opinion of the commenter, permit issuance was more important since the permit would enforce the early reductions.

Base year review will expedite the permit review and assist industry in making "acceptable" reductions. Early review of base year emissions is essential before a source commits the resources to reduce emissions. This review will provide assurance of acceptable base year emissions prior to major expenditures.

Finally, one commenter felt that Early Reduction permits should not be revoked for any reason prior to the end of the 6-year extension, even pursuant to section 112(f) of the CAA.

Permits issued during the 6-year compliance extension may be revoked only in those circumstances that warrant permit revocation under the title V permit regulations. If the compliance extension were revoked, then the source would have to achieve timely compliance with any applicable section 112 standard. Section 112(i)(5) does not shield a source from standards issued under section 112(f).

I. Interface With Section 112(g) Modifications

One commenter requested clarification of the netting provisions of section 112(g) of the CAA, and how these provisions will be impacted by the Early Reductions Program.

The EPA recognizes that the availability of Early Reduction credits for use as offsets for emission increases under section 112(g) is an important issue. The EPA is currently developing regulations to implement section 112(g) of the CAA. The issue of offsetting emission increases with Early Reductions credits has not been resolved and will be addressed in the upcoming regulations governing section 112(g) modifications. However, EPA recognizes that there are disadvantages of allowing Early Reduction credits to be used to offset section 112(g) emission increases.

Section 112(i)(5) was designed to bring about a substantial reduction in air toxic emissions from sources prior to the actual issuance of standards governing such sources. In exchange, those sources would receive a limited compliance extension from the emission limitations established pursuant to section 112(d) of the CAA. Section 112(g) is a mechanism to allow owners or operators of facilities to make physical or operational changes to their facilities without triggering MACT requirements. A "major source" is considered not to have undergone a modification if any increase (greater than a de minimis increase) as a result of physical or operational changes is offset by an equal or greater decrease in the quantity of emissions of another hazardous air pollutant (or pollutants) from such source which is deemed more hazardous. The EPA believes that the intent of section 112(i)(5) would be

undermined by allowing the Early Reduction credits to be used under section 112(g).

This is best illustrated by example. If Company A submits an enforceable commitment to reduce its emissions by 90 percent at one-half of its facility (and that portion of the facility meets the definition of source in § 63.73) it will achieve those reductions (for example, from 100 tons/yr to 10 tons/yr) in exchange for an alternative emission limit for the first six years beyond the otherwise applicable compliance date. Later the company wants to undertake a physical change at the other half of the facility which would result in an increase in emissions of 90 tons/yr of a HAP. If, under section 112(g), the owner or operator is allowed to use as an offset credit those 90 tons/yr of reductions from the Early Reductions Program, the major source overall will emit the exact same level of HAP's as it did prior to making early reductions (i.e., 100 tons/yr), MACT requirements will be avoided on one half the facility, and the other half of the facility will have received a six year extension from an otherwise applicable section 112(d) standard.

J. Interface With Title I Provisions.

One commenter suggested that facilities that reduce emissions for purposes of the Early Reductions Program should be able to use those reductions for offsetting and netting.

Most of the HAP's emitted by sources participating in the Early Reductions Program also are either volatile organic compounds (VOC) or particulate matter and, may therefore, be subject to other requirements under the CAA. For such situations, questions have surfaced over the interaction between the Early Reductions Program and the other CAA requirements. Specifically, a frequent question from interested companies concerns whether reductions made under the Early Reductions Program can be considered creditable reductions for purposes of New Source Review (NSR) permitting under parts C and D of title I of the CAA. The preamble to the proposed Early Reductions rule described the way Early Reductions would be treated in situations involving "offsets" under part D NSR requirements but did not discuss "netting" transactions. Today's preamble reiterates the proposal preamble discussion regarding use of Early Reductions as offsets and adds EPA's policy regarding netting transactions.

a. *Offsets.* Emission reductions of HAP's for the purpose of obtaining an alternative emission limitation under section 112(i)(5) of the CAA are not creditable for the purpose of meeting an offset requirement under section 173(a)(1) of the CAA. A source in a nonattainment area (an area where a national ambient air quality standard is exceeded) or an ozone transport region may need to obtain offsets for emission increases from planned new construction or modification of existing facilities. The HAP reductions are not allowed as offsets in this instance because section 173(c)(2) of the CAA states that emission reductions otherwise required by this Act shall not be creditable as emissions reductions for purposes of any such offset requirement. A source successfully participating in the Early Reductions Program will be granted an alternative emissions limitation (for the duration of the compliance extension period) in lieu of a section 112(d) emission standard. Therefore, the reduction of HAP emissions under the Early Reductions Program is a substitute for the reduction of HAP emissions that would otherwise be required of the source under section 112(d).

However, a source owner or operator may use as offsets any reductions in HAP emissions in excess of those required to qualify for an extension under the Early Reductions Program or reductions in non-HAP emissions which are coincidentally obtained through use of the HAP reduction measures, if such reductions are not required by any other provision of the CAA and meet any other requirements for offsets under NSR rules. These reductions are allowed as offsets pursuant to section 173(c)(2) of the CAA which further states that incidental emission reductions which are not otherwise required by the Act shall be creditable as emission reductions for such purposes.

b. *Netting.* In general, an owner or operator considering a physical or operational change at a major stationary source (as defined in the NSR rules) will be subject to (1) the requirements of section 173(a) (e.g., offsets, application of LAER) in nonattainment areas or ozone transport regions or (2) the requirements for Prevention of Significant Deterioration (PSD) (e.g., application of BACT) in attainment or unclassifiable areas, unless the changes will not cause a "significant net emissions increase" in pollutants subject to NSR. To determine the net emissions increase for NSR purposes, the owner or operator is allowed to sum the emissions increase from the proposed change with any creditable increases and decreases elsewhere at the plant.

The New Source Review rules and EPA's "Emissions Trading Policy Statement (ETPS)" (51 FR 43823, December 4, 1986) limit the creditability of some decreases in emissions for this "netting" procedure. For example, the NSR rules for nonattainment areas state that a decrease in emissions is creditable only to the extent that "* * * the reviewing authority has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR part 51 subpart I or the State has not relied on it in demonstrating attainment or reasonable further progress; * * *" (40 CFR 51.165(a)(1)(vi)(E)). The PSD rules contain similar language. Essentially what this restriction does is prevent sources from obtaining two credits for one reduction, where the credits are related to the same air quality objective (which in this case is the attainment/maintenance of national ambient air quality standards). Thus, as an example, a source cannot use an emissions reduction to meet reasonable further progress requirements and as a reduction credit in netting calculations.

However, under the ETPS, HAP decreases credited under the Early Reductions Program also may be credited for purposes of determining the net emissions increase for a plant change proposed at a later time for new source review purposes, provided of course that the reduced HAP's also are pollutants subject to the NSR rules and that the decreases meet all other requirements for netting. In such situations, the HAP decreases produce benefits for two different air quality objectives and one credit can be given toward each; the HAP credit is associated with the air toxics reduction objectives of section 112 of the CAA and the NSR credit is associated with the attainment/maintenance of national ambient air quality standards and PSD. However, the amount of the HAP reduction creditable in these situations will be limited if the netting calculations involve HAP emissions increases. Specifically, the creditable HAP reductions from the Early Reductions Program will be reduced by the amount of any increase in HAP emissions involved in the netting calculations. If no HAP increases are involved, the entire HAP reduction is creditable.

The principle behind this policy limitation is similar to that behind the netting restriction in the NSR rule mentioned above, namely that a reduction should not receive two benefits or credits (double counting) for the same air pollution control objective. The objective of the Early Reductions Program under section 112 of the CAA is to achieve significant reductions of

HAP's at existing facilities. Sources that achieve such HAP reductions in accordance with the rules promulgated today receive credit for the reductions in the form of a six-year compliance extension from applicable section 112(d) standards. If the reductions also were allowed to be used as netting reduction credits for physical or operational changes involving increases in HAP's, then the reductions in effect would be promoting HAP increases elsewhere at the plant site by helping such facilities net out of NSR control requirements. Under such a scenario, an owner or operator could receive a six-year compliance extension to section 112(d) standards for some portion of the plant, net out of NSR control requirements, and have overall HAP emissions equal to preexisting levels. Clearly this is not a result consistent with the objectives of the CAA.

To illustrate the effect of this policy, consider a plant site in which a portion of the facility (e.g., a process unit) participates in the Early Reductions Program and achieves a 50 tons per year reduction of HAP's, which also are particulate matter. Later, the owner or operator proposes a physical or operational change at another section of the plant which would increase particulate emissions by 75 tons per year, and none of the emissions increase would be HAP's. In this case, the owner or operator can use all of the HAP reductions from the Early Reductions Program to net against the particulate emissions increase because no HAP increases are involved. However, if 30 tons per year of the proposed 75 ton increase are HAP's, then only 20 tons per year of the HAP reductions under the Early Reductions Program could be used as reduction credits in any netting calculations (20 tons per year is the amount by which the HAP reduction exceeds the proposed HAP increase). Finally, if 50 or more tons per year of the proposed 75 ton increase would be HAP emissions, then none of the HAP reductions from the Early Reductions Program could be used to net against the particulate emissions increase (because the HAP increase from the proposed modification is equal to or greater than the HAP reductions from the Early Reductions Program).

It should be noted that this netting policy for HAP reductions is applicable only for NSR programs. Under section 112(g) of the CAA, EPA must promulgate separate requirements for modification of HAP sources. The provisions to implement section 112(g) are under development but will not become effective in a State until the State has obtained approval of a Title V permitting program.

Another commenter felt that a source that achieves a 90 (95) percent reduction from base year should be granted the same 6-year extension from complying with reasonably available control technology (RACT) requirements under Title I as received from section 112(d) standards under Title III.

Section 112(i)(5) of the CAA authorizes the Administrator (or a State operating pursuant to an authorized Title V permit program) to grant a 6-year extension from compliance with an emission standard promulgated under section 112(d) that would otherwise be applicable to that source, provided the source satisfies certain conditions. Nothing in section 112(i)(5) or any other provision of the CAA authorizes the Administrator to grant extension of any RACT requirement that might be required under other sections of the CAA. As a practical matter however, EPA anticipates that many of the methods or technologies adopted to reduce a source's HAP's by 90 (95) percent for purposes of obtaining a compliance extension from a section 112(d) standard may also constitute compliance with RACT requirements under other provisions of the CAA.

Although sources successfully participating in the Early Reductions Program will be granted an alternative emission limitation in lieu of meeting an applicable section 112(d) standard, the source still is responsible for complying with other applicable requirements of the CAA. For example, sources located in areas designated nonattainment for the criteria pollutant ozone are subject to other emission reduction requirements. State implementation plans (SIP's) for these nonattainment areas (plans for attaining the criteria pollutant ambient air quality standards) must contain requirements for application of RACT requirements for stationary sources of volatile organic compounds (VOC). The RACT is required for sources: (a) For which EPA has published, or will publish, a control techniques guideline document; and (b) that are "major" as defined in the CAA.

State implementation plans also must provide for other emission reductions sufficient to demonstrate attainment by specified deadlines and meet interim reasonable further progress requirements. States may obtain reductions from any VOC emission sources in the inventory, which means that they may eventually require additional emission reductions from sources participating in the Early Reductions Program. (It should be noted that VOC emission reductions resulting from compliance with HAP rules, including those under the Early Reductions Program, are creditable toward the Program requirements to the extent that they were not required prior to enactment of the CAA Amendments of 1990 and are consistent with creditability requirements under the CAA.)

The interaction between the Early Reductions Program and other requirements for the attainment of national ambient air quality standards causes concern in that the prospect of later application of additional requirements to sources that make early reductions would effectively limit the attractiveness of, and therefore participation in, the Program. Therefore, with respect to the percentage reduction requirements, reasonable further progress and attainment demonstration requirements, EPA has established a policy to reduce the amount of uncertainty for sources that choose to participate in the Early Reductions Program. This guidance should further encourage possible applicants to participate in the Early Reductions Program. Briefly, the policy regarding RACT and reasonable further progress requirements for sources making early reductions provides that:

(1) The source must meet any applicable existing RACT requirements (including RACT which is required but has not been adopted by the State, i.e., RACT fixups);

(2) EPA encourages States to favorably consider the reductions made under the Early Reductions Program in its analysis of any future RACT requirements for the source; and

(3) EPA encourages States to seek any additional reductions (beyond those under the Early Reductions Program) needed to make reasonable further progress first from sources not participating in the Early Reductions Program.

The intent of the policy is to require compliance with existing RACT requirements, but potentially give sources some breathing room with respect to future RACT or reasonable further progress requirements, in recognition of the fact that substantial 90 (95) percent reductions already have been made at the source. This policy is appropriate because, in most cases, a 90 (95) percent reduction of HAP's from the sources will produce comparable reductions in criteria pollutants or criteria pollutant precursors (i.e., VOC). For example, nearly all HAP's emitted as gases also are VOC's.

However, it is possible that an Early Reduction demonstration will not produce a criteria pollutant reduction. A

creditable HAP emission reduction may be achieved by substituting a non-HAP compound for the HAP. If, for example, both compounds are VOC, then there is no VOC reduction although the HAP has been eliminated. In such cases it would not be appropriate to apply this policy.

K. Test Methods and Procedures

A variety of comments were received regarding Method 301. One commenter suggested that Method 301 should be made applicable to other waste media in addition to gaseous measurements (the language in the proposal package contained references to sampling trains, sampling probes, etc., specific to measurement of gases). The EPA concurs with this comment; an intent of the method and the rule is its applicability to all types of sources. Thus the language in Method 301 has been modified to be more generic as to source media. This modification does not change the requirements of the method nor does it affect the stringency or applicability of the method.

Three commenters suggested that EPA establish a de minimis concentration for all HAP's for Method 301. The de minimis concentration would be the lowest concentration for which the test methods would have to be validated.

It is beyond the scope of Method 301 to specify de minimis levels. Method 301 does provide specific procedure for the determination of the limit of quantitation. In addition, Method 301 requires that the data and the proposed method be validated for the concentration(s) of HAP's in the waste stream(s).

One commenter recommended that Method 301 contain a procedure for calculating the concentration range for which a method would be considered validated.

Method 301 advocates that the proposed test methodology be validated over the range of expected HAP concentrations, in the field or through laboratory testing utilizing the ruggedness test procedures. In addition, a procedure is offered for determining the limit of quantitation. Such procedures would establish the concentration range.

One commenter noted that Method 301 does not specify the process conditions under which the validation testing should be conducted.

The choice of operating conditions depends upon the end use(s) of the data. Considerations in structuring the validation test should include: Sample matrix complexity in regard to future applicability of the proposed method, sample analyte concentration(s) in the sample waste stream and of the applicable emission standard, and representativeness of the process conditions in regard to establishing actual annual emissions.

Two commenters noted that the validation protocol in Method 301 will increase the cost of testing and the time required to test. In order to minimize the costs, they suggest that EPA not require pre-review of the validation report before the test method can be used.

The EPA agrees that the validation of data obtained by the proposed method can be conducted concurrently with other testing in order to combine the validation step with the source test. This is encouraged, where appropriate, and was an intent of Method 301. Note that the source owner or operator incurs some risk that the proposed method may not meet the Method 301 validation criteria and the emissions data may not be applicable for compliance determination. Well-substantiated validation reporting should keep this risk to a minimum.

Another commenter suggested that Method 301 should provide a less rigorous validation procedure for the early stages of method development so that these methods may be used to provide a data base for screening, ranking, and regional planning without the expectation of a high degree of knowledge about accuracy and precision.

The EPA agrees that an overall test method development program will be more extensive than a single application of Method 301. Method 301 is specifically a field validation protocol. Responsible method development and evaluation should provide an indication that the proposed method has a sufficient probability of performing within the criteria of Method 301 during field validating testing.

One commenter was concerned that Method 301 would adversely affect State toxic screening programs which have incorporated less precise emission measurement techniques.

Method 301 is applicable to source owners or operators wishing to comply with a Federal requirement using a test method which has not yet been validated. Because a source emission screening and ranking process for use in the development of a State toxics strategy is not subject to specific Federal requirements, Method 301 should not affect this type of program.

One commenter noted that Method 301 does not address the direct interface or dilution interface sampling options of Method 18.

Method 301 may be applied to the direct and dilution interface sampling options of Method 18. However, the validation cannot be conducted without quadruplicate sampling and analytical systems, which EPA considered excessively burdensome. For the other sampling options of Method 18, such as container and absorption tube sampling, validation field testing should be conducted using Method 301.

One commenter felt that Method 301 requires an excessive number of samples for determining bias and precision. They suggested that reducing the number of test runs by half would only result in a difference of the t-statistic at an 80 percent confidence level by less than 11 percent, but cut the time, effort, and cost in half.

The decision level specified in the comment is incorrect and should be 0.05. The difference in the t-statistic resulting from reducing the number of samples by 50 percent is 17 rather than 11 percent. This difference is not acceptable to EPA.

One commenter raised questions about section 6.1.5 of the proposed method. The commenter noted that this section does not indicate the acceptance criteria for the correction factor calculated in Equation 301–5, and also contended that this correction factor may be inappropriate for methods which employ isotopic spiking (e.g., EPA Method 23 surrogate standards) where values are not corrected as long as the recovery is within 30 percent.

The acceptance criteria for the correction factor calculated in Equation 301–5 is specified in section 1.2.1 of the Method. Isotopic spiking with surrogate standards as specified in Method 23 is conducted as a quality assurance check of breakthrough of the analytes on the sorbent. The isotopic spiking specified in Method 301 is used to assess method bias. The two are not mutually exclusive. Where a significant bias is identified (section 6.1.4) using the spike, the correction factor (section 6.1.5) is calculated. The correction factor is evaluated by the criteria in section 1.2.1 and the data are either corrected or the data and procedure to obtain the data are rejected.

One commenter expressed concerns about the reasonableness of requiring reference materials at concentrations below a proposed method's detection limit or in concentrations in multiple ranges representative of several emission points at the same facility.

Validation of a proposed method requires that the method be capable of measuring in the applicable range of emission concentrations. A method with a detection limit above the emission concentration at a particular emission source could not be validated for that

source. Method 301 does provide for ruggedness testing which allows a proposed method to be validated for testing at multiple concentrations without requiring multiple field validation tests. Whether ruggedness testing or field validation is used to validate the method for the appropriate concentrations, it will be necessary to obtain reference materials in the applicable ranges.

One commenter was concerned that the limit for precision specified in Method 301 of 50 percent relative standard deviation was too high, even though 9 sampling runs are needed to show compliance. The commenter suggested that the relative standard deviation be reduced to 15 percent or less so that only three sampling periods are needed to show compliance.

The method criteria for precision and followup testing provide maximum flexibility in method development and application while achieving high quality results. They also serve indirectly as an incentive in method development; that is, the better the method precision, the less effort is required during followup testing using the validated method.

One commenter recommended that more explicit terminology be used in sections 6.2.1.3 and 6.2.2.3 of the rule pertaining to the F-test which tests the significance of the proposed method variance to that of the validated method.

The intent of the sections is to perform a comparison of the variances of the two methods. Method 301 has been revised to include both the F-test and simple comparison of variances, demonstrating that the variance of the proposed method is less than or equal to that of the validated method, as suggested by the commenter.

One commenter suggested that a hierarchy be established for identifying which validation procedures to use.

The EPA agrees that such guidance would be appropriate in Method 301 and has reworded sections 5.1 through 5.3 to define this hierarchy.

One commenter suggested that "documented" methods (section 12.1.2 of Method 301) such as National Institute of Occupational Safety and Health, American Society for Testing and Materials, and Occupational Safety and Health Administration methods should be considered validated methods.

The application for a waiver under section 12.2 should demonstrate the applicability of the "documented" method to the particular source to be measured. The validation procedure and documentation for that particular source would be reviewed with respect to Method 301 requirements.

Another commenter felt the Method 301 requirements in section 12.1.1 for extending applicability of a method to "similar" sources were burdensome. They suggested there be a more reasonable requirement than conducting a ruggedness test and applying to EPA for a waiver.

Section 12.1.1 states applicability to other sources may be demonstrated by conducting ruggedness testing. The EPA agrees with the commenter that ruggedness testing is not always necessary depending upon the similarity of the sample matrices. In addition, validation of the proposed method on a complex sample matrix may be sufficient to demonstrate that the method is applicable to a similar source with an emission matrix of less complexity. In every case, the requester must apply for a waiver to extend the applicability.

One commenter noted that Method 301 does not specify acceptable deviations in method procedures after validation.

Once validation of a method has been completed and the data used to meet a Federal or State requirement, modifications to the method can not be made without approval of the responsible agency or validation through application of Method 301. Any modification must be fully explained and documented with supporting data such as that from a ruggedness test. The primary consideration in acceptance of a modification will be its effect upon the results obtained by the previously validated method.

Finally, one State was concerned that the validation method at one source would be inappropriately interpreted as a validation for all applications.

The field validation procedure of Method 301 is appropriate for validating emissions data from the source and at the levels only for which the method was validated. Optional procedures are provided and must be applied to extend applicability of the methodology beyond the specific emission source and concentration levels at which the validation was conducted.

Various comments were received pertaining to other topics related to test methods and procedures. One commenter recommended that Method 25A be accepted for determining base year and post-reduction emissions. The commenter provided an example of where this method would be appropriate: When the gas stream is principally comprised of one HAP and the HAP contribution to the total hydrocarbon concentration can be documented. The commenter further suggested that continuous measurements would be more appropriate for batch processes.

The EPA believes that application of Method 25A to a single HAP in a sample matrix containing no other hydrocarbons would prove acceptable, assuming the detector is calibrated using that HAP. Total emissions of the HAP would then be determined using the emission value integrated for the entire test run. Application of Method 25A to more complex gas streams would need to be examined on a case-by-case basis. Use of continuous mass spectrometric techniques where the HAP could be speciated may be more likely to succeed. Method 301 addresses composite sampling techniques and EPA believes that procedures similar to those specified for a composite sampling test method could be applied to the measurement of emissions from a batch process.

One commenter requested that the final rule include a definition of "particulate."

The definition of particulate matter is dependent upon the test method involved. The requirements of the applicable regulation, SIP, or Federal regulation should be reviewed first for applicable definition(s). The problem exists for emissions that can be in either a particulate or gaseous phase. If there is a question, the applicant should consult with EPA to arrive at a resolution.

One commenter raised an important consideration in preparing a field validation involving comparison of the proposed method against a validated method described in section 5.2 of appendix A of the proposed rule. The commenter stated that if emission concentrations are highly variable over time such as in the case with a batch process like coking operations, the method precision calculated using Equation 301–7 would be disproportionately influenced by large absolute differences.

If paired, rather than quadruplet samples are used for procedures under section 56.2, each test run of the validation testing should be conducted over the entire process cycle.

One commenter felt that the bias criterion for validation of the data obtained by a proposal method compared to a validated method is too restrictive.

For pollutants and sources for which validated method(s) are available, Method 301 requires alternative methods to have a similar precision and a reasonable bias (±10) compared to the validated method(s). The EPA believes that these criteria are not too restrictive

and allow for innovative method development.

The EPA has made some minor changes to the proposed rule as a result of comments pertaining to test methods and procedures. One commenter suggested that revisions should be made in sections 6.1.2.4 and 6.2.2.4 to calculate the "standard deviation of the differences" rather than the "standard deviation of the mean of the differences." The EPA agrees with this suggestion and has made the appropriate changes in the rule.

Another commenter noted that section 6.3.2 did not specify calculation of the relative standard deviation for the spiked samples as was specified for the unspiked samples in section 6.3.6. It was not clear to the commenter which relative standard deviation is needed to meet the plus or minus 50 percent criterion in section 1.2.2.

Section 6.3.2 has been revised to parallel section 6.3.6. The method has also been revised to specify the 50 percent relative standard deviation criterion for both the spiked and unspiked samples.

One commenter suggested that section 8.2.4 specify that half the samples analyzed at the minimum and maximum storage times be from the validated method and half from the proposed method. It should also address procedures for samples which require extraction or digestion.

As a result of this comment, several wording changes have been made. Section 8.2.4 has been revised to specify that equal numbers of samples from the proposed and validated methods be analyzed. The procedures for samples requiring extraction or digestion parallel those described in section 8.2.2.

Finally, one commenter urged EPA to publish a guidance document outlining source testing methods.

The EPA has prepared an initial list of validated methods. This list may be obtained from the Emission Measurement Technical Information Center (EMTIC), U.S. Environmental Protection Agency (MD–T9), Research Triangle Park, North Carolina 27711. Updates to the list of validated methods will be made available on a periodic basis. The EMTIC may be contacted at any time to review the current list at (919) 541–0200.

L. Other Changes to the Proposed Regulation

A number of commenters noted inconsistencies or ambiguities in the language used in the proposed regulation. Where appropriate, EPA has made changes to address or clarify these comments. One commenter suggested that in § 63.72, the words "permitting authority" be used instead of "state * * *" acting pursuant to a permitting * * *." The wording in the proposed regulation implied that only the State had permitting authority.

The regulation has been changed to incorporate this comment. Section 63.72 of the regulation describes the general provisions of the Early Reductions Program. During the course of the Program, the authority to review and issue permits will shift from EPA to the States. The wording in the proposed regulation limited the provisions to States. The term "permitting authority" refers to States or EPA and is, therefore, the more appropriate term in this context.

Another commenter noted that the deadlines for submittal of late test data were different in §§ 63.75(d) and 63.77(f). They requested clarification of this inconsistency.

The test data referred to under § 63.75(d) supports base year data for enforceable commitments. Sources making enforceable commitments may need to act quickly to submit the commitment prior to the proposal of a section 112(d) standard. In this instance, sources will have very little time to obtain accurate test data. Therefore, EPA has granted a reasonable time period of 180 days after proposal of an applicable section 112(d) standard for sources to conduct necessary testing to support enforceable commitments.

The test data referred to under § 63.77(f) (now § 63.77(e)) supports post-reduction emissions for permit applications. In this case, EPA proposed allowing only 90 days for submission of test data. Since sources planning to submit a permit application will have sufficient lead time before applying, less additional time is needed than for submittal of supporting data for the enforceable commitment to produce necessary test data.

The EPA has modified the Early Reduction regulation to make consistent the deadlines for post-reduction emissions test data to support the reduction demonstration for enforceable commitments and permit applications. Section 63.77(f) of the proposed rule allowed sources with enforceable commitments 120 days (i.e., from December 1, 1993, until March 31, 1994) after the permit application deadline to submit test data but required other permit applicants to submit the same type data within 90 days. The 90-day deadline has now been changed to require test data within 120 days after the deadline for submittal of the permit application.

Two commenters noted that the proposed regulation used the term "post-control" when discussing emission reductions.

The EPA recognizes that there are many methods to reduce emissions other than applying a control device. Any emphasis on using a control device versus other methods of emission reduction was unintentional and, in fact, EPA encourages pollution prevention and recycling methods in preference to add-on controls. All references in the proposed regulation to "post-control" emissions have been replaced with "post-reduction" emissions.

The wording in the suggested commitment language in § 63.75(b) has been revised to be consistent with the requirement in § 63.75(a)(ii); that the base year emissions "* * * constitute the best available data for base year emissions * * * and are correct * * *" Language has also been added to clarify that the source owner or operator has not included in the base year emissions that exceed allowable emission levels specified by law, regulation or permit.

The wording in § 63.74(k) has been clarified to be consistent with the intent as described in the proposal preamble. Emissions in excess of allowable levels cannot be used to establish emissions, not "emission points." Emission points in violation of any rule, regulation, or law can be included in the source, but only allowable emissions from those points can be used to establish emissions.

The addresses in §§ 63.75 and 63.76 in the final rule to which enforceable commitments and base year reviews are sent has been revised by replacing the Office of General Counsel (LE–132A) with the Stationary Source Compliance Division (EN–341W).

VI. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and EPA responses to significant comments, the contents of the docket, except for interagency review materials,

will serve as the record in case of judicial review (section 307(d)(7)(A)).

B. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060–0222. Public reporting burden for this collection of information is estimated to average 213 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch (PM–223Y); U.S. Environmental Protection Agency; 401 M St., SW.; Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

C. Executive Order 12291

Under Executive Order 12291, OMB is required to judge whether a regulation is "major" and therefore subject to the requirements of a Regulatory Impact Analysis. The criteria set forth in Section 1 of the Order for determining whether a regulation is a major rule are as follows:

(1) Is likely to have an annual effect on the economy of $100 million or more;

(2) Is likely to cause a major increase in costs or prices for consumers, individual industries, geographic regions, or Federal, State, or local governments; or

(3) Is likely to result in significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of the United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The EPA has determined that this regulation would result in none of the adverse economic effect set forth in section 1 of the Order as grounds for finding a regulation to be a "major rule." This is a voluntary program, open to sources that seek an alternative to meeting a section 112(d) standard. The program is attractive to sources because of the potential savings that can be realized in obtaining a compliance extension. Although EPA believes that significant savings will be realized by industries that participate in this Program, it is not likely that savings will have an impact on the economy of $100 million per year. The EPA estimates that 50 to 100 sources per year may participate in the Program, and thus each source would have to save over $1 million to affect the economy by $100 million per year. Based on the enforceable commitments received so far from the chemical industry, this does not seem to be the case. However, further quantification of the economic impact of this regulation is impossible without knowing what sources and how many will apply, how they will actually achieve the 90 (95) percent reductions, and what the otherwise applicable section 122(d) standards will be. Consequently, the EPA has concluded that this regulation is not a "major rule" under Executive Order 12291. The final rule was submitted to OMB for review as required by the Order.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 requires the identification of potentially adverse impacts of Federal regulations upon small business entities. The CAA specifically requires the completion of a Regulatory Flexibility Analysis in those instances where small business impacts are possible. Because these standards impose no adverse economic impacts, a Regulatory Flexibility Analysis has not been prepared.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities.

List of Subjects in 40 CFR Part 63

Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: October 29, 1992.

William K. Reilly,

Administrator.

Part 63 of 40 CFR chapter I is added to read as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart A—General Provisions [Reserved]

Subpart B—[Reserved]

Subpart C—List of Hazardous Air Pollutants, Petition Process, Lesser Quantity Designations, Source Category List [Reserved]

Subpart D—Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants

Sec.
63.70 Applicability.
63.71 Definitions.
63.72 General provisions for compliance extensions.
63.73 Source.
63.74 Demonstration of early reduction.
63.75 Enforceable commitments.
63.76 Review of base year emissions.
63.77 Application procedures.
63.78 Early reduction demonstration evaluation.
63.79 Approval of applications.
63.80 Enforcement.
63.81 Rule for special situations.

Appendix A to Part 63—Test Methods

Appendix B to Part 63—Sources Defined for Early Reduction Provisions

Authority: 42 U.S.C. 7401 *et seq.*

Subpart A—General Provisions [Reserved]

Subpart B—[Reserved]

Subpart C—List of Hazardous Air Pollutants, Petitions Process, Lesser Quantity Designations, Source Category List [Reserved]

Subpart D—Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants

§ 63.70 Applicability.

The provisions of this subpart apply to an owner or operator of an existing source who wishes to obtain a compliance extension from a standard issued under section 112(d) of the Act. The provisions of this subpart also apply to a State or local agency acting pursuant to a permit program approved under Title V of the Act. The Administrator will carry out the provisions of this subpart for any State that does not have an approved permit program.

§ 63.71 Definitions.

All terms used in this subpart not defined in this section are given the same meaning as in the Act.

Act means the Clean Air Act as amended.

Actual emissions means the actual rate of emissions of a pollutant, but does not include excess emissions from a malfunction, or startups and shutdowns associated with a malfunction. Actual emissions shall be calculated using the source's actual operating rates, and types of materials processed, stored, or combusted during the selected time period.

Artificially or substantially greater emissions means abnormally high emissions such as could be caused by equipment malfunctions, accidents, unusually high production or operating rates compared to historical rates, or other unusual circumstances.

EPA conditional method means any method of sampling and analyzing for air pollutants that has been validated by the Administrator but that has not been published as an EPA Reference Method.

EPA reference method means any method of sampling and analyzing for an air pollutant as described in appendix A of part 60 of this chapter, appendix B of part 61 of this chapter, or appendix A of part 63.

Equipment leaks means leaks from pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, agitators, accumulator vessels, and instrumentation systems in hazardous air pollutant service.

Existing source means any source as defined in § 63.72, the construction or reconstruction of which commenced prior to proposal of an applicable section 112(d) standard.

Hazardous air pollutant (HAP) means any air pollutant listed pursuant to section 112(b) of the Act.

High-risk pollutant means a hazardous air pollutant listed in Table 1 of § 63.74.

Malfunction means any sudden failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Not feasible to prescribe or enforce a numerical emission limitation means a situation in which the Administrator or a State determines that a pollutant (or stream of pollutants) listed pursuant to section 112(b) of the Act cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal law; or the application of measurement technology to a particular source is not practicable due to technological or economic limitations.

Permitting authority means either a State agency with an approved permitting program under Title V of the Act or the Administrator in cases where the State does not have an approved permitting program.

Responsible official means one of the following:

(1) For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the permitting authority.

(2) For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency, either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

Reviewing agency means a State agency with an approved permitting program under Title V of the Act. An EPA Regional Office is the reviewing agency where the State does not have such an approved permitting program.

State means a State or local air pollution control agency.

§ 63.72 General provisions for compliance extensions

(a) Except as provided in paragraph (f) of this section, a permitting authority acting pursuant to a permitting program approved under Title V of the Act shall by permit allow an existing source to meet an alternative emission limitation in lieu of an emission limitation promulgated under section 112(d) of the Act for a period of 6 years from the compliance date of the otherwise applicable standard provided the source owner or operator demonstrates:

(1) According to the requirements of § 63.74 that the source has achieved a reduction of 90 percent (95 percent or more in the case of hazardous air pollutants which are particulates) in emissions of:

(i) Total hazardous air pollutants from the source;

(ii) Total hazardous air pollutants from the source as adjusted for high-risk pollutant weighting factors, if applicable.

(2) That such reduction was achieved before proposal of an applicable standard or, for sources eligible to qualify for an alternative emission limitation as specified in paragraph (c) of this section, before January 1, 1994.

(b) A source granted an alternative emission limitation shall comply with an applicable standard issued under section 112(d) of the Act immediately upon expiration of the six year compliance extension period specified in paragraph (a) of this section.

(c) An existing source that achieves the reduction specified in paragraph (a)(1) of this section after proposal of an applicable section 112(d) standard but before January 1, 1994, may qualify for an alternative emission limitation under paragraph (a) of this section if the source makes an enforceable commitment, prior to proposal of the applicable standard, to achieve such reduction. The enforceable commitment shall be made according to the procedures and requirements of § 63.75.

(d) For each permit issued to a source under paragraph (a) of this section, there shall be established as part of the permit an enforceable alternative emission limitation for hazardous air pollutants reflecting the reduction which qualified the source for the alternative emission limitation.

(e) An alternative emission limitation shall not be available with respect to standards or requirements promulgated to provide an ample margin of safety to protect public health pursuant to section 112(f) of the Act, and the Administrator will, for the purpose of determining whether a standard under section 112(f) of the Act is necessary, review emissions from sources granted an alternative emission limitation under this subpart at the same time that other sources in the category or subcategory are reviewed.

(f) Nothing in this subpart shall preclude a State from requiring hazardous air pollutant reductions in excess of 90 percent (95 percent in the case of particulate hazardous air pollutants) as a condition of such State granting an alternative emission limitation authorized in paragraph (a) of this section.

§ 63.73 Source.

(a) An alternative emission limitation may be granted under this subpart to an existing source. For the purposes of this subpart only, a source is defined as follows:

(1) A building structure, facility, or installation identified as a source by the EPA in appendix B of this part;

(2) All portions of an entire contiguous plant site under common ownership or control that emit hazardous air pollutants;

(3) Any portion of an entire contiguous plant site under common ownership or control that emits hazardous air pollutants and can be identified as a facility, building, structure, or installation for the purposes of establishing standards under section 112(d) of the Act; or

(4) Any individual emission point or combination of emission points within a contiguous plant site under common control, provided that emission reduction from such point or aggregation of points constitutes a significant reduction of hazardous air pollutant emissions of the entire contiguous plant site.

(b) For purposes of paragraph (a)(4) of this section, emissions reductions are considered significant if they are made from base year emissions of not less than:

(1) A total of 10 tons per year of hazardous air pollutants where the total emissions of hazardous air pollutants in the base year from the entire contiguous plant site is greater than 25 tons per; or

(2) A total of 5 tons per year of hazardous air pollutants where the total emissions of hazardous air pollutants in the base year from the entire contiguous plant site is less than or equal to 25 tons per year.

§ 63.74 Demonstration of early reduction.

(a) An owner or operator applying for an alternative emission limitation shall demonstrate achieving early reductions as required by § 63.72(a)(1) by following the procedures in this section.

(b) An owner or operator shall establish the source for the purposes of this subpart by documenting the following information:

(1) A description of the source including: a site plan of the entire contiguous plant site under common control which contains the source, markings on the site plan locating the parts of the site that constitute the source, and the activity at the source which causes hazardous air pollutant emissions;

(2) A complete list of all emission points of hazardous air pollutants in the source, including identification numbers and short descriptive titles; and

(3) A statement showing that the source conforms to one of the allowable definition options from § 63.73. For a source conforming to the option in § 63.73(a)(4), the total base year emissions from the source, as determined pursuant to this section, shall be demonstrated to be at least:

(i) 5 tons per year, for cases in which total hazardous air pollutant emissions from the entire contiguous plant site under common control are 25 tons per year or less as calculated under paragraph (1) of this section; or

(ii) 10 tons per year in all other cases.

(c) An owner or operator shall establish base year emissions for the source by providing the following information:

(1) The base year chosen, where the base year shall be 1987 or later except that the base year may be 1985 or 1986 if the owner or operator of the source can demonstrate that emission data for the source for 1985 or 1986 was submitted to the Administrator pursuant to an information request issued under section 114 of the Act and was received by the Administrator prior to November 15, 1990;

(2) The best available data accounting for actual emissions, during the base year, of all hazardous air pollutants from each emission point listed in the source in paragraph (b)(2) of this section;

(3) The supporting basis for each emission number provided in paragraph (c)(2) of this section including:

(i) For test results submitted as the supporting basis, a description of the test protocol followed, any problems encountered during the testing, and a discussion of the validity of the method for measuring the subject emissions; and

(ii) For calculations based on emission factors, material balance, or engineering principles and submitted as the supporting basis, a step-by-step description of the calculations, including assumptions used and their bases, and a brief rationale for the validity of the calculation method used; and

(4) Evidence that the emissions provided under paragraph (c)(2) of this section are not artificially or substantially greater than emissions in other years prior to implementation of emission reduction measures.

(d) An owner or operator shall establish post-reduction emissions by providing the following information:

(1) For the emission points listed in the source in paragraph (b)(2) of this section, a description of all control measures employed to achieve the emission reduction required by § 63.72(a)(1);

(2) The best available data on an annual basis accounting for actual emissions, after the base year and following employment of emission reduction measures, of all hazardous air pollutants from each emission point in the source listed in paragraph (b)(2) of this section;

(3) The supporting basis for each emission number provided in paragraph (d)(2) of this section including:

(i) For test results submitted as the supporting basis, a description of the test protocol followed, any problems encountered during the testing, and a discussion of the validity of the method for measuring the subject emissions; and

(ii) For calculations based on emission factors, material balance, or engineering principles and submitted as the supporting basis, a step-by-step description of the calculations, including assumptions used and their bases, and a brief rationale for the validity of the calculation method used;

(4) Evidence that all emission reductions used for the early reductions demonstration were achieved prior to proposal of an applicable standard issued under section 112(d) of the Act or, for sources subject to enforceable commitments, prior to January 1, 1994; and

(5) Evidence that there was no increase in radionuclide emissions from the source.

(e)(1) An owner or operator shall demonstrate that both total base year emissions and total base year emissions adjusted for high-risk pollutants, as applicable, have been reduced by at least 90 percent for gaseous hazardous air pollutants emitted and 95 percent for particulate hazardous air pollutants emitted by determining the following for gaseous and particulate emissions separately:

(i) Total base year emissions, calculated by summing all base year emission data from paragraph (c)(2) of this section;

(ii) Total post-reduction emissions, calculated by summing all post-reduction emission data from paragraph (d)(2) of this section;

(iii) (If applicable) Total base year emissions adjusted for high-risk pollutants, calculated by multiplying each emission number for a pollutant from paragraph (c)(2) of this section by the appropriate weighting factor for the pollutant from Table 1 in paragraph (f) of this section and then summing all weighted emission data;

(iv) (If applicable) Total post-reduction emissions adjusted for high-risk pollutants, calculated by

multiplying each emission number for a pollutant from paragraph (d)(2) of this section by the appropriate weighting factor for the pollutant from Table 1 and then summing all weighted emission data; and

(v) Percent reductions, calculated by dividing the difference between base year and post-reduction emissions by the base year emissions. Separate demonstrations are required for total gaseous and particulate emissions, and total gaseous and particulate emissions adjusted for high-risk pollutants.

(2) If any points in the source emit both particulate and gaseous pollutants, as an alternative to the demonstration required in paragraph (e)(1) of this section, an owner or operator may demonstrate:

(i) A weighted average percent reduction for all points emitting both particulate and gaseous pollutants where the weighted average percent reduction is determined by

$$\%_w = \frac{0.9(\sum M_g) + 0.95(\sum M_p)}{\sum M_g + \sum M_p} X\ 100$$

where $\%_w$=the required weighted percent reduction

ΣM_g=the total mass rate (e.g., kg/yr) of all gaseous emissions

ΣM_p=the total mass rate of all particulate emissions and,

(ii) The reductions required in paragraph (e)(1) of this section for all other points in the source.

(f) If lower rates or hours are used to achieve all or part of the emission reduction, any hazardous air pollutant emissions that occur from a compensating increase in rates or hours from the same activity elsewhere within the plant site which contains the source shall be counted in the post-reduction emissions from the source. If emission reductions are achieved by shutting down process equipment and the shutdown equipment is restarted or replaced anywhere within the plant site, any hazardous air pollutant emissions from the restarted or replacement equipment shall be counted in the post-reduction emissions for the source.

TABLE 1. LIST OF HIGH-RISK POLLUTANTS

CAS No.	Chemical	Weighting factor
53963	2-Acetylaminofluorene	100
107028	Acrolein	100
79061	Acrylamide	10
79107	Acrylic acid	10
107131	Acrylonitrile	10
0	Arsenic compounds	100
1332214	Asbestos	100
71432	Benzene	10
92875	Benzidine	1000
0	Beryllium compounds	10
542881	Bis(chloromethyl) ether	1000
106990	1,3-Butadiene	10
0	Cadmium compounds	10
57749	Chlordane	100
532274	2-Chloroacetophenone	100
0	Chromium compounds	100
107302	Chloromethyl methyl ether.	10
0	Coke oven emissions	10
334883	Diazomethane	10
132649	Dibenzofuran	10
96128	1,2-Dibromo-3-chloropropane.	10
111444	Dichloroethyl ether (Bis(2-chloroethyl) ether).	10
79447	Dimethylcarbamoyl chloride.	100
122667	1,2-Diphenylhydrazine	10
106934	Ethylene dibromide	10
151564	Ethylenimine (Aziridine)	100
75218	Ethylene oxide	10
76448	Heptachlor	100
118741	Hexachlorobenezene	100
77474	Hexachlorocyclopentadiene.	100
302012	Hydrazine	100
0	Manganese compounds	10
0	Mercury compounds	100
101688	Methylene diphenyl diisocyanate (MDI).	10
60344	Methyl hydrazine	10
624839	Methyl isocyanate	10
0	Nickel compounds	10
62759	N-Nitrosodimethylamine	100
684935	N-Nitroso-N-methylurea	1000
56382	Parathion	10
75445	Phosgene	10
7803512	Phosphine	10
7723140	Phosphorus	10
75558	1,2-Propylenimine	100
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin.	100,000
8001352	Toxaphene (chlorinated camphene).	100
75014	Vinyl chloride	10

(g) The best available data representing actual emissions for the purpose of establishing base year or post-reduction emissions under this section shall consist of documented results from source tests using an EPA Reference Method, EPA Conditional Method, or the owner's or operator's source test method which has been validated pursuant to Method 301 of appendix A of this part. However, if one of the following conditions exists, an owner or operator may submit, in lieu of results from source tests, calculations based on engineering principles, emission factors, or material balance data as actual emission data for establishing base year or post-reduction emissions:

(1) No applicable EPA Reference Method, EPA Conditional Method, or other source test method exists;

(2) It is not technologically or economically feasible to perform source tests;

(3) It can be demonstrated to the satisfaction of the reviewing agency that the calculations will provide emission estimates of accuracy comparable to that of any applicable source test method;

(4) For base year emission estimates only, the base year conditions no longer exist at an emission point in the source and emission data could not be produced for such an emission point, by performing source tests under currently existing conditions and converting the test results to reflect base year conditions, that is more accurate than an estimate produced by using engineering principles, emission factors, or a material balance; or

(5) The emissions from one or a set of emission points in the source are small compared to total source emissions and potential errors in establishing emissions from such points will not have a significant effect on the accuracy of total emissions established for the source.

(h) For base year or post-reduction emissions established under this section that are not supported by source test data, the source owner or operator shall include the reason source testing was not performed.

(i) In cases where emission control measures have been employed less than a year prior to demonstrating emission reductions under this section, an owner or operator shall extrapolate post-reduction emission rate data to an annual basis and shall describe the extrapolation method as part of the supporting basis required under paragraph (d) of this section.

(j) The EPA average emission factors for equipment leaks cannot be used under this subpart to establish base year emissions for equipment leak sources, unless the base year emission number calculated using the EPA average emission factors for equipment leaks also is used as the post-reduction emission number for equipment leaks from the source.

(k) A source owner or operator shall not establish base year or post-reduction emissions that include any emissions from the source exceeding allowable emission levels specified in any applicable law, regulation, or permit condition.

(l) For sources subject to paragraph (b)(3)(i) of this section, an owner or operator shall document total base year emissions from an entire contiguous plant site under common control by providing the information required pursuant to paragraphs (b)(2), (c)(2), and (e)(1)(i) of this section for all hazardous

air pollutants from all emission points in the contiguous plant site under common control.

(m) If a new pollutant is added to the list of hazardous air pollutants or high-risk pollutants, any source emitting such pollutant will not be required to revise an early reduction demonstration pursuant to this section if:

(1) Alternative emission limits have previously been specified by permit for the source as provided for in § 63.72(a); or

(2) The base year emissions submitted in an enforceable commitment have previously been approved by the reviewing agency.

§ 63.75 Enforceable commitments.

(a) To make an enforceable commitment an owner or operator shall submit a commitment to achieve the early reductions required under § 63.72(a)(1) to the appropriate EPA Regional Office and a copy of the commitment to the appropriate State, except that the commitment shall be submitted to the State and a copy to the EPA Regional Office if the State has an approved permitting program under Title V of the Act. A copy shall also be submitted to both the EPA Stationary Source Compliance Division (EN–341W), 401 M Street, SW., Washington, DC 20460 and the EPA Emission Standards Division (MD–13), Research Triangle Park, NC 27711; attention both to the Early Reductions Officer. The commitment shall contain:

(1) The name and address of the source;

(2) The name and telephone number of the source owner or operator or other responsible official who can be contacted concerning the commitment;

(3) An alternative mailing address if correspondence is to be directed to a location other than that given in paragraph (a)(1) of this section;

(4) All information specified in § 63.74(b), (c) and (e)(1)(i), which defines and describes the source and establishes the base year hazardous air pollutant emissions from the source;

(5) The general plan for achieving the required hazardous air pollutant emissions reductions at the source including descriptions of emission control equipment to be employed, process changes or modifications to be made, and any other emission reduction measures to be used; and

(6) A statement of commitment, signed by a responsible official of the source, containing the following:

(i) A statement providing the post-reduction emission levels for total hazardous air pollutants and high-risk pollutants, as applicable, from the source on an annual basis which reflect a 90 percent (95 percent for particulate pollutants) reduction from base year emissions;

(ii) A statement certifying that the base year emission data submitted as part of the enforceable commitment constitute the best available data for base year emissions from the source, are correct to the best of the responsible official's knowledge, and are within allowable levels specified in any applicable law, regulation, or permit;

(iii) A statement that it is understood by the source owner or operator that submission of base year emissions constitutes a response to an EPA request under the authority of section 114 of the Act and that the commitment is subject to enforcement according to § 63.80; and

(iv) A statement committing the source owner or operator to achieving the emission levels, listed in paragraph (a)(6), (i) of this section, at the source before January 1, 1994.

(b) The following language may be used to satisfy the requirements of paragraphs (a)(6)(ii) through (a)(6)(iv) of this section:

I certify to the best of my knowledge that the base year emissions given above are correct and constitute the best available data for base year emissions from the source, and acknowledge that these estimates are being submitted in response to an EPA request under section 114 of the Act. I further certify that the base year emissions provided for all emission points in the source do not exceed allowable emission levels specified in any applicable law, regulation, or permit condition. I commit to achieve before January 1, 1994, the stated post-reduction emission level(s) at the source, which will provide the 90 (95) percent reduction required to qualify for the compliance extension, and acknowledge that this commitment is enforceable as specified in title 40, part 63, subpart D, of the Code of Federal Regulations.

(c) A commitment for a source shall be submitted prior to proposal of an applicable standard issued under section 112(d) of the Act. Commitments received after the proposal date shall be void.

(d) If test results for one or more emission points in a source are required to support base year emissions in an enforceable commitment but are not available prior to proposal of an applicable standard issued under section 112(d) of the Act, the test results may be submitted after the enforceable commitment is made but no later than 180 days after proposal of an applicable standard. In such cases, the enforceable commitment shall contain the best substitute emission data for the points in the source for which test results will be submitted later.

(e) An owner or operator may rescind such a commitment prior to December 1, 1993 without penalty and forfeit the opportunity to obtain a six year compliance extension under this subpart.

(Approved by the Office of Management and Budget under control number 2060–0222)

§ 63.76 Review of base year emissions.

(a) Pursuant to the procedures of this section, the appropriate reviewing agency shall review and approve or disapprove base year emission data submitted in an enforceable commitment under § 63.75 or in a request letter from an applicant that wishes to participate in the early reduction program but who is not required to submit an enforceable commitment. For review requests submitted to a State agency as the appropriate reviewing agency, a copy of the request also shall be submitted to the applicable EPA Regional Office. For review requests submitted to the EPA Regional Office as the appropriate reviewing agency, a copy of the request also shall be sent to the applicable State agency. Copies also shall be submitted to the EPA Stationary Source Compliance Division (EN–341W), 401 M Street, SW., Washington, DC 20460 and the EPA Emission Standards Division (MD–13), Research Triangle Park, NC 27711; to the attention of the Early Reductions Officer.

(b) Within 30 days of receipt of an enforceable commitment or base year emission data, the reviewing agency shall advise the applicant that:

(1) The base year emission data are complete as submitted; or

(2) The base year emission data are not complete and include a list of deficiencies that must be corrected before review can proceed.

(c) EPA will publish a notice in the Federal Register which contains a list, accumulated for the previous month, of the sources for which complete base year emission data have been submitted and which are undergoing review either in the EPA Regional Office or a State agency within the EPA region. The notice will contain the name and location of each source and a contract in the EPA Regional Office for additional information.

(d) Within 60 days of a determination that a base year emission data submission is complete, the reviewing agency shall evaluate the adequacy of the submission with respect to the requirements of § 63.74 (b) and (c) and either:

(1) Determine to approve the submission and publish a notice in a newspaper of general circulation in the

area where the source is located or in a State publication designed to give general public notice, providing the aggregate base year emission data for the source and the rationale for the proposed approval, noting the availability of the nonconfidential information contained in the submission for public inspection in at least one location in the community in which the source is located, providing for a public hearing upon request by an interested party, and establishing a 30 day public comment period that can be extended to 60 days upon request by an interested party; or

(2) Determine to disapprove the base year emission data and give notice to the applicant of the reasons for the disapproval. An applicant may correct disapproved base year data and submit revised data for review in accordance with this subsection, except that the review of a revision shall be accomplished within 30 days.

(e) If no adverse public comments are received by the reviewing agency on proposed base year data for a source, the data shall be considered approved at the close of the public comment period and a notice of the approval shall be sent to the applicant and published by the reviewing agency by advertisement in the area affected.

(f) If adverse comments are received and the reviewing agency agrees that corrections are needed, the reviewing agency shall give notice to the applicant of the disapproval and reasons for the disapproval. An applicant may correct disapproved base year emission data and submit revised emission data. If a revision is submitted by the applicant that, to the satisfaction of the reviewing agency, takes into account the adverse comments, the reviewing agency will publish by advertisement in the area affected a notice containing the approved base year emission data for the source and send notice of the approval to the applicant.

(g) If adverse comments are received and the reviewing agency determines that the comments do not warrant changes to the base year emission data, the reviewing agency will publish by advertisement in the area affected a notice containing the approved base year emission data for the source and the reasons for not accepting the adverse comments. A notice of the approval also shall be sent to the applicant.

(h) If an applicant submits revised emission data under paragraph (d)(2) or (f) of this section for a source subject to an enforceable commitment, the applicant also shall submit an amended enforceable commitment which takes into account the revised base year emissions.

(i) If revised base year emission data are not submitted or notice of intent to submit revised data is not provided to the permitting authority by an applicant within 90 days of receiving adverse comments or a notice of disapproved base year emission data for a source that is subject to an enforceable commitment, the enforceable commitment shall be considered withdrawn and a notice to that effect shall be sent by the reviewing agency to the applicant.

§ 63.77 Application procedures.

(a) To apply for an alternative emission limitation under § 63.72, an owner or operator of the source shall file a permit application with the appropriate permitting authority.

(b) The permit application shall contain a demonstration of early reduction for the source as prescribed in § 63.74 and the additional information required for a complete permit application as specified by the State's permitting program approved under title V of the Act.

(c) Permit applications under this section for sources not subject to enforceable commitments shall be submitted by the later of the following dates:

(1) The date of proposal of an otherwise applicable standard issued under section 112(d) of the Act; or

(2) 120 days after approval of a State permit program under title V of the Act.

(d) Permit applications for sources subject to enforceable commitments pursuant to § 63.75 shall be submitted no later than December 1, 1993.

(e) If a source test is the supporting basis for establishing post-reduction emissions for one or more emission points in the source but the test results are not available by the deadline for submittal of a permit application according to paragraph (c) of this section, the owner or operator shall provide the supporting basis no later than 120 days after the applicable deadline for submittal of the permit application or no later than March 31, 1994 for sources subject to an enforceable commitment.

(f) Review and disposition of permit applications submitted under this section will be accomplished according to regulations in 40 CFR part 70.

§ 63.78 Early reduction demonstration evaluation.

(a) The permitting authority will evaluate an early reduction demonstration submitted by the source owner or operator in a permit application with respect to the requirements of § 63.74.

(b) An application for a compliance extension may be denied if, in the judgement of the permitting authority, the owner or operator has failed to demonstrate that the requirements of § 63.74 have been met. Specific reasons for denial include, but are not limited to:

(1) The information supplied by the owner or operator is incomplete;

(2) The required 90 percent reduction (95 percent in cases where the hazardous air pollutant is particulate matter) has not been demonstrated;

(3) The base year or post-reduction emissions are incorrect, based on methods or assumptions that are not valid, or not sufficiently reliable or well documented to determine with reasonable certainty that required reductions have been achieved; or

(4) The emission of hazardous air pollutants or the performance of emission control measures is unreliable so as to preclude determination that the required reductions have been achieved or will continue to be achieved during the extension period.

§ 63.79 Approval of applications.

(a) If an early reduction demonstration is approved and other requirements for a complete permit application are met, the permitting authority shall establish by a permit issued pursuant to title V of the Act enforceable alternative emissions limitations for the source reflecting the reduction which qualified the source for the extension. However, if it is not feasible to prescribe a numerical emissions limitation for one or more emission points in the source, the permitting authority shall establish such other requirements, reflecting the reduction which qualified the source for an extension, in order to assure the source achieves the 90 percent or 95 percent reduction, as applicable.

(b) An alternative emissions limitation or other requirement prescribed pursuant to paragraph (a) of this section shall be effective and enforceable immediately upon issuance of the permit for the source and shall expire exactly six years after the compliance date of an otherwise applicable standard issued pursuant to section 112(d) of the Act.

§ 63.80 - Enforcement.

(a) All base year or post-reduction emissions information described in § 63.74 and required to be submitted as part of a permit application under § 63.77 or an enforceable commitment under § 63.75 shall be considered to

have been requested by the Administrator under the authority of section 114 of the Act.

(b) Fraudulent statements contained in any base year or post-reduction emissions submitted to a State or EPA Regional Office under this subpart shall be considered violations of section 114 of the Act and of this subpart and, thus, actionable under section 113 of the Act and can be considered, in appropriate cases, violations of 18 U.S.C. 1001, the general false swearing provision of the United States Code.

(c) If a source subject to an enforceable commitment fails to achieve reductions before January 1, 1994, sufficient to qualify the source for an extension under this subpart, the source shall be considered to be in violation of the commitment and shall be subject to enforcement action under section 113 of the Act.

(d) If an early reduction demonstration in a permit application filed under § 63.77 is disapproved for a source not subject to an enforceable commitment, the owner or operator shall comply with an applicable standard issued under section 112(d) of the Act by the compliance date specified in such standard.

(e) If an early reduction demonstration in a permit application filed under § 63.77 is disapproved for a source that is subject to an enforceable commitment, the owner or operator shall comply with an applicable standard issued under section 112(d) of the Act by the compliance date specified in such standard and will be subject to enforcement action under section 113 of the Act.

(f) A violation of an alternative emission limitation or other requirement established by permit under § 63.79 (a) or (b) for the source is enforceable pursuant to the authority of section 113 of the Act notwithstanding any demonstration of continuing 90 percent (95 percent for hazardous air pollutants which are particulates) emission reduction over the entire source.

§ 63.81 Rules for special situations.

(a) If more than one standard issued under section 112(d) of the Act would be applicable to a source as defined under § 63.73, then the date of proposal referred to in § § 63.72(a)(2), 63.72(c), 63.74(d)(4), 63.75(c), and 63.77(c) is the date the first applicable standard is proposed.

(b) Sources emitting radionuclides are not required to reduce radionuclides by 90 (95) percent. Radionuclides may not be increased from the source as a result of the early reductions demonstration.

Appendix A to Part 63—Test Methods

Method 301—Field Validation of Pollutant Measurement Methods from Various Waste Media

1. Applicability and principle

1.1 *Applicability.* This method, as specified in the applicable subpart, is to be used whenever a source owner or operator (hereafter referred to as an "analyst") proposes a test method to meet a U.S. Environmental Protection Agency (EPA) requirement in the absence of a validated method. This Method includes procedures for determining and documenting the quality, i.e., systematic error (bias) and random error (precision), of the measured concentrations from an effected source. This method is applicable to various waste media (i.e., exhaust gas, wastewater, sludge, etc.).

1.1.1 If EPA currently recognizes an appropriate test method or considers the analyst's test method to be satisfactory for a particular source, the Administrator may waive the use of this protocol or may specify a less rigorous validation procedure. A list of validated methods may be obtained by contacting the Emission Measurement Technical Information Center (EMTIC), Mail Drop 19, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, (919) 541–0200. Procedures for obtaining a waiver are in Section 12.0.

1.1.2 This method includes optional procedures that may be used to expand the applicability of the proposed method. Section 7.0 involves ruggedness testing (Laboratory Evaluation), which demonstrates the sensitivity of the method to various parameters. Section 8.0 involves a procedure for including sample stability in bias and precision for assessing sample recovery and analysis times; Section 9.0 involves a procedure for the determination of the practical limit of quantitation for determining the lower limit of the method. These optional procedures are required for the waiver consideration outlined in Section 12.0.

1.2 *Principle.* The purpose of these procedures is to determine bias and precision of a test method at the level of the applicable standard. The procedures involve (a) introducing known concentrations of an analyte or comparing the test method against a validated test method to determine the method's bias and (b) collecting multiple or collocated simultaneous samples to determine the method's precision.

1.2.1 *Bias.* Bias is established by comparing the method's results against a reference value and may be eliminated by employing a correction factor established from the data obtained during the validation test. An offset bias may be handled accordingly. Methods that have bias correction factors outside 0.7 to 1.3 are unacceptable. Validated method to proposed method comparisons, section 6.2, requires a more restrictive test of central tendency and a lower correction factor allowance of 0.90 to 1.10.

1.2.2 *Precision.* At the minimum, paired sampling systems shall be used to establish precision. The precision of the method at the level of the standard shall not be greater than 50 percent relative standard deviation. For a validated method to proposed method equivalency comparisons, section 6.2, the analyst must demonstrate that the precision of the proposed test method is as precise as the validated method for acceptance.

2. Definitions

2.1 *Negative bias.* Bias resulting when the measured result is less than the "true" value.

2.2 *Paired sampling system.* A sampling system capable of obtaining two replicate samples that were collected as closely as possible in sampling time and sampling location.

2.3 *Positive bias.* Bias resulting when the measured result is greater than the "true" value.

2.4 *Proposed method.* The sampling and analytical methodology selected for field validation using the method described herein.

2.5 *Quadruplet sampling system.* A sampling system capable of obtaining four replicate samples that were collected as closely as possible in sampling time and sampling location.

2.6 *Surrogate compound.* A compound that serves as a model for the types of compounds being analyzed (i.e., similar chemical structure, properties, behavior). The model can be distinguished by the method from the compounds being analyzed.

3. Reference Material

The reference materials shall be obtained or prepared at the level of the standard. Additional runs with higher and lower reference material concentrations may be made to expand the applicable range of the method, in accordance with the ruggedness test procedures.

3.1 *Exhaust Gas Tests.* The analyst shall obtain a known concentration of the reference material (i.e., analyte of concern) from an independent source such as a specialty gas manufacturer, specialty chemical company, or commercial laboratory. A list of vendors may be obtained from EMTIC (see Section 1.1.1). The analyst should obtain the manufacturer's stability data of the analyte concentration and recommendations for recertification.

3.2 *Other Waste Media Tests.* The analyst shall obtain pure liquid components of the reference materials (i.e., analytes of concern) from an independent manufacturer and dilute them in the same type matrix as the source waste. The pure reference materials shall be certified by the manufacturer as to purity and shelf life. The accuracy of all diluted reference material concentrations shall be verified by comparing their response to independently-prepared materials (independently prepared in this case means prepared from pure components by a different analyst).

3.3 *Surrogate Reference Materials.* The analyst may use surrogate compounds, e.g., for highly toxic or reactive organic compounds, provided the analyst can demonstrate to the Administrator's satisfaction that the surrogate compound behaves as the analyte. A surrogate may be an isotope or one that contains a unique element (e.g., chlorine) that is not present in the source or a derivation of the toxic or reactive compound, if the derivative formation is part of the method's procedure.

Laboratory experiments or literature data may be used to show behavioral acceptability.

3.4 *Isotopically Labeled Materials.* Isotope mixtures may contain the isotope and the natural analyte. For best results, the isotope labeled analyte concentration should be more than five times the natural concentration of the analyte.

4. EPA Performance Audit Material

4.1 To assess the method bias independently, the analyst shall use (in addition to the reference material) an EPA performance audit material, if it is available. The analyst may contact EMTIC (see section 1.1.1) to receive a list of currently available EPA audit materials. If the analyte is listed, the analyst should request the audit material at least 30 days before the validation test. If an EPA audit material is not available, request documentation from the validation report reviewing authority that the audit material is currently not available from EPA. Include this documentation with the field validation report.

4.2 The analyst shall sample and analyze the performance audit sample three times according to the instructions provided with the audit sample. The analyst shall submit the three results with the field validation report. Although no acceptance criteria are set for these performance audit results, the analyst and reviewing authority may use them to assess the relative error of sample recovery, sample preparation, and analytical procedures and then consider the relative error in evaluating the measured emissions.

5. Procedure for Determination of Bias and Precision in the Field

The analyst shall select one of the sampling approaches below to determine the bias and precision of the data. After analyzing the samples, the analyst shall calculate the bias and precision according to the procedure described in section 6.0. When sampling a stationary source, follow the probe placement procedures in section 5.4.

5.1 *Isotopic Spiking.* This approach shall be used only for methods that require mass spectrometry (MS) analysis. Bias and precision are calculated by procedures described in section 6.1.

5.1.1 *Number of Samples and Sampling Runs.* Collect a total of 12 replicate samples by either obtaining six sets of paired samples or three sets of quadruplet samples.

5.1.2 *Spiking Procedure.* Spike all 12 samples with the reference material at the level of the standard. Follow the appropriate spiking procedures listed below for the applicable waste medium.

5.1.2.1 *Exhaust Gas Testing.* The spike shall be introduced as close to the tip of the sampling probe as possible.

5.1.2.1.1 *Gaseous Reference Material with Sorbent or Impinger Sampling Trains.* Sample the reference material (in the laboratory or in the field) at a concentration which is close to the allowable concentration standard for the time required by the method, and then sample the gas stream for an equal amount of time. The time for sampling both the reference material and gas stream should be equal; however, the time should be adjusted to avoid sorbent breakthrough.

5.1.2.1.2 *Gaseous Reference Material with Sample Container (Bag or Canister).* Spike the sample containers after completion of each test run with an amount equal to the allowable concentration standard of the emission point. The final concentration of the reference material shall approximate the level of the emission concentration in the stack. The volume amount of reference material shall be less than 10 percent of the sample volume.

5.1.2.1.3 *Liquid and Solid Reference Material with Sorbent or Impinger Trains.* Spike the trains with an amount equal to the allowable concentration standard before sampling the stack gas. The spiking should be done in the field; however, it may be done in the laboratory.

5.1.2.1.4 *Liquid and Solid Reference Material with Sample Container (Bag or Canister).* Spike the containers at the completion of each test run with an amount equal to the level of the emission standard.

5.1.2.2 *Other Waste Media.* Spike the 12 replicate samples with the reference material either before or directly after sampling in the field.

5.2 *Comparison Against a Validated Test Method.* Bias and precision are calculated using the procedures described in section 6.2. This approach shall be used when a validated method is available and an alternative method is being proposed.

5.2.1 *Number of Samples and Sampling Runs.* Collect nine sets of replicate samples using a paired sampling system (a total of 18 samples) or four sets of replicate samples using a quadruplet sampling system (a total of 16 samples). In each sample set, the validated test method shall be used to collect and analyze half of the samples.

5.2.2 *Performance Audit Exception.* Conduct the performance audit as required in section 4.0 for the validated test method. Conducting a performance audit on the test method being evaluated is recommended.

5.3 *Analyte Spiking.* This approach shall be used when sections 5.1 and 5.2 are not applicable. Bias and precision are calculated using the procedures described in Section 6.3.

5.3.1 *Number of Samples and Sampling Runs.* Collect a total of 24 samples using the quadruplet sampling system (a total of 6 sets of replicate samples).

5.3.2 In each quadruplet set, spike half of the samples (two out of the four) with the reference material according to the applicable procedure in section 5.1.2.1 or 5.1.2.2.

5.4 *Probe Placement and Arrangement for Stationary Source Stack or Duct Sampling.* The probes shall be placed in the same horizontal plane. For paired sample probes the arrangement should be that the probe tip is 2.5 cm from the outside edge of the other with a pitot tube on the outside of each probe. Other paired arrangements for the pitot tube may be acceptable. For quadruplet sampling probes, the tips should be in a 6.0 cm × 6.0 cm square area measured from the center line of the opening of the probe tip with a single pitot tube in the center or two pitot tubes with their location on either side of the probe tip configuration. An alternative arrangement should be proposed whenever the cross-sectional area of the probe tip configuration is approximately 5 percent of the stack or duct cross-sectional area.

6 Calculations

Data resulting from the procedures specified in section 5.0 shall be treated as follows to determine bias, correction factors, relative standard deviations, precision, and data acceptance.

6.1 *Isotopic Spiking.* Analyze the data for isotopic spiking tests as outlined in sections 6.1.1 through 6.1.6.

6.1.1 Calculate the numerical value of the bias using the results from the analysis of the isotopically spiked field samples and the calculated value of the isotopically labeled spike:

$$B = CS - S_m \qquad \text{Eq. 301-1}$$

where:

B=Bias at the spike level.

S_m=Mean of the measured values of the isotopically spiked samples.

CS=Calculated value of the isotopically labeled spike.

6.1.2 Calculate the standard deviation of the S_i values as follows:

$$SD = \sqrt{\frac{\sum (S_i - S_m)^2}{(n-1)}}$$

Eq. 301-2

where:

S_i=Measured value of the isotopically labeled analyte in the ith field sample,

n=Number of isotopically spiked samples, 12.

6.1.3. Calculate the standard deviation of the mean (SDM) as follows:

$$SDM = \frac{SD}{\sqrt{n}}$$

Eq. 301-3

$$t = \frac{|B|}{SDM}$$

6.1.4 Test the bias for statistical significance by calculating the t-statistic, Eq. 301-4

and compare it with the critical value of the two-sided t-distribution at the 95-percent confidence level and n-1 degrees of freedom. This critical value is 2.201 for the eleven degrees of freedom when the procedure specified in section 5.1.2 is followed. If the calculated t-value is greater than the critical value the bias is statistically significant and the analyst should proceed to evaluate the correction factor.

6.1.5 *Calculation of a Correction Factor.* If the t-test does not show that the bias is statistically significant, use all analytical results without correction and proceed to the precision evaluation. If the method's bias is

statistically significant, calculate the correction factor, CF, using the following equation:

$$CF = \frac{1}{1 \pm \frac{B}{CS}}$$

Eq. 301–5

If the CF is outside the range of 0.70 to 1.30, the data and method are considered unacceptable. For correction factors within the range, multiply all analytical results by the CF to obtain the final values.

6.1.6 *Calculation of the Relative Standard Deviation (Precision).* Calculate the relative standard deviation as follows:

$$RSD = \left(\frac{SD}{S_m}\right) \times 100$$

Eq. 301–6

where S_m is the measured mean of the isotopically labeled spiked samples.

6.2 *Comparison with Validated Method.* Analyze the data for comparison with a validated method as outlined in sections 6.2.1 or 6.2.2, as appropriate. Conduct these procedures in order to determine if a proposed method produces results equivalent to a validated method. Make all necessary bias corrections for the validated method, as appropriate. If the proposed method fails either test, the method results are unacceptable, and conclude that the proposed method is not as precise or accurate as the validated method. For highly variable sources, additional precision checks may be necessary. The analyst should consult with the Administrator if a highly variable source is suspected.

6.2.1 *Paired Sampling Systems.*

6.2.1.1 *Precision.* Determine the acceptance of the proposed method's variance with respect to the variability of the validated method results. If a significant difference is determined, the proposed method and the results are rejected. Proposed methods demonstrating F-values equal to or less than the critical value have acceptable precision.

6.2.1.2 Calculate the variance of the proposed method, S_p^2, and the variance of the validated method, S_v^2, using the following equation:

$S_{(p \text{ or } v)}^2 = SD^2$ Eq. 301–7

where:

SD_v=Standard deviation provided with the validated method,

SD_p=Standard deviation of the proposed method calculated using Equation 301–9a.

6.2.1.3 *The F-test.* Determine if the variance of the proposed method is significantly different from that of the validated method by calculating the F-value using the following equation:

$$F = \frac{S_p^2}{S_v^2}$$

Eq. 301–8

Compare the experimental F-value with the critical value of F. The critical value is 1.0 when the procedure specified in section 5.2.1 for paired trains is followed. If the calculated F is greater than the critical value, the difference in precision is significant and the data and proposed method are unacceptable.

6.2.1.4 *Bias Analysis.* Test the bias for statistical significance by calculating the t-statistic and determine if the mean of the differences between the proposed method and the validated method is significant at the 80-percent confidence level. This procedure requires the standard deviation of the validated method, SD_v, to be known. Employ the value furnished with the method. If the standard deviation of the validated method is not available, the paired replicate sampling procedure may not be used. Determine the mean of the paired sample differences, d_m, and the standard deviation, SD_d, of the differences, d_i's, using Equation 301–2 where: d_i replaces S_i, d_m replaces S_m. Calculate the standard deviation of the proposed method, SD_p, as follows:

$SD_p = SD_d / SD_v$ Eq. 301–9a

(If $SD_v > SD_d$, let $SD = SD_d / 1.414$).

Calculate the value of the t-statistic using the following equation:

$$t = \frac{d_m}{\left(\frac{SD_p}{\sqrt{n}}\right)}$$

Eq. 301–9

where n is the total number of paired samples. For the procedure in section 5.2.1, n equals nine. Compare the calculated t-statistic with the corresponding value from the table of the t-statistic. When nine runs are conducted, as specified in section 5.2.1, the critical value of the t-statistic is 1.397 for eight degrees of freedom. If the calculated t-value is greater than the critical value the bias is statistically significant and the analyst should proceed to evaluate the correction factor.

6.2.1.5 *Calculation of a Correction Factor.* If the statistical test cited above does not show a significant bias with respect to the reference method, assume that the proposed method is unbiased and use all analytical results without correction. If the method's bias is statistically significant, calculate the correction factor, CF, as follows:

$$CF = \frac{1}{\frac{d_m}{V_m} + 1}$$

Eq. 301–10

where V_m is the mean of the validated method's values.

Multiply all analytical results by CF to obtain the final values. The method results, and the method, are unacceptable if the correction factor is outside the range of 0.9 to 1.10.

6.2.2 *Quadruplet Replicate Sampling Systems.*

6.2.2.1 *Precision.* Determine the acceptance of the proposed method's variance with respect to the variability of the validated method results. If a significant difference is determined the proposed method and the results are rejected.

6.2.2.2 Calculate the variance of the proposed method, S_p^2, using the following equation:

$$S^2 = \frac{\sum d_i^2}{2n}$$

Eq. 301–11

where the d_i's are the differences between the validated method values and the proposed method values.

6.2.2.3 *The F-test.* Determine if the variance of the proposed method is more variable than that of the validated method by calculating the F-value using Equation 301–8. Compare the experimental F value with the critical value of F. The critical value is 1.0 when the procedure specified in section 5.2.2 for quadruplet trains is followed. The calculated F should be less than or equal to the critical value. If the difference in precision is significant the results and the proposed method are unacceptable.

6.2.2.4 *Bias Analysis.* Test the bias for statistical significance at the 80 percent confidence level by calculating the t-statistic. Determine the bias (mean of the differences between the proposed method and the validated method, d_m) and the standard deviation, SD_d, of the differences. Calculate the standard deviation of the differences, SD_d, using Equation 301–2 and substituting d_i for S_i. The following equation is used to calculate d_i:

$$d_i = \frac{(V_{1_i} + V_{2_i})}{2} - \frac{(P_{1_i} + P_{2_i})}{2}$$

Eq. 301–12

and: V_{1i}=First measured value of the validated method in the ith test sample.

P_{1i}=First measured value of the proposed method in the ith test sample.

Calculate the t-statistic using Equation 301–9 where n is the total number of test sample differences (d_i). For the procedure in section 5.2.2, n equals four. Compare the

calculated t-statistic with the corresponding value from the table of the t-statistic and determine if the mean is significant at the 80-percent confidence level. When four runs are conducted as specified in section 5.2.2, the critical value of the t-statistic is 1.638 for three degrees of freedom. If the calculated t-value is greater than the critical value the bias is statistically significant and the analyst should proceed to evaluate the correction factor.

6.2.2.5 *Correction Factor Calculation.* If the method's bias is statistically significant, calculate the correction factor, CF, using Equation 301–10. Multiply all analytical results by CF to obtain the final values. The method results, and the method, are unacceptable if the correction factor is outside the range of 0.9 to 1.10.

6.3 *Analyte Spiking.* Analyze the data for analyte spike testing as outlined in Sections 6.3.1 through 6.3.3.

6.3.1 *Precision.*

6.3.1.1 *Spiked Samples.* Calculate the difference, d_i, between the pairs of the spiked proposed method measurements for each replicate sample set. Determine the standard deviation (SD_s) of the spiked values using the following equation:

$$SD_s = \sqrt{\frac{\sum d_i^2}{2n}}$$

Eq. 301–13

where: n = Number of runs.

Calculate the relative standard deviation of the proposed spiked method using Equation 301–6 where S_m is the measured mean of the analyte spiked samples. The proposed method is unacceptable if the RSD is greater than 50 percent.

6.3.1.2 *Unspiked Samples.* Calculate the standard deviation of the unspiked values using Equation 301–13 and the relative standard deviation of the proposed unspiked method using Equation 301–6 where S_m is the measured mean of the analyte spiked samples. The RSD must be less than 50 percent.

6.3.2 *Bias.* Calculate the numerical value of the bias using the results from the analysis of the spiked field samples, the unspiked field samples, and the calculated value of the spike:

$$B = S_m - M_m - CS$$

Eq. 301–14

where: B = Bias at the spike level.
S_m = Mean of the spiked samples.
M_m = Mean of the unspiked samples.
CS = Calculated value of the spiked level.

6.3.2.1 Calculate the standard deviation of the mean using the following equation where SD_s and SD_u are the standard deviations of the spiked and unspiked sample values respectively as calculated using Equation 301–13.

$$SD = \sqrt{SD_s^2 + SD_u^2}$$

Eq. 301–15

6.3.2.2 Test the bias for statistical significance by calculating the *t*-statistic using Equation 301–4 and comparing it with the critical value of the two-sided *t*-distribution at the 95-percent confidence level and n-1 degrees of freedom. This critical value is 2.201 for the eleven degrees of freedom.

6.3.3 *Calculation of a Correction Factor.* If the t-test shows that the bias is not statistically significant, use all analytical results without correction. If the method's bias is statistically significant, calculate the correction factor using Equation 301–5. Multiply all analytical results by CF to obtain the final values.

7. Ruggedness Testing (Optional)

7.1 *Laboratory Evaluation.*

7.1.1 Ruggedness testing is a useful and cost-effective laboratory study to determine the sensitivity of a method to certain parameters such as sample collection rate, interferant concentration, collecting medium temperature, or sample recovery temperature. This Section generally discusses the principle of the ruggedness test. A more detailed description is presented in citation 10 of Section 13.0.

7.1.2 In a ruggedness test, several variables are changed simultaneously rather than one variable at a time. This reduces the number of experiments required to evaluate the effect of a variable. For example, the effect of seven variables can be determined in eight experiments rather than 128 (W.J. Youden, Statistical Manual of the Association of Official Analytical Chemists, Association of Official Analytical Chemists, Washington, DC, 1975, pp. 33–36).

7.1.3 Data from ruggedness tests are helpful in extending the applicability of a test method to different source concentrations or source categories.

8. Procedure for Including Sample Stability in Bias and Precision Evaluations

8.1 *Sample Stability.*

8.1.1 The test method being evaluated must include procedures for sample storage and the time within which the collected samples shall be analyzed.

8.1.2 This section identifies the procedures for including the effect of storage time in bias and precision evaluations. The evaluation may be deleted if the test method specifies a time for sample storage.

8.2 *Stability Test Design.* The following procedures shall be conducted to identify the effect of storage times on analyte samples. Store the samples according to the procedure specified in the test method. When using the analyte spiking procedures (section 5.3), the study should include equal numbers of spiked and unspiked samples.

8.2.1 Stack Emission Testing.

8.2.1.1 For sample container (bag or canister) and impinger sampling systems, sections 5.1 and 5.3, analyze six of the samples at the minimum storage time. Then analyze the same six samples at the maximum storage time.

8.2.1.2 For sorbent and impinger sampling systems, sections 5.1 and 5.3, that require extraction or digestion, extract or digest six of the samples at the minimum storage time and extract or digest six other samples at the maximum storage time. Analyze an aliquot of the first six extracts (digestates) at both the minimum and maximum storage times. This will provide some freedom to analyze extract storage impacts.

8.2.1.3 For sorbent sampling systems, sections 5.1 and 5.3, that require thermal desorption, analyze six samples at the minimum storage time. Analyze another set of six samples at the maximum storage time.

8.2.1.4 For systems set up in accordance with section 5.2, the number of samples analyzed at the minimum and maximum storage times shall be half those collected (8 or 9). The procedures for samples requiring extraction or digestion should parallel those in section 8.2.1.

8.2.2 *Other Waste Media Testing.* Analyze half of the replicate samples at the minimum storage time and the other half at the maximum storage time in order to identify the effect of storage times on analyte samples.

9. Procedure for Determination of Practical Limit of Quantitation (Optional)

9.1 *Practical Limit of Quantitation.*

9.1.1 The practical limit of quantitation (PLQ) is the lowest level above which quantitative results may be obtained with an acceptable degree of confidence. For this protocol, the PLQ is defined as 10 times the standard deviation, s_o, at the blank level. This PLQ corresponds to an uncertainty of ±30 percent at the 99-percent confidence level.

9.1.2 The PLQ will be used to establish the lower limit of the test method.

9.2 *Procedure I for Estimating s_o.* This procedure is acceptable if the estimated PLQ is no more than twice the calculated PLQ. If the PLQ is greater than twice the calculated PLQ use Procedure II.

9.2.1 Estimate the PLQ and prepare a test standard at this level. The test standard could consist of a dilution of the reference material described in section 3.0.

9.2.2 Using the normal sampling and analytical procedures for the method, sample and analyze this standard at least seven times in the laboratory.

9.2.3 Calculate the standard deviation, s_o, of the measured values.

9.2.4 Calculate the PLQ as 10 times s_o.

9.3 *Procedure II for Estimating s_o.* This procedure is to be used if the estimated PLQ is more than twice the calculated PLQ.

9.3.1 Prepare two additional standards at concentration levels lower than the standard used in Procedure I.

9.3.2 Sample and analyze each of these standards at least seven times.

9.3.3 Calculate the standard deviation for each concentration level.

9.3.4 Plot the standard deviations of the three test standards as a function of the standard concentrations.

9.3.5 Draw a best-fit straight line through the data points and extrapolate to zero concentration. The standard deviation at zero concentration is S_o.

9.3.6 Calculate the PLQ as 10 times S_o.

10.0 Field Validation Report Requirements

The field validation report shall include a discussion of the regulatory objectives for the

testing which describe the reasons for the test, applicable emission limits, and a description of the source. In addition, validation results shall include:

10.1 Summary of the results and calculations shown in section 6.0.

10.2 Reference material certification and value(s).

10.3 Performance audit results or letter from the reviewing authority stating the audit material is currently not available.

10.4 Laboratory demonstration of the quality of the spiking system.

10.5 Discussion of laboratory evaluations.

10.6 Discussion of field sampling.

10.7 Discussion of sample preparations and analysis.

10.8 Storage times of samples (and extracts, if applicable).

10.9 Reasons for eliminating any results.

11. Followup Testing

The correction factor calculated in section 6.0 shall be used to adjust the sample concentrations in all followup tests conducted at the same source. These tests shall consist of at least three replicate samples, and the average shall be used to determine the pollutant concentration. The number of samples to be collected and analyzed shall be as follows, depending on the validated method precision level:

11.1 Validated relative standard deviation (RSD) $\leq \pm 15$ Percent. Three replicate samples.

11.2 Validated RSD $\leq \pm 30$ Percent. Six replicate samples.

11.3 Validated RSD $\leq \pm 50$ Percent. Nine replicate samples.

11.4 Equivalent method. Three replicate samples.

12. Procedure for Obtaining a Waiver

12.1 *Waivers.* These procedures may be waived or a less rigorous protocol may be granted for site-specific applications. The following are three example situations for which a waiver may be considered.

12.1.1 *"Similar" Sources.* If the test method has been validated previously at a "similar" source, the procedures may be waived provided the requester can demonstrate to the satisfaction of the Administrator that the sources are "similar." The method's applicability to the "similar" source may be demonstrated by conducting a ruggedness test as described in section 6.0.

12.1.2 *"Documented" Methods.* In some cases, bias and precision may have been documented through laboratory tests or protocols different from this method. If the analyst can demonstrate to the satisfaction of the Administrator that the bias and precision apply to a particular application, the Administrator may waive these procedures or parts of the procedures.

12.1.3 *"Conditional" Test Methods.* When the method has been demonstrated to be valid at several sources, the analyst may seek a "conditional" method designation from the Administrator. "Conditional" method status provides an automatic waiver from the procedures provided the test method is used within the stated applicability.

12.2 *Application for Waiver.* In general, the requester shall provide a thorough description of the test method, the intended application, and results of any validation or other supporting documents. Because of the many potential situations in which the Administrator may grant a waiver, it is neither possible nor desirable to prescribe the exact criteria for a waiver. At a minimum, the requester is responsible for providing the following.

12.2.1 A clearly written test method, preferably in the format of 40 CFR part 60, appendix A Test Methods. The method must include an applicability statement, concentration range, precision, bias (accuracy), and time in which samples must be analyzed.

12.2.2 Summaries (see section 10.0) of previous validation tests or other supporting documents. If a different procedure from that described in this method was used, the requester shall provide appropriate documents substantiating (to the satisfaction of the Administrator) the bias and precision values.

12.2.3 Results of testing conducted with respect to sections 7.0, 8.0, and 9.0.

12.2.3 Discussion of the applicability statement and arguments for approval of the waiver. This discussion should address as applicable the following: Applicable regulation, emission standards, effluent characteristics, and process operations.

12.3 *Requests for Waiver.* Each request shall be in writing and signed by the analyst. Submit requests to the Director, OAQPS, Technical Support Division, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

13. Bibliography

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12. Youden, W.J. Statistical techniques for collaborative tests. In: Statistical Manual of the Association of Official Analytical Chemists, Association of Official Analytical Chemists, Washington, DC. 1975, pp. 33–36.

Appendix B to Part 63—Sources Defined for Early Reduction Provisions

Source	Location of definition
1. Organic Process Equipment in Volatile Hazardous Air Pollutant Service at Chemical Plants and Other Designated Facilities.	56 FR 9315, March 6, 1991, Announcement of Negotiated Rulemaking
a. All valves in gas or light liquid service within a process unit	
b. All pumps in light liquid service within a process unit	
c. All connectors in gas or light liquid service within a process unit	
d. Each compressor	
e. Each product accumulator vessel	
f. Each agitator	
g. Each pressure relief device	
Each open-ended valve or line	
i. Each sampling connection system	
j. Each instrumentation system	
k. Each pump, valve, or connector in heavy liquid service	
l. Each closed vent system and control device	

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Part II

Environmental Protection Agency

40 CFR Parts 9 and 63
National Emission Standards for Hazardous Air Pollutants for Source Categories: Perchloroethylene Dry Cleaning Facilities; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD–FRL–4732–9]

RIN 2060–AC27

National Emission Standards for Hazardous Air Pollutants for Source Categories: Perchloroethylene Dry Cleaning Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: National emission standards for hazardous air pollutants (NESHAP) for perchloroethylene (PCE) dry cleaning facilities were proposed in the Federal Register on December 9, 1991 (56 FR 64382). A notice of availability of new information on control of PCE emissions during clothing transfer at dry cleaning facilities that use transfer dry cleaning machines was published on October 1, 1992 (57 FR 45363). This action promulgates national emission standards for PCE dry cleaning facilities. These standards implement section 112 of the Clean Air Act (Act) and are based on the Administrator's determination that PCE is a hazardous air pollutant (HAP) and that emissions, ambient concentrations, bioaccumulation, or deposition of PCE are known to cause or may reasonably be anticipated to cause adverse effects to human health or the environment.

The intended effect of this NESHAP is to require all new and existing major source dry cleaning facilities (emitting or with the potential to emit greater than 9.1 megagrams (Mg) [10 tons] per year of PCE) to control emissions to the level of the maximum achievable control technology (MACT), as specified in section 112 of the Act.

The intended effect of this NESHAP is also to require all new and existing area source dry cleaning facilities (emitting or with the potential to emit 9.1 Mg [10 tons] per year or less of PCE) to control PCE emissions to the level achieved by generally available control technologies (GACT) or management practices.

EFFECTIVE DATE: September 22, 1993.

Judicial Review. Under section 307(b)(1) of the Act, judicial review of the actions taken by this notice is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

ADDRESSES: *Background Information Document.* The background information document (BID) for the promulgated standards may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone number (919) 541–2777. Please refer to "Dry Cleaning Facilities—Background Information for Promulgated Standards," EPA–450/3–91–020b. The BID contains: (1) A summary of the public comments made on the proposed NESHAP and the notice of availability of new information and the Administrator's response to the comments; (2) a summary of the changes made to the NESHAP since proposal; and (3) the final Environmental Impact Statement, which summarizes the impacts of the standards.

Docket. Docket No. A–88–11, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8:30 a.m. and 3:30 p.m., Monday through Friday, excluding Federal holidays, at the EPA's Air Docket (LE–131), Waterside Mall, room M1500, 1st Floor, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

Public Meeting. As discussed in more detail at the end of this preamble, in order to gain additional understanding of indoor air pollution, ground water contamination and solid waste generation resulting from dry cleaning facilities, the EPA will convene a public meeting at a place and time to be announced. Information also will be sought on the environmental impacts associated with the operation of wastewater evaporators. The objective of this public meeting will be to gather information on the magnitude of these problems, as well as potential solutions to these problems.

Individuals wishing to find out the date and location of the meeting or to speak at this public meeting should contact Ms. Julia Stevens at (919) 541–5578 by October 22, 1993. Individuals wishing to submit written comments in lieu of attending this public meeting should forward their comments by November 22, 1993 to: Mr. Bruce Jordan, Director; Emission Standards Division (MD–13); Environmental Protection Agency; Research Triangle Park, NC 27711.

FOR FURTHER INFORMATION CONTACT: For information concerning the standards, contact Mr. George Smith at (919) 541–1549 or Mr. Fred Porter at (919) 541–5251, Standards Development Branch, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The following outline is provided to aid in reading the preamble to the final rule.

I. Background
A. List of Categories and Subcategories
B. Source of Authority for National Emission Standards for Hazardous Air Pollutants
C. Criteria for Development of National Emission Standards for Hazardous Air Pollutants
D. Categorization/Subcategorization: Determining Maximum Achievable Control Technology "Floors" for NESHAP
E. Historical Development of the Standards
II. Summary
A. Summary of Promulgated Standards
B. Selection of Basis of Standards for New and Existing Sources—Selection of MACT or GACT
C. Selection of Format for the Final Rule
D. Summary of Changes Since Proposal
E. Potential to Emit
III. Summary of Environmental, Energy, and Economic Impacts
A. Affected Facilities
B. Air Impacts
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I. Background

A. List of Categories and Subcategories

The Act requires, under section 112, that the EPA evaluate and control emissions of HAP's. The control of HAP's is achieved through promulgation of emission standards under sections 112(d) and 112(f) for categories of sources that emit HAP's. Section 112(c)(3) directs the Administrator to list each category or subcategory of area sources which the Administrator finds "presents a threat of adverse effects to human health or the environment." Section 112(c)(3) also directs the Administrator to list within 5 years "sufficient categories or

subcategories of area sources to ensure that area sources representing 90 percent of the area source emissions of the 30 HAP's that present the greatest threat to public health in the largest number of urban areas are subject to regulation." Section 112(c)(1) directed the EPA to publish an initial list of major sources which emitted one or more of the listed 189 HAP's. As described in the proposal, (56 FR 64382, 64383 (December 9, 1991)), the EPA identified 5 categories of major or area sources of dry cleaners for regulation. These source categories were included in the initial section 112(c)(1) list published on July 16, 1992, (57 FR 31576) as follows:

Source Category and Subcategory
Industrial (major)—Dry-to-dry machines; Transfer machines.
Commercial (major)—Transfer machines.
Commercial (area)—Dry-to-dry machines; Transfer machines.

All sources in the industrial category are major sources. The industrial category has two basic types of machines: Dry-to-dry and transfer. A major source includes any source that emits or has the potential to emit, considering controls, in the aggregate, 9.1 Mg/yr (10 tpy) of any HAP (section 112(a)(1) of the Act). The EPA proposed that the industrial source category and those major sources under the commercial source category be regulated under MACT. The EPA also proposed that the commercial source category, which includes area sources, be listed under section 112(c)(3) for regulation under GACT.

B. Source of Authority for National Emission Standards for Hazardous Air Pollutants Development

Title III of the Act was enacted to help reduce the increasing amount of nationwide air toxics emissions. Under title III, section 112 was amended to give the EPA the authority to establish national standards to reduce air toxics from sources that emit one or more HAP. Section 112(b) contains a list of HAP's, which are the specific air toxics to be regulated by NESHAP. Section 112(c) directs the EPA to use this pollutant list to develop and publish a list of source categories for which a NESHAP will be developed. The EPA must list all known categories and subcategories of "major sources" (defined above) which emit one or more of the listed HAP's. Area source categories selected by the EPA for NESHAP development will be based on the Administrator's judgment that the sources in a category, individually or in aggregate, pose a "threat of adverse effects to health and the environment." As noted above, the initial section 112(c)(1) list of source categories was published on July 16, 1992 (57 FR 31576) and listed 5 source categories of dry cleaners (three major and two area).

C. Criteria for Development of National Emission Standards for Hazardous Air Pollutants

The NESHAP are to be developed to control HAP emissions from both new and existing sources according to the statutory directives set out in section 112. The statute requires the standards to reflect the maximum degree of reduction in emissions of HAP's that is achievable for new or existing sources. The NESHAP must reflect consideration of the cost of achieving the emission reduction, and any nonair quality health and environmental impacts, and energy requirements for control levels more stringent than the MACT floors (described below). The emission reduction may be accomplished through application of measures, processes, methods, systems or techniques including, but not limited to, measures which:

1. Reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications,
2. Enclose systems or processes to eliminate emissions,
3. Collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point,
4. Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in subsection (h), or
5. Are a combination of the above (section 112(d)(2)).

To develop a NESHAP, the EPA collects information about the industry, including information on emission source characteristics, control technologies, data from HAP emission tests at well-controlled facilities, and information on the costs and other energy and environmental impacts of emission control techniques. The EPA uses this information to analyze possible regulatory approaches.

Although NESHAP are normally structured in terms of numerical emission limits, alternative approaches are sometimes necessary. In some cases, physically measuring emissions from a source may be impossible or at least impracticable due to technological and economic limitations. Section 112(h) authorizes the Administrator to promulgate a design, equipment, work practice, or operational standard, or combination thereof, in those cases where it is not feasible to prescribe or enforce an emission standard.

Section 112(h)(2) provides that "the phrase 'not feasible to prescribe or enforce an emission standard' means any situation in which the Administrator determines that 'the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.'" As described below, the Administrator has determined that it is impracticable to prescribe an emission standard for the sources subject to this rule. Accordingly, this final rule is being issued as a section 112(h) standard.

D. Categorization/Subcategorization; Determining Maximum Achievable Control Technology "Floors" for NESHAP

The Act directs the Administrator to list categories and subcategories of major sources and area sources which emit one or more of the HAP's listed in section 112(b) (section 112(c) of the Act). The Administrator shall list all major sources which emit HAP's. The Administrator shall list those area source categories and subcategories which she finds present a threat of adverse effects to human health or the environment warranting regulation. Once the EPA has identified the specific source categories or subcategories of major sources and area sources that it intends to regulate under section 112, it must set MACT standards for each and must set such standards at a level at least as stringent as the "floor," unless it regulates area sources under section 112(d)(5) as described below. Congress provided certain very specific directives to guide the EPA in the process of determining the regulatory floor.

Congress specified that the EPA shall establish standards which require "the maximum degree of reduction in emissions of the hazardous air pollutants * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determines is achievable * * *" (section 112(d)(2) of the Act) In addition, Congress limited the EPA's discretion by establishing a minimum baseline or "floor" for standards. For new sources, the standards for a source category or subcategory "shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator" (section 112(d)(3) of the Act). Congress provided that existing source standards could be less

stringent than new source standards but could be no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources (excluding certain sources) for categories and subcategories with 30 or more sources or the best performing 5 sources for categories or subcategories with fewer than 30 sources (section 112(d)(3) of the Act).

Once the floor has been determined for new or existing sources for a category or subcategory, the Administrator must set MACT standards that are no less stringent than the floor. Such standards must then be met by all sources within the category or subcategory. However, in establishing the standards, the Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory (section 112(d)(1) of the Act). Thus, for example, the Administrator could establish two classes of sources within a category or subcategory based on size and establish a different emission standard for each class, provided both standards are at least as stringent as the MACT floor.

In addition, the Act provides the Administrator further flexibility to regulate area sources. Section 112(d)(5) provides that in lieu of establishing MACT standards under section 112(d), the Administrator may promulgate standards which provide for the use of "generally available control technologies or management practices." Area source standards promulgated under this authority (GACT standards) would not be subject to the MACT "floors" described above. Moreover, for source categories subject to standards promulgated under section 112(d)(5), the EPA is not required to conduct a residual risk analysis under section 112(f).

At the end of the data gathering and analysis, the EPA must decide whether it is more appropriate to follow the MACT or the GACT approach for regulating an area source category. As stated previously, MACT is required for major sources. If all or some portion of the sources emits less than 9.1 Mg/yr (10 tpy) of any one HAP (or less than 22.7 Mg/yr (25 tpy) of total HAP's), then it may be appropriate to define subcategories within the source category and apply a combination MACT/GACT approach, MACT for major sources and GACT for area sources. In other cases, it may be appropriate to regulate both major and area sources in a source category under MACT.

The next step in establishing a MACT or GACT standard is the investigation of regulatory alternatives. With MACT standards, only alternatives at least as stringent as the floor may be considered. Information about the industry is analyzed to develop model plants or populations for projecting national impacts, including HAP emission reduction levels, costs, energy, and secondary impacts. Several regulatory alternative levels (which may be different levels of emissions control or different levels of applicability or both) are then evaluated to determine the most plausible regulatory alternative to reflect the appropriate MACT or GACT level.

The regulatory alternatives for new versus existing sources may be different, and separate regulatory decisions must be made for new and existing sources. For both source types, the selected alternative may be more stringent than the MACT floor. However, the control level selected must be technically achievable. In selecting a regulatory alternative to represent MACT or GACT, the EPA considers the achievable reduction in emissions of HAP's (and possibly other pollutants that are co-controlled), the cost and economic impacts, energy impacts, and other environmental impacts. The objective is to achieve the maximum degree of emission reduction without unreasonable economic or other impacts.

The selected regulatory alternative is then translated into a proposed regulation. The regulation implementing the MACT or GACT decision typically includes sections of applicability, standards, test methods and compliance demonstration, monitoring, reporting, and recordkeeping. The preamble to the proposed regulation provides an explanation of the rationale for the decision. The public is invited to comment on the proposed regulation during the public comment period. Based on an evaluation of these comments, the EPA reaches a final decision and promulgates the NESHAP.

E. Historical Development of the Standards

On November 25, 1980 (45 FR 78174), the EPA proposed new source performance standards (NSPS) to limit emissions of volatile organic compounds (VOC's) from new, modified, and reconstructed PCE dry cleaners under the authority of section 111 of the Act. On December 26, 1985 (50 FR 52880), the EPA published a Notice of Intent to List PCE as a potentially toxic air pollutant to be regulated under section 112 of the Act and solicited information on the potential carcinogenicity of PCE. Perchloroethylene is the predominant solvent used in dry cleaning. It has chemical and physical properties which make it the most desirable solvent available for the dry cleaning of fabrics. Information was also requested on applicable emission control equipment and the associated level of control achievable.

Subsequent to the EPA's issuance of the 1980 proposed rule and to the EPA's Notice of Intent to List and possible regulation of PCE emissions from dry cleaners under section 112, a private citizens group from Oregon, Francis P. Cook, et al., brought suit against the Administrator of the EPA to compel him to issue a final rule regulating emissions from PCE dry cleaners under the authority of section 111 of the Act. The EPA and plaintiffs negotiated a settlement of the lawsuit whereby the EPA agreed to enter into a Consent Decree. The U. S. District Court for the District of Oregon entered the Consent Decree on March 16, 1990. (*Cook* v. *Reilly*, No. 89–630 7E (D. Ore)). In the Consent Decree, the EPA Administrator agreed to sign proposed NESHAP for PCE dry cleaning facilities within 1 year and promulgate the standards within 2 years following enactment of the new amendments to the Act. In accordance with the Consent Decree, on November 15, 1991, the Administrator, William K. Reilly, signed the proposed rulemaking. That notice appeared in the Federal Register on December 9, 1991, (56 FR 64382).

In that notice, the EPA proposed to regulate PCE emissions from dry cleaners under authority of section 112 of the Act because PCE is included on the list of HAP's found in section 112(b).

A notice announcing the withdrawal of the proposed NSPS for regulating VOC emissions from PCE dry cleaners under section 111 was also published at that time (56 FR 64382). The Consent Decree was amended twice to provide the EPA additional time to complete this action, with the current decree requiring the Administrator to sign a final rulemaking notice not later than September 13, 1991. This action completes the EPA's obligations to take regulatory action in compliance with the Consent Decree.

II. Summary

A. Summary of Promulgated Standards

The standards being promulgated today will reduce emissions of PCE from new and existing dry cleaning facilities in the industrial and commercial sectors of the dry cleaning industry. Coin-operated dry cleaning machines are exempt from the standards. The requirements of the standards are

discussed below. The process vent control requirements of the standards are presented in table 1.

TABLE 1.—REQUIREMENTS OF THE PCE DRY CLEANING NESHAP

Requirement	Small area source	Large area source	Major source
Applicability:	Consuming less than:	Consuming between:	Consuming more than:
Dry Cleaning Facilities with:			
(1) Only Dry-to-Dry Machines	140 gallons PCE/year	140–2,100 gallons PCE/year	2,100 gallons PCE/year
(2) Only Transfer Machines	200 gallons PCE/year	200–1,800 gallons PCE/year	1,800 gallons PCE/year
(3) Both Dry-to-Dry and Transfer Machines.	140 gallons PCE/year	140–1,800 gallons PCE/year	1,800 gallons PCE/year
Process Vent Controls:			
Existing Facilities	None	(1)	(1)
New Facilities	(2)	(2)	Refrigerated condenser followed by small carbon adsorber (or equivalent)
Fugitive Controls:			
Existing Facilities	(3)	(3)	Room enclosure
	(4)	(4)	
New	(5)	(5)	
	(6)	(6)	
	(7)	(7)	

[1] Refrigerated condenser (or equivalent) Existing carbon adsorbers can remain.
[2] Refrigerated condenser (or equivalent).
[3] Leak detection/repair.
[4] Store all PCE solvent & waste in sealed containers.
[5] Leak detection/repair.
[6] Store all PCE solvent & waste in sealed containers.
[7] No new transfer machine systems allowed.

Owners and operators of all new dry cleaning machines and existing uncontrolled dry cleaning machines located at major sources, as well as those of many area sources, are required to install and operate refrigerated condensers to control PCE emissions from process vents. Owners and operators of existing dry cleaning machines controlled with carbon adsorbers that were installed prior to today's date are not required to replace the carbon adsorber with a refrigerated condenser. These owners and operators may continue to operate their carbon adsorbers to control PCE emissions from process vents. Owners and operators of all dry cleaning machines are required to operate their PCE emission control equipment and dry cleaning machines according to the manufacturer's recommendations. New transfer machine systems are effectively banned through a requirement prohibiting any PCE emissions from clothing transfer between the washer and dryer of transfer machine systems.

Additional controls are required for new dry-to-dry machines and existing transfer machine systems located at major sources. Owners or operators of new dry-to-dry machines located at major sources are required to install a carbon adsorber in addition to a refrigerated condenser. The PCE saturated air remaining in the dry cleaning drum after completion of the refrigerated condenser cycle must be passed through this carbon adsorber immediately before the door of the dry cleaning machine is opened or as the door is opened. Owners or operators of existing transfer machine systems located at major sources are required to contain their transfer machine systems inside a room enclosure. This room enclosure must be vented to a carbon adsorber to control PCE emissions captured by the room enclosure.

To determine if a dry cleaning facility is a major source emitting over 9.1 Mg (10 tons) per year, total annual PCE consumption of all of the dry cleaning machines at a facility is used to determine PCE emissions. For the purpose of these standards, PCE consumption during any period is defined as the PCE purchased during that period. A facility with only dry-to-dry machines consuming 8,000 liters (2,100 gallons) per year would emit 9.1 Mg (10 tons) per year of PCE and is considered a major source. Similarly, a facility with only transfer machine systems consuming 6,800 liters (1,800 gallons) per year would emit 9.1 Mg (10 tons) per year of PCE and is considered a major source. Finally, a facility with both dry-to-dry machines and transfer machine systems consuming 6,800 liters (1,800 gallons) per year would emit 9.1 Mg (10 tons) per year and is also considered a major source.

The standards include yearly low solvent consumption exemption levels for existing area sources (these low solvent consumption levels do not apply to new sources). The low consumption exemption level is 530 liters (140 gallons) per year for an existing area source that contains only dry-to-dry machines. The low consumption exemption level is 760 liters (200 gallons) per year for an existing area source that contains only transfer machine systems. Finally, the low consumption exemption level is 530 liters (140 gallons) per year for an existing area source that contains both dry-to-dry machines and transfer machine systems. Existing area sources with a yearly PCE consumption below these low solvent consumption exemption levels are not required to install process vent controls. To determine appropriate compliance requirements based on PCE consumption, owners or operators of all dry cleaning facilities must calculate a yearly rolling total of PCE consumption (based on purchase receipts) on the first day of each month.

The owner or operator of each dry-to-dry machine, transfer machine dryer, or reclaimer using a refrigerated condenser is required to monitor and record the temperature on the outlet side of the refrigerated condenser once per week. The owner or operator of each transfer machine washer using a refrigerated

condenser is required to monitor and record the temperature on both the inlet side and the outlet side of the refrigerated condenser once per week. The owner or operator of each existing dry cleaning machine using an existing carbon adsorber for process vent control, which was installed prior to today, or each new major source dry-to-dry machine using a supplemental carbon adsorber to control PCE remaining in the machine drum, is required to monitor the concentration of PCE in the carbon adsorber exhaust outlet once per week.

All owners or operators of dry cleaning facilities are subject to pollution reduction requirements for all dry cleaning machines as well as auxiliary equipment (such as emission control devices, pumps, filters, muck cookers, stills, solvent tanks, solvent containers, water separators, diverter valves, and interconnecting piping, hoses, and ducts). To prevent liquid and vapor leaks from these sources, a weekly leak detection and repair program is required at all facilities except existing facilities with annual receipts less than $75,000, where biweekly leak detection and repair is required. All leaks detected must be recorded in a log, must have their necessary repair parts ordered, and must be repaired within 5 working days of receiving the necessary part. Storage of waste containing PCE in tightly sealed containers is also required to reduce PCE emissions before disposal. Owners or operators of all dry cleaning facilities must maintain monthly records of PCE consumption, based on purchase receipts. Each month, the annual PCE consumption for the preceding 12 months must also be calculated and recorded.

Initial reports certified by a responsible official are required, which include a brief description of and the design capacity of all dry cleaning machines at the facility, annual facility PCE consumption and, where appropriate, the type of emission control device to be used to achieve compliance for each machine at the facility. An existing dry cleaning machine that commenced construction prior to December 9, 1991 (the date of proposal of the PCE dry cleaning NESHAP), must comply with pollution prevention and recordkeeping-and-reporting requirements starting 90 days from today. An existing machine must comply with other requirements within 36 months of today's date. In general, a new dry cleaning machine for which construction commenced on or after December 9, 1991, must achieve compliance with this rule upon startup. However, a new dry cleaning machine that was constructed after December 9, 1991, but prior to today's date may comply immediately with the final rule or comply with section 112(i)(2) of the Act. (Section 112(i)(2) allows qualifying new sources 3 years from promulgation to comply with the final rule, if they comply with the proposed rule in the interim.) A statement signed by a responsible official certifying that compliance is being achieved is required 30 days following the date of compliance.

If a dry cleaning facility that initially met the requirements for an area source exceeds the PCE consumption level for an area source and becomes a major source, that dry cleaning facility is required to achieve compliance with the requirements for a major source by 180 days from the date that the PCE consumption level is exceeded, or within 36 months following today's date, whichever date is later.

If an existing dry cleaning facility initially below the low solvent consumption exemption level for an existing area source exceeds this low solvent consumption exemption level, that dry cleaning facility is required to achieve compliance with the process vent requirements for an area source above the low solvent consumption exemption level by 180 days from the date that the PCE consumption level is exceeded, or within 36 months following today's date, whichever date is later.

The recordkeeping requirements include documentation of the volume of PCE purchased each month, results and calculations of the yearly PCE consumption as determined each month, results of weekly or biweekly PCE liquid and vapor leak inspections and, where appropriate, results of weekly control device monitoring (refrigerated condenser outlet temperature, or refrigerated condenser inlet and outlet temperatures, or carbon adsorber exhaust concentration). All records must be retained for 5 years and made available for inspection upon request. Owners and operators of all dry cleaning facilities must retain onsite a copy of the design specifications and operating manuals for all dry cleaning machines and control devices.

Equivalent pollution prevention or emission control technology may be used to achieve compliance with the standards in lieu of the control devices required by the standard if certain information is submitted to and approved by the Administrator. The EPA notes that a dry cleaner could, by replacing perchloroethylene with other cleaning agents if available, be exempt from process vent controls or the entire NESHAP. An alternative standard may be approved through the section 112(l) approval process if the State meets certain requirements as discussed in more detail in section V. This information includes diagrams; documentation of emission quantification; solvent mileage information; identification of maintenance and monitoring requirements to ensure proper operation; an explanation of why the data regarding emission control is accurate and representative of both short and long term performance; an explanation of why the information supplied can be extrapolated to dry cleaning systems other than the specific systems examined; and documentation of cross-media (water, solid waste) impacts. Upon approval, the Administrator will publish a notice in the Federal Register.

Dry cleaners subject to today's rule should be aware of a separate rule known as the "general provisions." The general provisions, which were proposed in the Federal Register on August 11, 1993 (58 FR 42760), are generic requirements that sources subject to section 112 standards must meet. Among other things, the proposed general provisions rule contains a procedure for existing sources to apply for a one-year compliance extension, preconstruction review requirements for major sources, and definitions of terms that will be used in many or all section 112 standards. The EPA currently plans to promulgate the final general provisions in March 1994.

B. Selection of Basis of Standards for New and Existing Sources—Selection of MACT or GACT

As prescribed by section 112(c)(1), the promulgation of these standards was preceded by the development and publication of a list with all the categories and subcategories of major and area sources emitting any of the HAP's listed in section 112(b) of the Act. An initial list of such categories (required under section 112(c)(1)) was published in the Federal Register on July 16, 1992 (57 FR 31576). Three perchloroethylene dry cleaning major source categories were included on this list: (1) Commercial dry cleaning (perchloroethylene)—transfer machines; (2) industrial dry cleaning (perchloroethylene)—transfer machines; and (3) industrial dry cleaning (perchloroethylene)—dry-to-dry machines. Two dry cleaning area source categories were included on this list: (1) Commercial dry cleaning (perchloroethylene)—transfer machines; and (2) commercial dry cleaning

(perchloroethylene)—dry-to-dry machines. The Administrator found that these categories present "a threat of adverse effects to human health or the environment."

As described above, the dry cleaning industry subject to the NESHAP is subcategorized into major and area source dry cleaners. The dry cleaning industry is also subcategorized into industrial and commercial sectors. All industrial dry cleaners are major sources. Commercial dry cleaners can be either major or area sources. The dry cleaning industry is further subcategorized into dry-to-dry and transfer machines. Although two subcategories of coin-operation dry-to-dry machines (plant and self-service) were included in the preliminary source category list published June 21, 1991 (56 FR 28548), these two subcategories were deleted from the final source category list published July 16, 1992 (57 FR 31576). These two subcategories are exempt from this final NESHAP.

There were no differences in the types of control technologies identified for the subcategories of industrial and commercial dry cleaners; however, differences in control technologies were identified between major and area sources, and dry-to-dry and transfer machines. These differences were used in determining the requirements of the NESHAP.

The rule requires new and existing dry-to-dry machines, and transfer machine dryers, that are controlled with refrigerated condensers to be closed-loop—in other words, the gas-vapor mixture within the machine cannot be vented to the atmosphere while the dry cleaning machine drum is rotating. Although the refrigerated condenser can be external or internal, the gas-vapor stream must be routed back to (or contained within) the machine in a closed-loop configuration, without venting to the atmosphere. This ensures that the gas-vapor stream passes multiple times through the refrigerated condenser and that high control efficiency can be achieved. The EPA wishes to emphasize that the rule does not prohibit fan-and-vent systems which operate when the machine door is open to reduce worker exposure to PCE vapors left inside the drum at the end of the drying cycle.

The selection of the standards for this NESHAP based upon the subcategorization of the dry cleaning industry discussed above is summarized as follows.

1. Major Sources

Section 112 of the Act defines a major source as any stationary source that emits 9.1 Mg/yr (10 tpy) or more of any one HAP or 22.7 Mg/yr (25 tpy) or more of total HAP's. The Act states that new major sources must achieve the MACT, which is the level of emission control already achieved in practice by the best controlled similar source. The Act further states that emission standards promulgated for existing major sources may be less stringent than standards for new sources; however, standards for existing major sources must not be less stringent than the average level of emission reduction achieved by the average of the best performing 12 percent of the existing major sources.

For new major dry cleaning facilities, the only significant factor for determining similarity in sources is the type of machine used. Two basic types of machines are used in the dry cleaning industry: Dry-to-dry machines and transfer machines. For dry-to-dry machines, it has been demonstrated that the maximum degree of PCE emission reduction from machine vents and exhausts can be achieved by installing a *refrigerated condenser.*

At proposal, the EPA believed the performance of carbon adsorbers to be equal to that of refrigerated condensers when used to control emissions from dry-to-dry machines, and proposed to allow major source dry-to-dry machines to install either control device. Following proposal, however, new information was provided to the EPA from a survey of dry cleaners in California, which disputes these conclusions. A more detailed discussion of this finding is presented in section V.B.

The use of a refrigerated condenser and small carbon adsorber together is considered MACT for new source dry-to-dry machines. At present, both of these control devices are used widely in the dry cleaning industry. They are readily available and economically feasible as methods of control.

The emissions remaining in a conventional dry-to-dry machine, controlled with a refrigerated condenser, at the end of the dry cleaning cycle can be further controlled by drawing the air remaining in the machine through a small carbon adsorber either before the door to the machine is opened or venting the air through a carbon adsorber to the atmosphere as the door is opened. Information was made available to the EPA after proposal indicating that several conventional vented dry-to-dry machines equipped with refrigerated condensers currently operate in this manner (i.e., the air remaining in the machine at the end of the dry cleaning cycle is vented to a carbon adsorber as the door to the machine is opened).

Use of a carbon adsorber for process vent control represents the MACT floor for existing dry-to-dry machines because this is the average level of emission reduction achieved by the best-performing 12 percent of existing major sources. In considering whether to require controls above this floor, EPA distinguished between classes of machines. As noted earlier, the maximum achievable control technology for existing uncontrolled dry-to-dry machines is refrigerated condensers. However, MACT for existing dry-to-dry machines equipped prior to promulgation with carbon adsorbers is either a refrigerated condenser or a carbon adsorber. The final rule does not require the replacement of these carbon adsorbers with refrigerated condensers. The Administrator could not conclude, based on currently available information, that requiring replacement of a well-operated carbon adsorber with a refrigerated condenser was justified.

For transfer machine systems located at a major source, the NESHAP must be based on MACT. The Act states that MACT for new sources must be no less stringent than the best controlled similar source. The MACT may be more stringent, however, if the Administrator believes the balance between the additional economic, energy, and environmental impacts of a more stringent requirement is reasonable. A transfer machine system with a refrigerated condenser and a room enclosure represents the best controlled similar source. The only option more stringent than a transfer machine system with a room enclosure is a new dry-to-dry machine.

Dry-to-dry machines provide complete control of clothing transfer emissions (i.e., emissions released by transfer of clothing from the washer to the dryer of a transfer machine system). Dry-to-dry machines eliminate these emissions by eliminating the need to transfer clothing from a washer to a dryer (achieving 100 percent reduction of clothing transfer emissions).

The MACT for new transfer machine systems located at a major source is based upon the use of dry-to-dry machines, thereby requiring new major source transfer machine systems to eliminate all emissions from clothing transfer between the washer and the dryer. Such a requirement effectively bans or prohibits new transfer machine systems because no technology has been identified to date (including the use of hamper enclosures or room enclosures) that could be added to a new transfer

machine system to totally eliminate all PCE emissions from clothing transfer. A more detailed discussion of this finding is presented in section V.B.

For existing major source transfer machine systems, it has been demonstrated that the maximum degree of PCE emission reduction from machine vents and exhausts can be achieved by installing a refrigerated condenser. At proposal, the EPA believed carbon adsorbers outperformed refrigerated condensers on transfer machine systems and proposed to require carbon adsorbers on uncontrolled transfer machine systems. Following proposal, however, new information was provided to the EPA from a survey of dry cleaners in California, which disputes these conclusions. A more detailed discussion of this finding is presented in section V.B.

Use of a carbon adsorber for process vent control represents the MACT floor for existing transfer machines because this is the average level of emission reduction achieved by the best-performing 12 percent of existing major sources. In considering whether to require controls above this floor, the EPA distinguished between classes of machines. As noted earlier, the maximum achievable control technology for existing uncontrolled transfer machines is refrigerated condensers. However, MACT for existing transfer machines equipped prior to promulgation with carbon adsorbers is either a refrigerated condenser or a carbon adsorber. The final rule does not require the replacement of these carbon adsorbers with refrigerated condensers. The Administrator could not conclude, based on currently available information, that requiring replacement of a well-operated carbon adsorber with a refrigerated condenser was justified. Room enclosures capture and vent the fugitive PCE emissions from clothing transfer between the washer and the dryer at transfer machine systems to a carbon adsorber. Since clothing transfer emissions are a significant portion of overall transfer machine system emissions, control of these through a room enclosure would achieve additional emission reductions. Section V provides a more detailed discussion of these control devices.

Based on the results of further analysis, it was considered reasonable to go beyond the floor to require room enclosures for fugitive emission control in addition to refrigerated condensers for process vent control for transfer machine systems located at a major source.

2. Area Sources

Section 112 of the Act defines an area source as any stationary source of HAP's that is not a major source. Based on this definition, a dry cleaning facility that emits less than 9.1 Mg/yr (10 tpy) of any one HAP would be considered an area source. In section 112(d)(5), the Act further states that the Administrator may elect to promulgate a standard based on GACT or management practices to control HAP emissions from area sources instead of applying the MACT.

Section 112(c)(3) requires a "finding" of a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate warranting regulation) in order to regulate area sources under NESHAP. The large number of area source dry cleaning facilities nationwide emit, in aggregate, a significant amount of PCE emissions and, therefore, have the potential to have an adverse effect on health and the environment.

Unlike MACT, no stringency "floor" is required for GACT; and costs, economic impacts, and the technical capabilities of dry cleaning facility owners and operators to operate emission control equipment may be considered in determining GACT. For the most part, the technology used to achieve the level of emission control determined to achieve MACT is also used widely by area source dry cleaning facilities and could be considered GACT.

The GACT approach can be less stringent than MACT and can consider costs and economic impacts. At proposal, GACT for all area sources, except for existing refrigerated condenser controlled transfer machines was determined to be the use of either a refrigerated condenser or a carbon adsorber. Subsequent to proposal, the EPA learned that carbon adsorbers may not be operated as well as refrigerated condensers. Based on this finding, all new and existing uncontrolled area sources are required to install refrigerated condensers for process vent control. However, the Administrator determined that, based on existing information, a requirement to replace existing carbon adsorbers with refrigerated condensers is not justified at this time. No new transfer machines are allowed. These requirements were determined to be reasonable for area sources and are identical to MACT requirements. The EPA determined that the economic impacts of requiring the owner or operator of a new area source dry-to-dry machine to install a supplemental carbon adsorber to control PCE emissions in the dry cleaning machine drum is not reasonable. Further, the Administrator determined that the economic impacts of requiring the owner or operator of an existing area source transfer machine system to install a room enclosure to capture transfer emissions are unreasonable. Additional discussion of these findings is presented in section V.

Therefore, GACT for area sources would be identical to MACT for major sources except that the owner or operator of a new dry-to dry machine would not be required to install a supplemental carbon adsorber and the owner or operator of an existing transfer machine system would not be required to install a room enclosure.

C. Selection of Format for the Final Rule

1. Equipment Exhausts and Vents.

Emission standards for controlling PCE allow for some flexibility in complying with the standards because any control technique may be used if it achieves the level of emission reduction represented by the standards. An emission limitation format could be a concentration limit, a percent reduction level, or a mass emission rate limit.

Both the concentration limit and the percent reduction level would require periodic performance testing by the owner or operator to demonstrate that the dry cleaning facility is achieving compliance. Because the cost of requiring an owner to conduct even a single periodic performance test is expensive ($3,000 to $5,000) compared to the cost of control equipment ($6,000 to $8,000), it would be economically unreasonable to require either of these two emission limit formats for these standards.

A mass emission limit format would place a limit on the total consumption of HAP per unit of articles cleaned, also known as "solvent mileage." Some members of the dry cleaning industry use the "solvent mileage," method to compute the pounds of articles that can be cleaned per drum of solvent. To determine "solvent mileage," a record of gallons of solvent bought and amount of clothes cleaned would have to be kept. However, the amount of recordkeeping necessary to compute solvent mileage to comply with this type of format (such as weighing each load of clothes prior to cleaning and tracking the amount of solvent consumed) would be burdensome for a small facility owner or operator.

In addition to being impractical and an economic burden on dry cleaner owners or operators to measure emissions or to compute solvent mileage

for these sources, it would be difficult to enforce emission standards at several thousand dry cleaning facilities across the country, ensuring that each dry cleaner is achieving the emission standards. For these reasons, as authorized under section 112(h), an equipment standard requiring the use of a refrigerated condenser, or an equivalent control device was selected to limit emissions from these sources.

2. Equipment Leaks.

Based on dry cleaning machine test data, as much as 25 percent of the PCE emissions from an uncontrolled dry cleaning facility can be attributed to leaks from the dry cleaning equipment. Two possible formats for a standard to control these leaks are an emission limit standard or a work practice standard under section 112(h).

To require an emission limit for a leak standard, the leak sources would need to be enclosed so that the actual emission rate could be measured. Because this procedure would be impractical on the many potential leak sources on dry cleaning equipment, an emission limit format is not the preferred format for leaks.

Because control of fugitive equipment leaks requires maintenance of the dry cleaning equipment, the EPA is proposing a work practice with a program to detect and repair leaks as the logical format. The work practice would specify the inspection time intervals and an inspection method to locate the leaks, and would limit the time period allowed to perform the required maintenance and repairs. The proposed inspection method requires only a quantitative determination of the presence of a leak (i.e., visual or use of a portable halogenated-hydrocarbon detector). Although the effectiveness of this work practice cannot be quantified precisely, the EPA believes it would result in a substantial reduction of fugitive emissions. The work practice format has been selected for the proposed equipment leak standard because less time is required for demonstrating compliance, and the recordkeeping and economic impacts associated with this format are not burdensome.

D. Summary of Changes Since Proposal

Since proposal, several changes have been made to the regulation. The changes affect new and existing dry cleaning machines located at major and area sources. At proposal, owners or operators of new dry-to-dry machines located at major or area sources were given a choice of installing carbon adsorbers or refrigerated condensers as process vent control. At promulgation, all new dry cleaning machines located at major or area sources are required to install refrigerated condensers.

The owner or operator of a new dry-to-dry machine located at a major source is also required to install a carbon adsorber to control the PCE emissions remaining in the dry cleaning machine drum at the end of the dry cleaning cycle.

At proposal, new transfer machine systems were allowed and control requirements for these systems were specified. At promulgation, new transfer machine systems are prohibited through a regulatory requirement prohibiting PCE emissions from clothing transfer between the washer and the dryer. This requirement cannot be met by new transfer machine systems even if these systems are enclosed in room enclosures.

At proposal, existing uncontrolled dry-to-dry machines located at major or area sources were given a choice of installing carbon adsorbers or refrigerated condensers as process vent control. Existing uncontrolled transfer machine systems located at area sources were required to install carbon adsorbers. At promulgation, existing uncontrolled dry-to-dry machines and transfer machine systems are required to install refrigerated condensers. Existing controlled machines that already have a carbon adsorber, however, are not required to install a refrigerated condenser for process vent control.

At proposal, existing uncontrolled transfer machine systems located at major sources were required to install carbon adsorbers. At promulgation, existing uncontrolled transfer machine systems located at major sources are required to install refrigerated condensers as process vent control. Existing controlled transfer machine systems at major sources that already have a carbon adsorber, however, are not required to install a refrigerated condenser for process vent control. For control of fugitive emissions, all existing transfer machine systems located at major sources must be enclosed within a room enclosure that exhausts to a carbon adsorber.

At proposal, the low solvent consumption exemption for process vent control at area sources was 220 gallons of PCE per year for a dry-to-dry machine and 300 gallons of PCE per year for a transfer machine system. At promulgation, the low solvent consumption exemption for process vent control has been lowered and now applies to the total PCE solvent consumption of all machines at the dry cleaning facility rather than on a per machine basis. At promulgation, the low-solvent consumption exemption for process vent control is 140 gallons of PCE per year for a dry cleaning facility with only dry-to-dry machines or both dry-to-dry machines and transfer machine systems, and 200 gallons of PCE per year for a dry cleaning facility with only transfer machines systems.

The levels of PCE consumption distinguishing major from area sources have been lowered from the proposed levels and now apply to the total PCE consumption of all machines at the facility rather than on a per machine basis. The levels of PCE consumption distinguishing a major source from an area source are 2,100 gallons of PCE per year for a source with only dry-to-dry machines, and 1,800 gallons of PCE per year for a source with only transfer machine systems or both dry-to-dry machines and transfer machine systems. To track PCE consumption, the owner or operator of any dry cleaning facility subject to this rule is required on the first day of each month to compute an annual PCE consumption by summing PCE purchases over the previous 12 months.

At proposal, pollution prevention practices (such as leak detection and repair) were required only for those dry cleaning machines above the low solvent consumption exemption for process vent control. At promulgation, all PCE dry cleaning facilities must implement pollution prevention practices and operate their dry cleaning equipment according to the manufacturer's specifications.

There were no monitoring requirements included at proposal. The promulgated standards now require periodic monitoring of process vent control equipment. When operating a refrigerated condenser on a dry-to-dry machine, a transfer machine system dryer, or a reclaimer, the temperature on the outlet side of the refrigerated condenser must be measured and recorded once per week. When operating a refrigerated condenser on a transfer machine system washer, the difference between the inlet and outlet temperatures of the exhaust from the washer as it passes through the refrigerated condenser must be measured and recorded once per week.

When operating an existing carbon adsorber to control process vent emissions, a colorimetric detector tube must be used to measure and record the PCE level in the carbon adsorber exhaust once per week. Periodic desorption for carbon adsorbers is no longer specifically required. Instead, the owner or operator must follow the

manufacturer's specifications for the proper operation of a carbon adsorber.

The proposed rule would have required compliance within 18 months of publication of the final rule for existing dry cleaning machines with a design capacity larger than 22.7 kilograms (50 lbs). The compliance deadline for smaller machines would have been 36 months from promulgation. The final rule requires each existing dry cleaning system to be in compliance within 36 months of publication of the final rule, except that compliance with pollution prevention requirements and recordkeeping and reporting requirements is required starting 90 days after the rule's publication.

Section 112(i) of the Clean Air Act requires the EPA to set compliance dates for existing sources that provide for compliance as expeditiously as practicable, and no later than 3 years after promulgation of the final rule (with certain exceptions). As explained in the background information document cited at the beginning of this notice, the EPA is allowing 36 months for control technology to be installed on all dry cleaning machines because of questions about the market availability of an adequate supply of refrigerated condensers. On the other hand, the EPA has concluded that the pollution prevention requirements of the rule do not require significant capital expenditures and are feasible for dry cleaners to implement within 90 days. These requirements consist of "good housekeeping" practices such as inspecting for leaks and keeping the machine door closed during operation. The earlier compliance date in the final rule will result in earlier emissions reductions.

The 90-day applicability date for recordkeeping and reporting requirements will enhance the enforceability and effectiveness of the rule. One reason is that the applicability of control technology requirements in the rule depends on a facility's solvent consumption over a 12-month period. If documentation of a facility's solvent consumption was not required until 3 years after promulgation, it would be impossible to determine reliably which control technology requirements apply to a dry cleaning facility. Second, requiring an initial report from existing sources within 90 days will encourage these sources to begin planning for compliance with the rule's control technology requirements at an early date. This requirement also will provide regulatory agencies with information about regulated facilities in time to promote and monitor compliance effectively.

E. Potential to Emit

The annual major-source consumption levels (8,000 liters (2,100 gallons) per year for dry-to-dry machines and 6,800 liters (1,800 gallons) per year for transfer machine systems) represent the EPA's determination of the volumes of PCE that are used and consumed by the two different types of machine in order to emit 10 tons of PCE per year. Because it is not economically and technically feasible to precisely monitor and measure yearly PCE emissions at each of the dry cleaning facilities affected by this rule, PCE consumption is an appropriate surrogate measure. The EPA has found that PCE emissions to ambient air are closely and predictably related to the volume of PCE used and consumed in the dry cleaning process. Accordingly, this rule does not require each dry cleaning facility to test and calculate the maximum annual rate of PCE stack and fugitive emissions for each particular dry cleaning machine regulated under this rule. Instead, the consumption level assigned to each type of dry cleaning machine determines whether a facility is a major source (that is, whether it emits or has the potential to emit 10 tons or more of PCE).

The consumption levels differ between dry-to-dry (8,000 liters) and transfer machine systems (6,800 liters) because the use of a dry-to-dry machine results in lower fugitive emissions than the use of a transfer machine system. Stated another way, a dry-to-dry machine is more efficient in its use of PCE from an air emission perspective. This higher efficiency means that for each liter of PCE used for dry cleaning, a dry-to-dry machine emits less PCE to the ambient air than a transfer machine system. Accordingly, a dry-to-dry machine can use or consume a greater volume of PCE than a transfer machine system before emitting 10 tons or more of PCE to the ambient air. Amounts of PCE used and consumed in dry cleaning processes but not emitted to the ambient air at a dry cleaning facility include amounts of PCE transferred offsite as solid waste in used filters and spent carbon, amounts transferred to wastewater streams, and amounts that remain in cleaned clothing at the time of customer pickup.

The major source consumption levels established in the final rule differ from the major source consumption levels in the proposed dry cleaning rule of December 9, 1991. The proposed major source PCE consumption levels were 11,700 liters (3,100 gallons) for dry-to-dry machines, and 7,600 liters (2,000 gallons) for transfer machine systems. The difference is due to the EPA's determination that the major source consumption levels for PCE established in the final rule (8,000 liters or 2,100 gallons for dry-to-dry machines and 6,800 liters or 1,800 gallons for transfer machine systems) more accurately reflect the volume of PCE that each type of machine uses or consumes in emitting 10 tons of PCE.

Under the rule, a dry cleaning facility will be classified as a major or area source in the following manner. As previously mentioned, a facility has the potential to emit more than 10 tons of PCE only if its solvent consumption exceeds the rule's solvent use cut-off levels that divide major sources from area sources. The owner or operator must certify to the regulating agency whether or not the facility's solvent consumption will exceed the cut-off level. If solvent consumption is greater than or equal to this cut-off level, the facility is to be considered a major source and must comply with all major sources requirements. If solvent consumption is less than the cut-off level, the facility is considered an area source.

If a facility is found to be an area source, the next determination is whether or not the facility must install area-source technology controls. To be exempt from technology controls, the facility's certification must guarantee that solvent use is less than the low-solvent-use exemption level. Otherwise, area-source control technology requirements apply to the facility.

The rule's requirements are intended to ensure that all dry cleaning facilities that have the potential to emit 10 tons of PCE considering controls are regulated as major sources. If regulated as an area source, a facility will be required to observe the limit on solvent consumption to which it certified, as well as meet other requirements for area sources. These are Federally enforceable requirements that will prevent area sources from emitting more than 10 tons of PCE in a year. After its compliance date, if an area source wishes to increase operations or add a dry cleaning machine, and the result would be to increase solvent consumption above the major-source cutoff level, the facility must first comply with the rule's requirements for major sources. Failure to do so would result in a violation of the rule.

In this rule, the EPA is not establishing any precedents or policies concerning the determination of a facility's "potential to emit" or its classification as a major or area source

under section 112. The EPA believes it would be unwise and inappropriate to resolve these complex issues solely in the context of the PCE dry cleaning NESHAP because the result could create numerous unforeseen problems and inequities in regulation of other categories of sources. The EPA is considering these issues in a comprehensive fashion in light of the broad range of sources for which NESHAP will be developed. The EPA is presently continuing to consider these issues and will take whatever appropriate actions that are necessary to resolve them.

III. Summary of Environmental, Energy, and Economic Impacts

A. Affected Facilities

The number of new and existing machines in 1996 (5 years from the date of proposal) were projected in order to calculate the 5-year impacts of the standards. Industry estimates indicate a zero growth rate for commercial dry cleaning facilities. For this reason, the only new facilities projected to be constructed during the 5 years following the date of proposal (between 1991 and 1996) are an estimated 7,700 new commercial facilities which replace those that retire. Industrial dry cleaning facilities are declining because many of these facilities are switching from the use of PCE to the use of water to wash linens and uniforms. For this reason, no new industrial facilities are projected between 1991 and 1996. Approximately 28 industrial facilities would retire during this period.

In 1996, based on the estimates of machine retirement, approximately 17,400 existing commercial and industrial facilities will be subject to the standards. Taking into account the low solvent consumption exemption levels for existing area sources, approximately 9,700 of these existing facilities would be required to install process vent control devices. Of these facilities, however, approximately 6,500 are expected to decide to install process vent control devices to comply with State or local regulations. Thus, in 1996 approximately 3,200 existing facilities are estimated to have to install process vent control devices solely to comply with the standards promulgated today.

As mentioned above, between 1991 and 1996, 7,700 new facilities are projected. All of these facilities are required to install process vent controls. Of these new facilities, approximately 7,300 are expected to decide to install process vent control devices to comply with State or local regulations. Thus, in 1996 approximately 400 new facilities are estimated to install process vent control devices solely to comply with the standards promulgated today.

The following discussion presents the projected environmental, energy, and economic impacts for 1996 based on the estimated 3,200 existing and 400 new facilities that would be required to install process vent control devices solely to comply with the standards promulgated today.

B. Air Impacts

In 1996, the standards are expected to reduce nationwide emissions of PCE from existing dry cleaning facilities by a maximum of some 5,500 Mg (6,000 tons) from process vent control and some 18,000 Mg (19,800 tons) from leak detection and repair. This emission reduction is based on projected nationwide PCE emissions from existing facilities in 1996 of 42,000 Mg (46,500 tons) in the absence of the standards. This emission reduction corresponds to approximately 44 percent of the total PCE emissions from all existing dry cleaning facilities. This reduction is in addition to reductions achieved by controls already in place in many of these facilities, and reductions anticipated in the absence of the NESHAP.

In 1996, the standards are expected to reduce nationwide emissions from new dry cleaning facilities by a maximum of some 1,100 Mg (1,200 tons) from process vent control and some 7,600 Mg (8,600 tons) from leak detection and repair. This emission reduction is based on projected nationwide PCE emissions in 1996 of 15,800 Mg (17,400 tons) from new dry cleaning facilities in the absence of the standards. This emission reduction corresponds to about 43 percent of the total PCE emissions from all new dry cleaning facilities.

In 1996, annual emissions of PCE from a typical new or existing dry cleaning facility located at an area source with annual receipts of $200,000 operating a typical size dry-to-dry machine with capacity of 15.9 kilograms (kg) (35 pounds (lb)) controlled with a refrigerated condenser are projected to be 0.77 Mg (0.85 tons) from process vent control and 0.8 Mg (0.88 tons) from leak detection and repair. This represents greater than 50-percent reduction in emissions from an uncontrolled dry-to-dry machine of this same size and receipt level.

C. Water, Solid Waste, Noise, and Radiation Impacts

The requirement for use of refrigerated condensers minimizes the impact on water quality resulting from the standards. The projected impact on water quality results from the PCE contained in aqueous wastes generated by the control devices. When using a refrigerated condenser, a small amount of PCE is generated and collected in the separator water. A typical refrigerated condenser controlled dry-to-dry machine is estimated to generate about 0.03 kg (0.07 lb) of PCE in wastewater per year. Owners or operators of all new dry cleaning machines and those existing uncontrolled dry cleaning machines that are above the low solvent consumption exemption levels would be required to install refrigerated condensers.

When using a carbon adsorber, PCE is collected in the steam condensate generated during desorption of the carbon. A typical existing dry-to-dry machine with an existing carbon adsorber is estimated to generate 0.85 kg (1.9 lb) of PCE in wastewater per year. However, only owners or operators of existing dry cleaning machines with existing carbon adsorbers installed prior to the date of promulgation would be allowed to continue to use a carbon adsorber as primary process vent control.

In addition to process vent control, owners or operators of existing transfer machine systems located at major sources would be required to install a room enclosure with a carbon adsorber. A carbon adsorber on the room enclosure is estimated to be approximately one-third the size of a typical carbon adsorber used to control process vent emissions. A typical transfer machine system located at a major source with a carbon adsorber on the room enclosure is estimated to generate 0.28 kg (0.60 lb) of PCE in wastewater per year. This amount is in addition to the 0.85 kg (1.9 lb) of PCE in wastewater generated if the transfer machine system has a carbon adsorber controlled process vent.

Owners or operators of new dry-to-dry machines at major sources would be required to install a carbon adsorber to control the PCE remaining in the dry cleaning machine drum at the end of the dry cleaning cycle. This carbon adsorber is also estimated to be approximately one-third the size of a typical carbon adsorber used to control process vent emissions. A typical dry-to-dry machine with a refrigerated condenser controlled process vent and a carbon adsorber to control the PCE emissions remaining in the machine drum is expected to generate about 0.31 kg (0.68 lb) of PCE in wastewater per year.

It is projected that the total amount of PCE in wastewater generated on a national basis by dry cleaning facilities in the absence of the standards in 1996

would be 5.9 Mg (6.5 tons). With the standards, the amount of PCE in wastewater generated on a national basis by dry cleaning facilities is projected to be about 6.1 Mg (6.7 tons) in 1996, an increase of about 0.2 Mg (0.2 ton) per year (corresponding to an increase of about 3 percent).

The solid waste impact of the standards is considered minimal. The main types of solid waste generated from controlled dry cleaning machines are spent carbon from carbon adsorbers, spent carbon from cartridge filters, solvent sludge (muck), and still bottoms. Neither a carbon adsorber nor a refrigerated condenser would affect muck, still bottom, or cartridge filter carbon generation, so no impact due to the control alternatives was calculated for these waste types.

Periodic replacement of the carbon bed associated with a carbon adsorber is necessary to maintain the performance of a carbon adsorber in controlling PCE emissions. According to carbon vendors, the carbon is likely to need replacement approximately every 5 years.

For a typical 15.9 kg (35 lb) existing area source dry-to-dry machine controlled with an existing carbon adsorber installed prior to today's date, the amount of solid waste generated from spent carbon is estimated to be approximately 25 kg (55 lb) per year. For a typical 113 kg (250 lb) existing major source dry-to-dry machine controlled with an existing carbon adsorber, the amount is estimated to be approximately 90 kg (198 lb) per year. These are the same amounts that would be generated in the absence of the standards.

New major source dry-to-dry machines with refrigerated condenser and carbon adsorber control would also require periodic replacement of the carbon bed. For a typical major source dry-to-dry machine with both refrigerated condenser and carbon adsorber control, the amount of solid waste generated from spent carbon is estimated to be approximately 8.4 kg (19 lb) per year.

Existing major source transfer machine systems with carbon adsorbers on their room enclosures would also require periodic replacement of the carbon bed. For a typical major source transfer machine system with refrigerated condenser process vent control and carbon adsorber control on the room enclosure, the amount of solid waste generated from spent carbon is estimated to be about 8.4 kg (19 lb) per year. For a typical major source existing transfer machine system with carbon adsorber process vent control and carbon adsorber control on the room enclosure, the amount of solid waste generated from spent carbon is estimated to be about 98 kg (217 lb) per year.

It is projected that the amount of carbon discarded every 5 years in the absence of the standards would be 880 Mg (970 tons) or an average of 175 Mg (193 tons) per year. With the standards, the amount of carbon discarded on a national basis every 5 years would be 890 Mg (980 tons) or an average of 177 Mg (195 tons) per year. This corresponds to an increase in national solid waste impacts from both new and existing dry cleaning facilities of about 10 Mg (10 tons) of carbon discarded approximately every 5 years, or an average of about 2 Mg (2 tons) of carbon every year (corresponding to an increase of about 1 percent).

There are no noise or radiation impacts associated with these standards.

D. Energy Impacts

The energy impacts resulting from the standards on a nationwide basis are considered minimal. Electricity is required for cooling the coils of the refrigerated condenser and for operating fans and generating steam for desorbing existing carbon adsorbers. The total increase in annual electricity use for existing dry cleaning facilities in 1996 resulting from the standards would be about 2,454,500 kilowatt-hours per year (KW-hr/yr) (390,000 British thermal units per year (Btu/yr)). The total increase in annual electricity use for new dry cleaning facilities in 1996 resulting from the standards would be about 276,600 KW-hr/yr (44,000 Btu/yr). The total increase in annual electricity use for all facilities nationwide would be about 2,731,100 KW-hr/yr (430,000 Btu/yr).

This increase in electricity requirement is equivalent to about 700,000 liters (3,400 barrels (bbl)) of fuel oil per year for electricity generation for existing facilities and about 79,000 liters (380 bbl) of fuel oil per year for new facilities. The total increase for all facilities would be about 780,000 liters (3,800 bbl) of fuel oil per year, corresponding to an increase of 0.7 percent.

By installing a refrigerated condenser as required by the standards, the electricity requirement for a typical uncontrolled dry cleaning facility with one 15.9 kg (35 lb) dry-to-dry machine is expected to increase by about 600 KW-hr/yr (95 Btu/yr) in 1996.

E. Cost Impacts

The nationwide cumulative 5-year capital costs in 1996 of complying with the standards would be about $35 million. The cumulative 5-year capital costs for existing facilities would be about $32 million and about $3 million for new facilities.

The total nationwide annualized costs in 1996 of complying with the standards for process vents would be about $9 million. This estimate does not include credit for solvent savings. If a credit for solvent savings is included, the total nationwide annualized cost is about $4 million. The annualized costs in 1996 including a credit for solvent savings for existing facilities complying with the standards would be about $3.4 million, and about $0.5 million for new facilities.

The total nationwide annualized costs in 1996 for both new and existing facilities complying with the standards for pollution prevention, leak detection and repair, monitoring, reporting and recordkeeping would be about $10 million. This estimate does not include credit for solvent savings. If a credit for solvent savings is included in this estimate, these facilities would have a total annual cost savings of $7.6 million.

For a typical new area source facility with annual receipts of $200,000 with a 15.9 kg (35 lb) dry-to-dry machine, the capital cost of a refrigerated condenser is $6,300, and the resulting annualized cost of this process vent control is $1,000. The resulting annualized cost for the above typical new area source to perform pollution prevention, leak detection and repair, monitoring, reporting, and recordkeeping is about $460. This estimate does not reflect credit received from solvent savings. If a credit for solvent savings is included, this typical facility would have a total cost of about $350.

F. Economic Impacts

The economic impact assessment includes a market component and a financial component. The market component focuses on the adjustment of market prices and quantity of dry cleaning as a result of complying with the standards. The financial component focuses on the ability of firms to obtain the money to buy the control equipment.

The upward price adjustments are projected to range between 0.15 and 2.3 percent in various markets, with the largest increases being found in small rural markets. The downward adjustment in total dry cleaning is projected to be about 0.5 percent. If the whole quantity adjustment were translated into closures rather than reduction in output at many cleaners, the net closures would be projected to be just under 260.

The financial analysis indicates that firms in below-average financial condition may face difficulty in obtaining the required funds to purchase control equipment from traditional loan sources such as banks. The analysis projects between 0 and 830 firms will be in this category. These firms will either obtain other financing (vendor-aided, relatives, personal assets, etc.), close, or sell their firm.

The environmental, energy, and economic impacts are discussed in greater detail in the BID's and the economic impact analyses for the proposed and promulgated standards: "Dry Cleaning Facilities—Background Information for Promulgated Standards," EPA–450/3–91–020b; "Dry Cleaning Facilities—Background Information for Proposed Standards," EPA–450/3–91–020a; "Economic Impact of Regulatory Controls in the Dry Cleaning Industry," EPA–450/3–91–021; and "Economic Impact of Regulatory Controls in the Dry Cleaning Industry," EPA–450/3–91–021b. Additional information on impacts is found in supporting information for the notice of availability of new information, "Information Package on Transfer Enclosures," (Docket No. A–88–11, Item No. IV–M–1).

In addition to the economic impact analysis, the cost effectiveness of alternative standards was also evaluated to determine the least costly way to reduce emissions and to ensure that the controls required by this rule are reasonable relative to other regulations. In this case, the promulgated standards would reduce the PCE dry cleaner's operating costs and produce an average 5-year total cost effectiveness of $550 per Mg ($500 per ton) of PCE emissions reduced. Additional details on costs can be found in the BID's.

IV. Public Participation

Prior to proposal of the standards, interested parties were advised by public notice in the **Federal Register** (56 FR 1186), January 11, 1991, of a meeting of the National Air Pollution Control Techniques Advisory Committee to discuss the NESHAP being developed for the PCE dry cleaning industry. This meeting was held on January 30, 1991. The meeting was open to the public and each attendee was given an opportunity to comment on the NESHAP recommended for proposal.

The standards were proposed and published in the Federal Register on December 9, 1991 (56 FR 64382). The preamble to the proposed standards discussed the availability of the BID and the economic impact analysis: "Dry Cleaning Facilities Background Information for Proposed Standards, EPA–450/3–91–020a" and "Economic Impact of Regulatory Controls in the Dry Cleaning Industry EPA–450/3–91–021," which described in detail the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal, and copies of the BID were distributed to interested parties.

As a result of public comments received on the proposed standards, additional information became available about transfer enclosures used to control PCE emissions during the transfer step for transfer machine systems. A notice of availability of new information was published in the Federal Register on October 1, 1992, describing this information and requesting public comments.

Because no persons requested the opportunity for oral presentation of data, views, or arguments concerning either the proposed NESHAP or the notice of availability of new information, a public hearing was not held.

The public comment period for the proposal NESHAP was from December 9, 1991, to February 9, 1992. A total of 32 comment letters were received in response to the proposed NESHAP. The public comment period was reopened for the notice of availability of new information from October 1, 1992, to November 2, 1992. A total of seven comment letters were received in response to the notice. All comments have been carefully considered and, where determined to be appropriate by the Administrator, changes have been made in the proposed standards.

V. Significant Comments and Changes to the Proposed Standards

Comments on the proposed NESHAP and the notice of availability of new information were received mainly from industry; State and local air pollution control agencies; trade associations; and environmental groups. A detailed discussion of these comments and responses can be found in the promulgation BID, which is referred to in the ADDRESSES section of this preamble. The summary of comments and responses in the BID serves as the basis for the revisions that have been made to the standards between proposal and promulgation. The major comments and responses are summarized in this preamble and, for ease of discussion, have been divided into the following areas:

A. Regulatory Approach

1. MACT vs. GACT
2. Collocation

B. Emission Control

1. Performance of Refrigerated Condensers and Carbon Adsorbers
2. Low Solvent Consumption Exemption Levels
3. MACT for New Dry-to-Dry Machines at Major Sources
4. Banning Transfer Machine Systems and Reclaimers
5. Room Enclosures on Transfer Machine Systems
6. Vapor Barriers
7. Dry Cleaning Ventilation Requirements

C. Monitoring and Equivalency

1. Monitoring Control Devices
2. Determining Equivalency
3. Delegation of Authority to Determine Equivalency

D. Other Issues and Follow-up to Today's Action

1. New York Study
2. California Well Investigation Program
3. Follow-up to Today's Action

A. Regulatory Approach

1. MACT vs. GACT

Several commenters remarked on the use of maximum achievable control technology (MACT) versus generally available control technology (GACT) for regulating dry cleaners. Most of these commenters believed that MACT should be used to regulate all dry cleaners. One commenter, however, believed that GACT was the appropriate basis of regulation.

The commenters who felt MACT should be applied to all dry cleaners argued that there is sufficient and compelling health effects information regarding PCE to warrant application of MACT to all dry cleaning machines regardless of type or size, and that section 112(c)(3), (i.e., a threat to human health and the environment by sources individually, or in the aggregate) warrants the application of MACT controls for all area source dry cleaners.

As stated in the proposal, the EPA has concluded that area source dry cleaners present a threat of adverse effects to health or the environment. For this reason, commercial dry cleaning facilities that are area sources were added to the list of source categories under section 112(c)(3) to be regulated under the Act. Listing an area source category under section 112(c)(3), however, does not require that regulations developed for this source category must be based on MACT. These regulations may be based on MACT or they may be based on GACT.

The EPA does not agree that the health effects information regarding PCE is so compelling that it warrants application of MACT to all small area source dry cleaners. There are a range of opinions in the scientific community as

to the potential for PCE to cause cancer in humans. Further, to the extent that PCE may be a human carcinogen, existing evidence indicates that its potency is relatively low.

During development of the regulation, the EPA concluded that many small area source dry cleaning facilities may experience adverse economic impacts as a result of imposing a regulation based on MACT. For this reason, the GACT approach was selected as the basis for regulating small area source dry cleaning facilities.

In commenting on the choice of GACT to regulate area source dry cleaners, several commenters acknowledged that section 112(k) of the Act outlines a comprehensive strategy to reduce HAP's from area sources. These commenters did not, however, believe that such a strategy would reduce PCE emissions sufficiently from area source dry cleaning facilities. Consequently, these commenters asserted that residual risk review should be required for all dry cleaners to ensure that public health is adequately protected. They argued that it is bad public policy to apply GACT to the vast majority of dry cleaning facilities, thus precluding a residual risk assessment at a later date. Based on knowledge gained on public exposure to PCE from dry cleaning facilities, they maintained that it is absolutely necessary that such a risk assessment be conducted for this source category.

Section 112(k) of the Act directs the EPA to develop a strategy to control HAP emissions from area sources in urban areas. The strategy, among other things, must achieve area source emissions reductions from the 30 HAP's that pose the greatest threat to public health and achieve at least a 75-percent reduction in cancer incidence from all stationary sources. Consequently, the need for emission controls beyond GACT at dry cleaners will be reconsidered in the context of the overall urban air strategy and the relative contribution of PCE emissions from dry cleaning facilities to urban exposures.

Although a residual risk analysis is required for sources regulated under MACT, those sources regulated under GACT may also receive a residual risk analysis. Section 112(f)(5) of the Act states that residual risk analysis is not required for area sources regulated under GACT. This section, however, does not preclude area sources from a residual risk analysis and, if warranted, the EPA will undertake a residual risk analysis for the area source dry cleaning source category.

The one commenter who agreed with the EPA's decision to use GACT to regulate small area source dry cleaners stated that much evidence exists in the Senate Committee report and the legislative history of the 1990 Clean Air Act Amendments to indicate that dry cleaning was considered an example of an area source category for which regulations based on GACT were appropriate.

2. Collocation

Commenters recommended that the criteria for determining a major source be based on the PCE solvent consumption of the entire dry cleaning facility instead of each dry cleaning machine. They mentioned that the definition of source used in the proposed NESHAP referred only to the consumption of PCE for an individual dry cleaning machine and that under this proposed definition only certain machines would be considered major sources. The commenters believe that the EPA should consider the total consumption of PCE from all machines located within a contiguous area under common control.

The final rule has been revised to base the applicability of the NESHAP on the total annual PCE consumption of all machines located at a dry cleaning facility. For the purpose of these standards, PCE consumption during any period is defined as the PCE purchased during that period. The definition of a major source in the Act includes sources "located within a common area and under common control." Because multiple units located at a single dry cleaning facility would be under common control, the applicability of this NESHAP for major sources has been revised to be consistent with the language of the Act.

B. Emission Control

1. Performance of Refrigerated Condensers and Carbon Adsorbers

At proposal, the EPA believed the performance of carbon adsorbers to be equal to that of refrigerated condensers when used to control emissions from dry-to-dry machines, and proposed to allow dry-to-dry machines to install either control device. In addition, the EPA believed carbon adsorbers outperformed refrigerated condensers on transfer machine systems and proposed to require carbon adsorbers on uncontrolled transfer machine systems. Following proposal, however, new information was provided to the EPA from a survey of dry cleaners in California, which disputes these conclusions.

In 1989, the California Air Resources Board (CARB) conducted a voluntary survey of all dry cleaners in California. The results of this survey indicate that dry cleaning machines controlled by refrigerated condensers achieve solvent mileages approximately twice as high as machines controlled by carbon adsorbers.

Solvent mileage is the ratio of clothes cleaned to the amount of solvent consumed. Although air emissions are only one of several factors that determine solvent mileage, significantly better solvent mileage is likely to be indicative of lower air emissions. Although the data do not provide detailed information on how well the carbon adsorbers were operated and maintained (for example, frequency of desorbing the carbon bed), the EPA believes this information indicates that refrigerated condensers will achieve lower air emissions in actual practice than carbon adsorbers.

Therefore, the final rule requires refrigerated condensers for new major and area source dry-to-dry machines. The EPA has also concluded that all existing uncontrolled dry-to-dry machines and transfer machine systems must install and operate refrigerated condensers.

The final rule does not require the replacement of existing carbon adsorbers with refrigerated condensers. The Administrator concluded, based on currently available information, that the replacement of well-operated carbon adsorbers with refrigerated condensers was not justified at this time.

These sources are largely small businesses and could face severe financial costs to replace these units. In addition, the final rule includes additional monitoring to ensure proper carbon adsorber operation. While replacement of well-operated carbon adsorbers with refrigerated condensers provides limited air benefits, EPA has recently obtained additional information that suggests that there may be other environmental impacts (for example, potential groundwater contamination and solid waste generation) associated with the use of carbon adsorbers over refrigerated condensers (see section V.D). At this time, these data are uncertain. EPA believes that these data and their implications deserve further consideration. A public meeting has been scheduled to discuss these issues. (See ADDRESSES section at the beginning of this preamble.) If appropriate, the EPA may revisit the requirements of this rule in the future.

2. Low Solvent Consumption Exemption Levels

Several commenters believed that although the economic impact of regulating small existing area source dry cleaners can be significant, the proposed low solvent consumption exemption levels would exempt existing small area source facilities they believed pose the largest health threat to individuals. These commenters stated that, as a result of their location in proximity to human populations, more people are exposed to air toxics from small existing area source dry cleaners than from large industrial complexes, such as chemical plants, which are not usually located in the midst of population centers. Some believed that virtually all small existing area source dry cleaners contributing to this problem would be exempted under the proposed NESHAP. They requested that the EPA reevaluate the low solvent consumption exemption levels to ensure that a larger number of small existing area source dry cleaning facilities is subject to the NESHAP.

Neither the proposed nor the final NESHAP includes low solvent consumption exemption levels for new area source dry cleaning facilities. The proposed, as well as the final NESHAP, however, includes low solvent consumption exemption levels for existing area sources.

At proposal, the impacts of requiring the use of refrigerated condensers or carbon adsorbers to control process vent emissions from dry cleaning machines were judged to be unreasonable for area sources consuming less than 760 and 1,000 liters (200 and 300 gallons) of PCE per year for dry-to-dry machines and transfer machine systems, respectively (corresponding to annual receipts of $100,000). In response to comments, the EPA reconsidered these low solvent consumption exemption levels. The EPA concluded that lowering the exemption levels to 530 and 760 liters (140 and 200 gallons) per year for dry-to-dry and transfer machines, respectively (corresponding to annual receipts of $75,000) was warranted and reasonable.

In 1996, this change would require approximately 500 more dry cleaners to install refrigerated condensers to control process vent emissions from dry cleaning machines and would reduce PCE emissions by an additional 450 Mg (500 tons) per year. The cost of controlling those facilities with annual receipts between $75,000 and $100,000 is $0.9 million. As many as 165 additional financial failures are estimated to result from lowering the low solvent consumption exemption levels. Also, there could be as many as 65 additional business closures. The EPA judged this change in the requirement to be generally achievable. The EPA considered it unreasonable, however, to further lower the low solvent consumption exemption levels due to the high costs and excessive financial failures and closures (up to 3,800 financial failures and 1,400 closures) that would result. The decision to exempt certain low solvent consumption facilities was based on the evaluation of the potential economic impact of regulation. Many of the smaller businesses are individually operated, single family-owned establishments.

In addition to lowering the low solvent consumption exemption levels for existing area source dry cleaning facilities, the EPA reevaluated the impacts of extending additional pollution prevention practices, such as leak detection and repair, to all dry cleaning facilities and concluded that these impacts are reasonable. Thus, in the final NESHAP, *all* dry cleaning facilities are required to implement additional pollution prevention practices, such as leak detection and repair.

3. MACT for New Dry-to-Dry Machines at Major Sources.

Commenters stated that additional controls should have been considered as MACT for dry-to-dry machines. A new German machine, the Permac Consorba®, was mentioned by one commenter. This machine uses a carbon adsorber in conjunction with a refrigerated condenser for process vent control. The commenter indicated that it made sense that a dual control system would achieve better control than a machine with one control device.

In the simplest sense, a Permac Consorba® may be described as a dry-to-dry machine equipped with two control devices in series—a refrigerated condenser followed by a carbon adsorber. The reported advantage of this system over a conventional dry-to-dry machine equipped with only a refrigerated condenser is that it reduces the PCE concentration in the air remaining in the machine once the dry cleaning cycle is complete.

Conventional dry-to-dry machines vent or release the vapors remaining in the machine at the end of the dry cleaning cycle. The Permac Consorba® controls these vapors with a carbon adsorber before the machine door is opened.

The emissions remaining in a conventional machine at the end of the dry cleaning cycle can be controlled by drawing the air remaining in the machine through a small carbon adsorber either before the door to the machine is opened (similar to the Permac Consorba®) or venting the air through a carbon adsorber to the atmosphere as the door is opened. Indeed, information was made available to the EPA after proposal indicating that several conventional vented dry-to-dry machines equipped with refrigerated condensers currently operate in this manner (i.e., the air remaining in the machine at the end of the dry cleaning cycle is vented to a carbon adsorber as the door to the machine is opened).

There is no difference in PCE emissions between a Permac Consorba® and a conventional vented dry-to-dry machine equipped with a refrigerated condenser and a small carbon adsorber on the vent. Similarly, there would be no difference in emissions between a Permac Consorba® and a conventional no-vent dry-to-dry machine equipped with a refrigerated condenser that passed the air remaining in the machine at the end of the dry cleaning cycle through a carbon adsorber, before the door to the machine is opened.

Under the Act, MACT for new major sources must be no less stringent than the best-controlled similar source. As a result, the final NESHAP requires that new major source dry-to-dry machines be equipped with a refrigerated condenser and that the air remaining in the machine at the end of the dry cleaning cycle be passed through a carbon adsorber prior to opening the machine door or that the air remaining in the machine be passed through a carbon adsorber as soon as the door to the machine is opened. Thus, the level of control required for major new source dry cleaning facilities is equivalent to that achieved by the Permac Consorba® technology.

The MACT is also required for existing dry-to-dry machines located at major sources. Under the Act, MACT for existing sources must be no less stringent than the average emission limitation achieved by the best 12 percent of existing sources. Less than 12 percent of existing major source dry-to-dry machines are using a refrigerated condenser in combination with a carbon adsorber to control PCE process vent emissions. However, MACT can be more stringent if the Administrator determines that the balance of costs, energy, and environmental impacts of choosing a more stringent level of control are reasonable.

Assuming a 95-percent emission reduction for a carbon adsorber, the incremental cost effectiveness of the additional emission reduction achieved

by requiring conventional dry-to-dry machines with a refrigerated condenser to also install a carbon adsorber would be in the range of approximately $7,700 per Mg ($7,000 per ton) of PCE for a typical existing dry-to-dry machine located at a major source. If the efficiency of the carbon adsorber is less than 95 percent (as the California survey data mentioned earlier suggests), the cost effectiveness would be even higher. Because this additional cost of control is quite high for the additional amount of emission reduction achieved, the EPA does not consider this level of control reasonable for an existing dry-to-dry machine located at a major source.

4. Room Enclosures on Transfer Machine Systems

Commenters suggested that the EPA consider vapor containment and control systems, commonly referred to as "room enclosures," as MACT for transfer machine systems.

Room enclosures capture and vent the fugitive PCE emissions from clothing transfer between the washer and the dryer at transfer machine systems to a carbon adsorber. Since clothing transfer emissions are a significant portion of overall transfer machine system emissions, control of these through a room enclosure would achieve additional emission reductions.

The only type of control device that could effectively control PCE emissions on a room enclosure is a carbon adsorber. As stated previously, however, new information (i.e., the California survey) indicates that carbon adsorbers achieve a lower level of emission reduction in actual practice within the dry cleaning industry than originally thought.

Assuming a carbon adsorber achieves a 95-percent reduction in PCE emissions, the incremental cost effectiveness of requiring room enclosures with carbon adsorbers on existing major source transfer machine systems would be as low as $330 per Mg ($300 per ton) of PCE. In fact, even if the control efficiency of the carbon adsorber was as low as 20 percent, the incremental cost effectiveness of requiring room enclosures on major source transfer machine systems would be about $1,900 per Mg ($1,700 per ton) of PCE.

Although the EPA does not believe the control efficiency of carbon adsorbers within the dry cleaning industry is as low as 10 percent, making such an assumption for the purpose of calculations effectively indicates that, even at low control efficiencies, the use of room enclosures at major source transfer machine systems is reasonable. Consequently, the final NESHAP requires the use of room enclosures with carbon adsorbers at existing major source transfer machine systems.

Requiring existing major source transfer machine system dry cleaners to use room enclosures is not estimated to result in any additional financial failures or closures. Initially, due to the limited number of vendors of room enclosures, the EPA was concerned with the creation of a market for these devices. With few vendors and a large demand, the price of room enclosures could rise significantly. However, if required only for those few existing major source transfer machine systems, the demand for room enclosures is not judged sufficient to cause a significant rise in the price of a room enclosure.

For existing area sources, the impacts of requiring a room enclosure are considered unreasonable. The incremental cost effectiveness of requiring a room enclosure for a typical area source could be as high as $9,800 per Mg ($8,900 per ton) of PCE, even if the carbon adsorber is achieving a high percent emission reduction efficiency (e.g., 95 percent). If the carbon adsorber is operating at a lower control efficiency, the resulting incremental cost effectiveness would be even higher. The number of additional financial failures could be as high as 1,100 with as many as 260 additional closures if room enclosures were required on all existing area source transfer machine systems. Up to 500 additional financial failures and as many as 5 additional closures would result from such a requirement on only the largest area sources (e.g., those with annual receipts over $100,000). In addition, with only a few vendors of room enclosures, the EPA remains concerned with the impact that extending a requirement for room enclosures to all existing transfer machine system area sources would have on the price of room enclosures. For these reasons, the Administrator considers room enclosures unreasonable for existing transfer machine system area sources.

5. Banning Transfer Machine Systems and Reclaimers

Commenters recommended that the EPA impose a ban on the sale of new or used transfer machine systems. One commenter believed that transfer machine systems are still being offered and sold to dry cleaners, and that only a ban on the sale of transfer machine systems would prevent dry cleaners from purchasing these systems.

Prior to proposal, the EPA believed that no new transfer machine systems were being sold or had been sold in recent years due primarily to the adoption of the OSHA permissible exposure limit (PEL) of 25 parts per million (ppm) (January 19, 1989). The OSHA PEL was intended to reduce worker exposure to PCE. Based on the level of PCE emitted during the clothing transfer step at transfer machine systems, transfer machine systems were viewed as incapable of meeting the OSHA PEL. Consequently, the EPA believed it was not necessary to develop regulations that effectively banned or prohibited the use of new transfer machine systems.

Following proposal of the NESHAP for dry cleaners, however, the Eleventh Circuit Appeals Court remanded the PEL to OSHA. In addition, information provided to the EPA following proposal indicates that many owners or operators of transfer machine systems were meeting the OSHA PEL by increasing ventilation or rotating the placement of their workers. Moreover, it was learned that transfer machine systems, manufactured for use with petroleum solvents could be used as PCE transfer machine systems.

Finally, information provided to the EPA following proposal made it clear that, in some cases, reclaimers were being sold for use with dry-to-dry machines to increase the clothing throughput of the machines. A reclaimer is essentially a dryer, and its use with a dry-to-dry machine effectively converts the dry-to-dry machine to a washer, thus creating a new transfer machine system.

Consequently, the EPA has reconsidered its position at proposal, that a ban or prohibition of new transfer machine systems is unnecessary.

For transfer machine systems located at a major source, the NESHAP must be based on MACT. The Act states that MACT for new sources must be no less stringent than the best controlled similar source. A transfer machine system with a room enclosure represents the best controlled similar source. The MACT may be more stringent, however, if the Administrator believes the balance between the additional economic, energy, and environmental impacts of a more stringent requirement is reasonable. The only option more stringent than a transfer machine system with a room enclosure is a new dry-to-dry machine.

Dry-to-dry machines provide complete control of clothing transfer emissions (i.e., emissions released by transfer of clothing from the washer to the dryer of a transfer machine system). Dry-to-dry machines eliminate these emissions by eliminating the need to transfer clothing from a washer to a

dryer (achieving 100 percent reduction of clothing transfer emissions).

The MACT for new transfer machine systems could be based on the use of new dry-to-dry machines, thereby requiring new major source transfer machine systems to eliminate all emissions from clothing transfer between the washer and the dryer. Such a requirement would effectively ban or prohibit new transfer machine systems because no technology has been identified to date (including the use of hamper enclosures or room enclosures) that could be added to a new transfer machine system to totally eliminate all PCE emissions from clothing transfer. Dry-to-dry machines offer an effective pollution prevention alternative to transfer machines. Promoting use of this equipment is consistent with the Agency's commitment to pollution prevention.

The benefits associated with a requirement based on new dry-to-dry machines would be 100 percent control of clothing transfer emissions. Clothing transfer is estimated to contribute up to as much as 25 percent of the PCE emissions from an uncontrolled transfer machine system. For a typical major source, the annualized costs for requiring a dry-to-dry machine would be a net savings ($300) because overall PCE consumption is lower with a dry-to-dry machine. This lower cost is due to the increased amount of PCE that is recovered and recycled within the machine.

The EPA believes it is reasonable to require new transfer machine systems located at major sources to meet the same level of control of clothing transfer emissions as achieved by new dry-to-dry machines. Thus, the final NESHAP prohibits any emissions between the washing and drying step of the dry cleaning cycle for new transfer machine systems located at major sources. This requirement effectively bans or prohibits the use of new transfer machine systems at major sources.

For new area source transfer machine systems, the NESHAP is based on GACT. The GACT is a balance between environmental, economic, and energy impacts the Administrator considers reasonable. The incremental cost of requiring a new dry-to-dry machine over a new transfer machine system with a room enclosure at a typical new area source is approximately $600 per year. The EPA does not believe that the additional costs of purchasing a new dry-to-dry machine over purchasing a new transfer machine system with a room enclosure would deter entry (or expansion) into the dry cleaning market. If a business venture is viable and attractive with the purchase of a new transfer machine system and room enclosure, the EPA believes that the business venture would also be viable and attractive with the purchase of a new dry-to-dry machine. Consequently, requiring new area source transfer machine systems to eliminate all clothing transfer emissions (i.e., purchase a new dry-to-dry machine) is considered generally achievable. Thus, the final NESHAP also prohibits any emissions between the washing and drying step of the dry cleaning cycle for new transfer machine systems located at area sources. As mentioned above for major sources, this requirement effectively bans or prohibits the use of new transfer machine systems at area sources. Thus, all new transfer machines are effectively banned. Under the rule, the addition of a reclaimer to an existing dry-to-dry machine would constitute reconstruction of the dry cleaning system. As a result, the addition of a reclaimer to a dry-to-dry machine would be banned effective on today's date. Reclaimers added to a dry-to-dry machine after December 9, 1991 (the date of the proposed dry cleaning NESHAP) and prior to today's date are allowed to operate for up to three years from today's date, if the dry cleaning system complies in the interim with the proposed rule.

In addition to requiring that all new dry cleaning machines be dry-to-dry machines, phasing out or replacing existing transfer machine systems with dry-to-dry machines was also considered. Commenters questioned why there was no discussion of immediate or gradual replacement of existing transfer machine systems in the proposal. They stressed that the EPA cannot rely upon OSHA rules for a prompt phase out of transfer machine systems.

There is little difference between the impacts of immediate replacement of existing transfer machine systems and replacement within three years, the maximum compliance period for existing sources under the statute. In both cases, the capital cost of the transfer machine system is a "sunk" cost that has been incurred and is not a factor in the analysis.

This "sunk" cost makes the analysis of replacing existing transfer machine systems quite different from that of banning or prohibiting new transfer machine systems. For existing transfer machines systems, the cost of replacing the existing system is the full cost of a new dry-to-dry machine. For a new system, the cost of banning or prohibiting the system is the difference in cost between a new transfer machine system and a new dry-to-dry machine. Consequently, the costs are much higher in the analysis of replacing existing transfer machine systems than they are in the analysis of banning or prohibiting new transfer machine systems. The emission reduction achieved is the same for either option.

The EPA analyzed the costs of requiring replacement of existing transfer machine systems with dry-to-dry machines in comparison with the additional fugitive emissions of PCE that result from transfer machine systems. The incremental cost effectiveness for replacing a typical existing major source transfer machine systems with a dry-to-dry machine is approximately $12,200 per ton of PCE reduced. For area sources, the incremental cost effectiveness for replacing the transfer machine system with a dry-to-dry machine is approximately $41,000 per ton of PCE reduced. The EPA has determined that based on this comparison, which relies on currently available information, requiring replacement of these transfer machine systems with dry-to-dry machines is not justified at this time. However, the EPA is aware that additional environmental impacts may be associated with the continued use of transfer machine systems in certain situations. For example, the impact on indoor air quality may be of concern. At this time, however, the data are insufficient to determine whether considering these other impacts it may be appropriate to further limit the use of transfer machine systems. The EPA will address this issue further in the public meeting (see ADDRESSES section at the beginning of this preamble) and will continue to examine this issue. If appropriate, the EPA may revisit the determinations made in this rule.

Commenters agreed with the EPA that use of a reclaimer with a dry-to-dry machine effectively creates a new transfer machine system. Therefore, they recommended a ban on the sale of new or used reclaimers.

Accordingly, the NESHAP has been revised to define a dry-to-dry machine used with a reclaimer as a transfer machine system. In addition, the NESHAP does not allow clothing transfer emissions to occur between the washing and the drying step of the dry cleaning cycle for a new transfer machine system. This requirement effectively bans or prohibits new transfer machine systems. It also effectively bans or prohibits the use of new reclaimers with new or existing dry-to-dry machines, because adding a reclaimer to a new or an existing dry-

to-dry machine creates a new transfer machine system.

6. Vapor Barriers

In addition to room enclosures, some commenters requested that vapor barriers be required to prevent seepage of PCE to adjacent apartments. It was also suggested that dry cleaning facilities located in close proximity to residential buildings or food service establishments be required to have vapor barriers on all floors, walls, and ceilings to separate the dry cleaning facility from other areas in the building and to deter migration of PCE emissions.

Installing vapor barriers to prevent seepage of PCE emissions into adjacent living or working areas merely contains the emissions in the dry cleaning facility. Installing vapor barriers could lead to elevated PCE concentrations in the work areas and public areas of the dry cleaning facility, resulting in increased worker and public exposure at the dry cleaner. Vapor barriers could also be very expensive for a dry cleaning owner or operator to install. Estimates indicate that installation of a vapor barrier in a 30 by 50 by 20 foot dry cleaning facility would cost approximately $6,500. Based on available information, vapor barriers are considered unreasonable for a national standard due to their high cost and their failure to control or reduce PCE emissions.

The Administrator agrees with the concerns expressed by many commenters about the potential impact of fugitive emissions. As mentioned earlier, to address these concerns, the final NESHAP requires control of fugitive emissions by leak detection and repair. As a result, the NESHAP will significantly reduce fugitive PCE emissions from all dry cleaning facilities.

In a few cases, local agencies may find situations where they believe the use of vapor barriers may be warranted, such as the situation of a very large dry cleaning establishment without adequate ventilation located in an apartment complex. Cases such as this are best handled on a site-specific basis at the local level.

7. Dry Cleaning Ventilation Requirements

Commenters recommended including dry cleaning ventilation requirements in the final NESHAP. Specific dry cleaner exhaust or ventilation requirements were recommended, such as adopting the National Fire Protection Association (NFPA) Standard 32 for dry cleaning plants (1990 edition). This would require an air change within the dry cleaning plant every 5 minutes. In addition, commenters recommended that all dry cleaning machines install a ventilation system capable of maintaining a minimum air velocity of 0.6 meters per second (100 feet per minute) through the loading door of the dry cleaning machine, whenever the door is open.

Ventilation requirements in and of themselves would not reduce fugitive emissions. From the perspective of the NESHAP, the EPA believes it is more appropriate to focus on the use of equipment or techniques that prevents or controls emissions rather than to focus on ventilation requirements that merely divert, rather than reduce, emissions.

If dry cleaning plant ventilation systems were installed and the resulting exhaust routed through a control device, such as a carbon adsorber, this would reduce fugitive emissions; however, it could be prohibitively expensive. The NESHAP, therefore, does not include dry cleaning plant ventilation requirements. On the other hand, the NESHAP does not preclude a dry cleaning plant from installing ventilation systems. Moreover, where local authorities consider a ventilation system necessary, the NESHAP does not prevent or hinder local authorities in any way from requiring additional measures such as ventilation systems.

The NESHAP requires the implementation of a leak detection and repair program, to control fugitive PCE emissions. These measures will achieve a substantial reduction in fugitive emissions at dry cleaning facilities.

C. Monitoring and Equivalency

1. Monitoring Control Devices

Many commenters stated that the NESHAP should contain some type of emission limit and performance testing. They asserted that requiring the dry cleaning owner or operator to install certain equipment and follow work practices without a performance test will not necessarily reduce emissions. The commenters felt the only way to ensure emission reductions was to establish and enforce an emission limit through performance testing.

As discussed in the proposal preamble, the cost of requiring an owner or operator to undertake a full-fledged performance test to demonstrate compliance with emission limits based on the use of a refrigerated condenser or a carbon adsorber would be expensive ($3,000 to $5,000), especially compared to the cost of this emission control equipment ($6,000 to $8,000). The additional cost of such a performance test, therefore, would create a significant impact by almost doubling the cost that the NESHAP would impose.

The economic analysis conducted prior to proposal indicated that many operators will likely experience difficulty in obtaining capital to purchase emission control equipment. To preclude unreasonable economic impacts, the NESHAP does not require vent controls on existing sources with an annual PCE consumption of less than 530 liters (140 gallons) per year for facilities with dry-to-dry machines or 760 liters (200 gallons) per year for facilities with transfer machine systems. Imposing additional costs by requiring a full-fledged performance test to determine compliance would add significantly to the economic impact of the NESHAP and would result in raising the low solvent consumption exemption levels for existing sources and decrease the emission reductions achieved by the NESHAP.

Several commenters believed that the NESHAP should include emission limitations and performance testing for carbon adsorbers. They believed that an emission limit for carbon adsorbers is necessary because operating requirements alone are not enough. Examples were cited of carbon adsorbers with damaged prefilters or leaking dampers drastically reducing emission control efficiency.

The concerns of the commenters regarding poor operation and maintenance of equipment are well founded. There is, however, incentive for an owner or operator to properly operate and maintain dry cleaning emission control equipment. Having invested what for most dry cleaning facilities will be a substantial sum of money in this equipment, properly operating and maintaining it will provide some return in terms of recovered PCE. Proper operation and maintenance will result in lower PCE consumption and reduce the dry cleaner's operating costs attributable to PCE purchases.

Beyond this economic incentive, however, the final NESHAP requires the owner or operator to follow the equipment manufacturer's specifications regarding proper operation and maintenance of equipment. In addition, the NESHAP requires the owner or operator to maintain a log containing information on the proper operation and maintenance of control devices.

To help dry cleaners determine that the control devices are operating properly, periodic monitoring is also required in the final NESHAP. If the control device used to achieve

compliance is a refrigerated condenser, the owner or operator is required to measure the temperature of the vapor stream passing through the refrigerated condenser. For refrigerated condensers used with transfer machine system washers, the temperature on the inlet side and outlet side of the refrigerated condenser must be measured. For refrigerated condensers used with transfer machine system dryers or reclaimers, or dry-to-dry machines, the temperature of the exhaust gas stream exiting the refrigerated condenser must be measured. Measurements must be taken once per week at the end of the cool down cycle prior to door opening. Records of this temperature measurement must be kept in a log maintained onsite.

If the control device used to achieve compliance is a carbon adsorber, the owner or operator is required to measure the PCE concentration at the exit of the carbon adsorber. Measurements must be taken once per week during the last aeration cycle prior to a scheduled desorption using a colorimetric detector tube. Records must be kept in a log (maintained on site) of the date and PCE concentration measured using the colorimetric detector tube.

The NESHAP requires that copies of the equipment manufacturer's operation and maintenance specifications be retained onsite. All of the above requirements will ensure proper operation and maintenance of equipment and will also ensure this equipment achieves the emission control performance it is capable of achieving.

2. Determining Equivalency

Guidance was requested regarding what type of information must be included with any request for a determination of equivalency (i.e., that the equipment a dry cleaner proposes to use is equivalent to that required by the NESHAP). Information was requested on the type and duration of emission data needed and the method for determining the control efficiency of the particular technology.

It is difficult to specify what information must be submitted for a determination of equivalency without knowing some details of the emission control technology or system for which the determination is requested. A description of this type of information must be broad and general in nature to accommodate all possibilities. It is possible, however, to be more specific regarding some requirements and the final NESHAP specifies that the following information must be submitted:

a. Diagrams, as appropriate, illustrating the emission control technology or system, its operation and integration into or function with dry-to-dry machines or transfer machine systems during each portion of the normal dry cleaning cycle.

b. Information quantifying vented PCE emissions from the dry-to-dry machines or transfer machine systems during each portion of the dry cleaning cycle with and without the use of the candidate emission control technology or system.

c. Information on solvent mileage achieved with and without the candidate emission control technology. Solvent mileage is the average weight of articles cleaned per volume of PCE used.

d. Identification of maintenance requirements and parameters to monitor to ensure proper operation and maintenance.

e. Explanation of why this submitted information is considered accurate and representative of both the short-term and long-term performance of the candidate emission control technology on the specific dry cleaning system examined.

f. Explanation of why this information can be extrapolated to dry cleaning systems other than the specific system(s) examined.

g. Information on the cross-media impacts (to water and solid waste) of the candidate emission control technology and demonstration that the cross-media impacts are less than or equal to the cross-media impacts of a refrigerated condenser.

3. Delegation of Authority to Determine Equivalency

Concern was expressed by some commenters that States were not delegated authority in the proposal to determine equivalency. Commenters strongly opposed limiting the authority for approving alternative control equipment and procedures proposed by individual dry cleaning sources to the EPA alone. It was believed that the EPA's retention of this delegation of authority would negatively impact the operating permit process. The emphasis in comments was that States must retain the right to take appropriate actions to implement effective emission control strategies to protect public health within their jurisdictions.

The EPA agrees that States should be allowed to implement effective emission strategies to protect public health within their jurisdictions. In some cases, States may feel it is necessary to implement more protective air pollution control measures than those adopted in national standards to control local problems.

The EPA also agrees that provisions limiting the authority to the EPA alone for making judgments regarding the equivalency of different equipment to control PCE emissions with the same or better performance than the control equipment required by the NESHAP are not warranted because section 112(l) of the Act would allow a State to request approval of a State's program that permits a source to seek permission to use an alternative means of emission limitation under section 112(h)(3), provided that the State demonstrated that its program would be no less stringent and that certain conditions were met. Section 112(l) of the Act authorizes States to submit programs to the Administrator for approval for implementing and enforcing emission standards. Section 112(l) also goes on to state that such programs may provide for partial, as well as complete, delegation of the EPA's authorities and responsibilities. The approval and delegation process is addressed in detail in the EPA's notice of proposed rulemaking: "Approval of State Programs and Delegation of Federal Authorities; Proposed Rule," published on May 19, 1993, (58 FR 29296).

As a result, the provision limiting the authority to judge the equivalency of different equipment to the EPA has been deleted from the final standards. Doing so, however, does not mean that these provisions will be "automatically" delegated to States upon application. In addition, delegating these provisions will not preclude the EPA from considering petitions submitted by various equipment suppliers or vendors and making equivalency determinations on a national level.

D. Other Issues and Follow-up to Today's Action

The NESHAP promulgated in today's Federal Register will achieve significant reductions in PCE emissions from new and existing dry cleaning facilities. There remain, however, several major issues associated with dry cleaning facilities that merit further attention. These include: (1) Indoor air pollution in residences located above dry cleaning facilities; and (2) groundwater pollution resulting from dry cleaning facilities. These issues were brought to light following proposal of the NESHAP by the New York Study (indoor air pollution) and the California Study (ground water pollution).

1. New York Study

The New York Study, performed by the State of New York, is an assessment

of indoor air pollution in residences located above dry cleaners. Many States and environmental groups referred to this study in their public comments on the NESHAP, and several commenters submitted copies of the study as attachments to their comments. They believed that the study shows that the risk to public health from exposure to PCE emissions from dry cleaners is significant and should be targeted for regulation. They mentioned that, although the Act does not specifically address indoor air pollution, indoor air emissions eventually become ambient air emissions.

The New York Study focuses on dry cleaners located in Albany, New York. All 102 dry cleaners listed in the Albany telephone directory were contacted. Of these 102 dry cleaners, 67 cleaned or pressed clothes on the premises. Of these 67, 6 had occupied residences above them.

The levels of PCE in the indoor and outdoor air at residences located above the 6 dry cleaners were measured over a 24-hour period. Identical measurements were taken at the same time at 6 control residences located at least 100 meters (330 feet) away from each dry cleaner. The control residences were selected based on their similarity to the study residences in terms of building type, age, and neighborhood.

The study found indoor air concentrations of PCE ranging from 100 to 55,000 micrograms per cubic meter ($mcg/^3$) [15 to 8,000 parts per billion (ppb)] in the 6 residences located above dry cleaners. The cancer risk estimate associated with these levels, based on the EPA's unit cancer risk estimate for PCE and lifetime exposure, is 1 in 100,000 to 1 in 100 (10^{-5} to 10^{-2}). Control residences had indoor air PCE concentrations ranging from 6 to 100 mcg/m^3 (1 to 15 ppb). The cancer risk associated with these levels is 1 in 1,000,000 to 1 in 100,000 (10^{-6} to 10^{-5}).

The New York study indicates that PCE emissions can accumulate in residences located above dry cleaning facilities, resulting in increased public exposure to PCE. While not definitive, in the EPA's opinion, based on various observations included in the New York study, the major contributor to the elevated PCE levels measured in the residences located above these dry cleaners seems to be fugitive emissions.

2. California Well Investigation Program

The California Well Investigation Program is an assessment of ground water contamination undertaken by the State of California. The study contends that PCE contaminated discharges into sewer lines by dry cleaning facilities has contaminated ground water in several areas.

The California Study focuses on wells in the Central Valley Region, which supply drinking water to municipal water systems. Water drawn from 215 out of some 2,000 wells tested contained detectable levels of PCE. Of these 215 wells, water drawn from 47 wells contained levels of PCE above the maximum contaminant level (MCL) of 5 parts per billion (ppb) in the National Revised Primary Drinking Water Regulations.

Soil gas surveys and ground water movement around 21 of the 47 wells with levels of PCE above the MCL indicate the source of PCE contamination in these wells to have originated from sewer lines. In 20 out of these 21 wells, dry cleaning facilities were identified as the sole users of PCE connected to the sewer lines. Soil gas surveys along the main sewer lines downstream from sewer laterals connecting the dry cleaners to the main sewer lines also showed relatively high concentrations of PCE. As a result, the study concludes that dry cleaning facilities are the source of the observed PCE contamination.

Recovery of PCE for reuse within the dry cleaning process generates wastewater contaminated with PCE. Most of the PCE contained in this wastewater is recovered in a water separator. Water from the water separator, however, is routinely discharged to the sewer at many dry cleaning facilities. Separator water generally contains about 150 ppm of PCE; but it may contain as much as 30 percent PCE, if the water separator is poorly operated.

Dry cleaning machines that use a refrigerated condenser for process vent control generate about 190 liters (50 gallons) per year of separator water; those with no process vent control generate even less. Dry cleaning machines that use a carbon adsorber for process vent control, on the other hand, generate about 7,600 liters (2,000 gallons) per year of separator water—40 times that generated by a refrigerated condenser.

The California study concludes that PCE discharged to sewers from dry cleaning facilities can contaminate ground water. Whether the primary source of PCE discharged to sewers by dry cleaning facilities is the result of leaking equipment, accidental spills, or PCE contaminated wastewater generated by dry cleaning or that generated by emission control equipment installed to control process vent emissions, however, is unclear.

The use of carbon adsorbers for process vent control significantly adds to the amount of PCE contaminated wastewater generated by dry cleaning facilities. While not conclusive, this suggests the use of carbon adsorbers for process vent control may be a primary contributor to ground water pollution resulting from dry cleaning facilities.

3. Follow-up to Today's Action

The EPA believes, based on information received to date, that PCE contamination of indoor air and ground water may present problems that warrant additional Federal actions. The EPA considered seeking an extension of the court deadline for the final rule to deal fully with these issues. This course of action, however, would have postponed the health and environmental benefits of the rule for an extended period of time. The EPA determined that the best environmental protection would be achieved by issuing today's rule as expeditiously as possible, and deciding subsequently how to address remaining indoor air pollution and ground water contamination associated with PCE dry cleaners.

Today's rule, while targeted primarily at reducing PCE contamination of outdoor air, may reduce indoor air contamination in some locations through requirements reducing fugitive and process vent emissions from dry cleaners. In addition, the rule requires uncontrolled machines to be controlled with refrigerated condensers, which will minimize generation of wastewater and solid waste.

In order to gain additional insight and understanding into the issues of indoor air pollution and ground water pollution associated with dry cleaning facilities, the EPA will convene a public meeting (see *Public Meeting* under ADDRESSES at the beginning of this preamble). The objective of this public meeting will be to gather additional information and solicit public comment on the magnitude and severity of the problems highlighted by the New York and the California studies and potential solutions or approaches for dealing with these problems. Copies of the New York and California studies are included in Docket No. A–88–11 (see Docket under ADDRESSES). (The New York Study is Docket No. A–88–11, Item No. IV–D–5 with additional information in Item No. IV–J–40; the California Study is also part of Item No. IV–J–40.) The EPA also would like to be informed of other studies conducted by States (or others) that address the relative efficiency of carbon adsorbers and refrigerated condensers, and their impact on air

emissions. Anyone wishing to speak and make presentations at the public meeting and/or wishing to submit written comments, please see the section Public Meeting under ADDRESSES at the beginning of this preamble.

The EPA will use the information received from the public meeting, as well as written comments, in deciding whether additional actions should be taken to reduce health and environmental risks from dry cleaners. The EPA will, at a minimum, publish and distribute the information presented at the public meeting. The EPA may then use this information to develop guidance for States and local agencies; and/or develop additional regulations. At the meeting, the EPA will explore the desirability and feasibility of using a regulatory negotiation or other consensus-building approach to address these issues.

With respect to indoor air pollution, the EPA specifically requests States and the public to provide their views and any available information on:

a. The number of dry cleaners co-located in buildings with residences or businesses.

b. The extent and severity of indoor air contamination with PCE from dry cleaners, and the adequacy of existing data on this problem.

c. The extent and severity of PCE contamination of fatty foods in residences, restaurants, and food stores that are co-located with or located near dry cleaners.

d. The extent to which PCE indoor air contamination results from fugitive emissions or process vent emissions.

e. The amount of fugitive emissions from different types of dry cleaning machines, and from the various pieces of ancillary equipment associated with the dry cleaning process.

f. Methods for reducing PCE contamination of indoor air, including but not limited to:

(1) Improved maintenance involving the use of instruments to inspect dry cleaning equipment for leaks of PCE.

(2) Increased room ventilation and/or ducting of emissions outdoors.

(3) Collection of steam press emissions.

(4) The use of vapor barriers.

(5) Improved training of dry cleaning workers, or other information dissemination activities.

(6) A phaseout of existing transfer machine systems (today's rule effectively bans new transfer machine systems but does not limit the period of time that existing transfer machine systems can remain in service).

(7) Other strategies, control technologies, and pollution prevention methods that can reduce fugitive emissions, especially at small dry cleaners.

g. The extent to which evaporators are in use, and their impact on air quality as well as wastewater contamination.

h. The relative performance of vented versus ventless machines in reducing PCE emissions.

i. The relative effectiveness, cost, and affordability of the available options, as well as key advantages and drawbacks, including information on:

(1) The economic impact of a requirement to replace existing carbon adsorbers with refrigerated condensers.

(2) The economic impact of a requirement to replace existing transfer machines with dry-to-dry equipment.

j. The appropriate Federal role in encouraging or requiring steps to reduce PCE contamination of indoor air.

k. The proposition that the EPA should voluntarily conduct a residual risk analysis for area source dry cleaners, as well as a statutorily mandated risk analysis for major sources, to assess remaining health and environmental risks after installation of MACT and GACT technology. (Based on the results of this analysis, the EPA could assess whether more stringent, health-based standards are warranted).

l. Examination of coin-operated dry cleaners exempt from this NESHAP to evaluate their potential contribution to indoor air pollution.

m. Evaluation of appropriate operator training and certification methods.

With respect to ground water contamination and solid waste generation by dry cleaners, the EPA specifically requests that States and the public provide their views and any available information on:

(1) The extent and severity of contamination of ground water with PCE from dry cleaners, and the degree of health threat posed by this contamination;

(2) The relative contribution of wastewater discharges, accidental spills, equipment leaks, and improper hazardous waste disposal to this ground water contamination;

(3) Costs of treating well water contaminated with PCE to make it safe for drinking, and the costs and feasibility of cleaning up ground water contaminated with PCE;

(4) The degree of solid or hazardous waste generation associated with the prevention/control technologies, information on how these wastes are managed and their environmental impact.

(5) Potential measures to prevent or minimize further contamination of ground water with PCE, including but not limited to:

(a) Use of wastewater evaporators by dry cleaners.

(b) Required replacement of existing carbon adsorbers used for process-vent control with refrigerated condensers, perhaps through a gradual phaseout. (The EPA particularly solicits comment on how the EPA could use its legal authorities to require a gradual phaseout, the environmental benefits of a phaseout, and the economic feasibility of potential phase-out schedules);

(c) Improved maintenance of dry cleaning equipment through improved training of dry cleaning workers or other information dissemination activities;

(d) Encouragement of emerging PCE emission control technologies that use adsorption but do not generate wastewater because regeneration is performed through heat desorption rather than steam stripping;

(e) Spill prevention and control measures;

(f) A ban or limit on the discharge of PCE-contaminated wastewater to sewers;

(g) Disposal of dry cleaner wastewater at hazardous waste facilities;

(h) The practical use of dry cleaner wastewater in boilers; and

(i) The relative effectiveness, costs, and affordability of the available options, as well as key advantages and drawbacks.

(6) The appropriate Federal role in encouraging or requiring steps to reduce the threat of ground water contamination from dry cleaners.

While examining these issues, the EPA, as part of its Design for the Environment (DfE) program is investigating potential substitutes for PCE in dry cleaning and developing an incentive program to encourage all dry cleaners to use control measures and work practices that minimize health and environmental risks.

The DfE program, which is operated by the EPA's Office of Pollution Prevention and Toxics, fosters cooperative study on a voluntary basis with businesses and trade associations in specific industries to evaluate the risks, performance, and costs of alternative chemicals, processes, and technologies. The DfE program is currently evaluating a variety of alternatives to the current use of PCE in dry cleaning, as well as emission control technologies for dry cleaning equipment, through its Cleaner Technologies Substitute Assessment (CTSA).

As part of the CESA, the DfE program, in conjunction with the Neighborhood Cleaners Association (NCA), the International Fabricare Institute (IFI), and a commercial vendor, conducted a 4-week study to test the economic feasibility and performance aspects of a potential alternative wet-cleaning process that does not use PCE. The alternative process primarily uses steam cleaning, spotting, tumble drying, soaps, and limited amounts of water to clean clothes. The EPA expects to release the results of the study in Fall 1993 and will address whether there may be circumstances under which wet-cleaning may be technically and economically feasible.

In addition to evaluating the wet-cleaning process, the DfE Dry Cleaning Project is assessing other pollution prevention and control options. The analysis will include evaluation of environmental and human health risks, and the performance and costs of various prevention and control technologies. This assessment, which is expected to be completed in Spring 1994, will provide the dry cleaning industry with valuable information when considering options for *compliance, risk reduction, and* pollution prevention.

For information on the Design for the Environment Dry Cleaning Project contact Jean E. (Libby) Parker, EPA, Office of Pollution Prevention and Toxics, mail code TS–779, 401 M Street, SW., Washington, DC 20460, telephone *number (202) 260–0880.*

As part of the EPA's focus on pollution prevention at this time, the Administrator strongly encourages those dry cleaners currently using carbon adsorbers for primary process vent control to replace them with refrigerated condensers as early as possible.

While the EPA conducts follow-up activities related to dry cleaners, the EPA notes that there are opportunities for State and local government to take action as well. For example, State and local governments may wish to investigate whether indoor air or ground water in their jurisdictions is being contaminated with PCE from dry cleaning. If a State or local government finds an indoor air pollution problem, for example, the government may wish to consider whether collocation of a dry cleaner in the same building with residences is appropriate.

V. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and the EPA's responses to significant comments, the contents of the docket, except for interagency review materials, will serve as the record in case of judicial review (section 307(d)(7)(A)).

B. Paperwork Reduction Act

Information collection requirements given in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2060–0234.

This collection of information is estimated to have a public reporting burden averaging 3.2 hours per response, and to require 49 hours per recordkeeper annually. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

In an Information Collection Request Action Notice dated June 5, 1992, OMB disapproved two of the information collection provisions for the PCE Dry Cleaning NESHAP. The first was the weekly records of leak detection and repair, and the second was the 5-year record retention period. The OMB questioned whether these provisions represented the least burdensome approach necessary to attain the goal of the standards. These concerns are addressed below.

With respect to the weekly leak detection and repair: The capture and reuse of PCE is the goal of the NESHAP. To the extent that there are fugitive emissions from leaks into the dry cleaning facility, the surrounding businesses, and the environment, the goal of the NESHAP cannot be attained. Leak detection is especially crucial for dry cleaning establishments located in mixed-use buildings, where fugitive PCE emissions tend to migrate into and build up in adjoining residences, restaurants, banks, and shops. (This is the conclusion of the New York Study which became available after the rule was proposed on December 9, 1991.)

Leaks result from unequal pressure in the system, and are also a function of the age, construction, and design of the system. A simple periodic inspection of the dry cleaning facility will alert the owner or operator of any leaks. The leaks can then be repaired on a timely basis, both meeting the goals of the NESHAP and saving the owner and operator the cost of replacing the PCE otherwise lost through leaks in the system. Therefore, frequent periodic inspections at all facilities are needed to ensure that the goal of the NESHAP is attained. However, to address concerns for those existing facilities with annual receipts below $75,000, these facilities are required to perform leak detection on a biweekly, rather than a weekly, basis.

With respect to the second issue, the 5-year retention period for records: The types of records required to be kept require very little storage space and are of great practical utility for purposes of determining compliance and following through with any necessary enforcement action. The recordkeeping required is so minimal that the records for a 5-year period literally could be kept in one notebook. The usefulness of the 5-year record retention period for the EPA results from the fact that dry cleaning facilities are so numerous and the EPA's inspection and audit resources so limited that inspections of any given facility will, of necessity, be rare. Congress recognized this, and granted a 5-year statute of limitations for NESHAP. A record retention period of less than 5 years would prevent the EPA from enforcing its regulations for fewer years than Congress has specifically mandated. The retention of records over 5 years also allows the EPA to establish a source's history and patterns of compliance for purposes of determining the appropriate level of enforcement action. In many cases, the additional information could benefit the source.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch (PM-223Y); U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

C. Executive Order 12291

Under Executive Order (E.O.) 12291, the EPA is required to judge whether a regulation is a "major rule" and therefore subject to the requirements of a regulatory impact analysis (RIA). The criteria set forth in section 1 of E.O. 12291 for determining whether a regulation is a major rule are as follows:

(1) The rule is likely to have an annual effect on the economy of $100 million or more; (2) the rule is likely to cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local governments, or geographic regions; or (3) the rule is likely to result in significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

This promulgated regulation is not a major rule because it would result in none of the adverse effects mentioned above. The total annual cost is estimated to be less than $14 million a year, far below the $100 million criterion set forth in E.O. 12291. The price impacts are estimated to range from 0.5 and 2.5 percent. The economic impact analysis on the industry indicated that output adjustments are about a 0.5 percent decrease. These small market adjustments indicate that no significant adverse effects on competition, employment, investment, productivity, innovation, or international trade are expected. Therefore, this regulation is not subject to an RIA.

This promulgated rulemaking was submitted to the OMB for review as required under E.O. 12291.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq) requires the EPA to consider potential impacts of promulgated regulations on small business "entities." A regulatory flexibility analysis is required if preliminary analysis indicates that a promulgated regulation is expected to have a significant economic impact on a substantial number of small entities.

Firms in the dry cleaning industry are classified as small or large based on annual sales receipts. Commercial firms are classified as small if they earn less than $2.5 million per year. By this definition, over 99 percent of commercial dry cleaning firms are small (U. S. Department of Commerce, 1990b).

The economic impacts of the regulatory alternatives were analyzed based on consumption of PCE but described in terms of dry cleaning revenues.

For the commercial area source categories, the economic analysis did indicate that many firms within the class of sources with annual receipts of less than $75,000 would be affected significantly by the promulgated standard. Below this annual receipt level are found the very smallest family-operated businesses with low annual PCE consumption and few employees. Due to economic considerations, only pollution prevention measures (i.e., leak detection and repair) are required for this class of sources under GACT—no process vent control is required.

For the class of sources with annual receipts of $75,000 or greater, the economic impacts are much smaller. Less than 260 net closures due to the promulgated regulation are projected. The analysis indicates that firms in below-average financial condition may face difficulty in obtaining the required funds to purchase control equipment from traditional loan sources, such as banks. The analysis projects between 0 and 830 firms will be in this category. These firms will either obtain other financing (vendor-aided, relatives, personal assets, etc.), close, or sell their firm. For more detail see "Economic Impact Analysis of Regulatory Controls in the Dry Cleaning Industry" (EPA–45/3–91–021b) and "Dry Cleaning Facilities—Background Information for Promulgated Standards" (EPA–450/3–91–020b).

In summary, excluding requirements for process vent control for the class of sources with annual gross receipts of $75,000 or less drastically reduces the impacts on the commercial dry cleaning sector.

E. Miscellaneous

Under the operating permit regulations codified at 40 CFR part 70, any source that is a major source under the Act or any nonmajor source subject to a standard under sections 111 or 112 of the Act must obtain an operating permit. (See § 70.3(a)(1).) The part 70 regulations also provide that a State may, at its discretion, defer all nonmajor sources from the obligation to obtain a part 70 permit until such time as the EPA finishes a rulemaking regarding the applicability of the part 70 program to nonmajor sources. Part 70 further provides that, for nonmajor sources subject to a future standard promulgated under section 111 or 112, "* * * the Administrator will determine whether to exempt any or all such applicable sources from the requirements to obtain a part 70 permit at the time that the new standard is promulgated." (See § 70.3(b)(1) and (2).)

Today's final dry cleaning rule does not exempt area source dry cleaners from permitting requirements. The EPA believes that permitting these nonmajor sources will enhance the implementation and enforcement of the rule by clarifying how the rule applies to a particular source, and how relevant parts of the to-be-promulgated general provisions apply to dry cleaners. The general provisions, which were proposed in the Federal Register on August 11, 1993 (58 FR 42760), are generic requirements that sources subject to section 112 standards must meet.

However, under the existing provisions of part 70, States may choose to defer the obligation of all nonmajor sources to obtain a permit until the EPA "completes a rulemaking to determine how the program should be structured for nonmajor sources and the appropriateness of any permanent exemptions * * *." In promulgating the permits rule, the EPA committed to complete that rulemaking within 5 years after the approval of the first State part 70 program that defers permitting of nonmajor sources.

The EPA believes, for the same reasons stated in the preamble to the operating permits rule, that the benefits to be gained from the permitting of nonmajor sources subject to this rule are not likely to accrue during the early stages of the permit program when permitting authorities will be occupied with the task of issuing permits to major sources. Once this task is complete, however, permitting authorities should be able to process permits for nonmajor sources subject to this rule on a relatively expedited basis. This expedited review should be the case, in part, because of the presumptive suitability of these sources for general permits.

In accordance with section 117 of the Act, publication of these promulgated standards was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies.

This regulation will be reviewed 8 years from the date of promulgation as required by the Act. This review will include an assessment of such factors as the need for integration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology, and reporting requirements.

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 63

Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: September 13, 1993.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I, of the Code

of Federal Regulations is amended as set forth below:

PART 9—[AMENDED]

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345(d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding a new entry to the table under the indicated heading to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories	
* * * * *	
63.322–63.325	2060–0234

* * * * *

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

3. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, 7412, 7414, 7416, and 7601.

4. Part 63 is amended by adding subpart M to read as follows:

Subpart M—National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

Sec.
63.320 Applicability.
63.321 Definitions.
63.322 Standards.
63.323 Test methods and monitoring.
63.324 Reporting and recordkeeping requirements.
63.325 Determination of equivalent emission control technology.

Subpart M—National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

§ 63.320 Applicability.

(a) The provisions of this subpart apply to the owner or operator of each dry cleaning facility that uses perchloroethylene.

(b) Each dry cleaning system that commences construction or reconstruction on or after December 9, 1991, shall be in compliance with the provisions of this subpart beginning on September 22, 1993 or immediately upon startup, whichever is later, except for dry cleaning systems complying with section 112(i)(2) of the Clean Air Act.

(c) Each dry cleaning system that commenced construction or reconstruction before December 9, 1991, shall comply with §§ 63.322(c), (d), (j), (j), (k), and (l), 63.323(d), and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) beginning on December 20, 1993, and shall comply with other provisions of this subpart by September 23, 1996.

(d) Each existing dry-to-dry machine and its ancillary equipment located in a dry cleaning facility that includes only dry-to-dry machines and each existing transfer machine system and its ancillary equipment, as well as each existing dry-to-dry machine and its ancillary equipment, located in a dry cleaning facility that includes both transfer machine system(s) and dry-to-dry machine(s) is exempt from §§ 63.322, 63.323, and 63.324, except §§ 63.322(c), (d), (i), (j), (k), (l), and (m), 63.323(d), and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) if the total perchloroethylene consumption of the dry cleaning facility is less than 530 liters (140 gallons) per year. Consumption is determined according to § 63.323(d).

(e) Each existing transfer machine system and its ancillary equipment located in a dry cleaning facility that includes only transfer machine system(s) is exempt from §§ 63.322, 63.323, and 63.324, except §§ 63.322(c), (d), (i), (j), (k), (l), and (m), 63.323(d), and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) if the perchloroethylene consumption of the dry cleaning facility is less than 760 liters (200 gallons) per year. Consumption is determined according to § 63.323(d).

(f) If the total yearly perchloroethylene consumption of a dry cleaning facility determined according to § 63.323(d) is initially less than the amounts specified in paragraph (d) or (e) of this section, but later exceeds those amounts, the existing dry cleaning system(s) in the dry cleaning facility must comply with §§ 63.322, 63.323, and 63.324 by 180 calendar days from the date that the facility determines it has exceeded the amounts specified, or by September 23, 1996, whichever is later.

(g) A dry cleaning facility is a major source if the facility emits or has the potential to emit more than 9.1 megagrams per year (10 tons per year) of perchloroethylene to the atmosphere. In lieu of measuring a facility's potential to emit perchloroethylene emissions or determining a facility's potential to emit perchloroethylene emissions, a dry cleaning facility is a major source if:

(1) It includes only dry-to-dry machine(s) and has a total yearly perchloroethylene consumption greater than 8,000 liters (2,100 gallons) as determined according to § 63.323(d); or

(2) It includes only transfer machine system(s) or both dry-to-dry machine(s) and transfer machine system(s) and has a total yearly perchloroethylene consumption greater than 6,800 liters (1,800 gallons) as determined according to § 63.323(d).

(h) A dry cleaning facility is an area source if it does not meet the conditions of paragraph (g) of this section.

(i) If the total yearly perchloroethylene consumption of a dry cleaning facility determined according to § 63.323(d) is initially less than the amounts specified in paragraph (g) of this section, but then exceeds those amounts, the dry cleaning facility becomes a major source and all dry cleaning systems located at that dry cleaning facility must comply with the appropriate requirements for major sources under §§ 63.322, 63.323, and 63.324 by 180 calendar days from the date that the facility determines it has exceeded the amount specified, or by September 23, 1996, whichever is later.

(j) All coin-operated dry cleaning machines are exempt from the requirements of this subpart.

§ 63.321 Definitions.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Ancillary equipment means the equipment used with a dry cleaning machine in a dry cleaning system including, but not limited to, emission control devices, pumps, filters, muck cookers, stills, solvent tanks, solvent containers, water separators, exhaust dampers, diverter valves, interconnecting piping, hoses, and ducts.

Articles mean clothing, garments, textiles, fabrics, leather goods, and the like, that are dry cleaned.

Area source means any perchloroethylene dry cleaning facility that meets the conditions of § 63.320(h).

Biweekly means any 14-day period of time.

Carbon adsorber means a bed of activated carbon into which an air-perchloroethylene gas-vapor stream is routed and which adsorbs the perchloroethylene on the carbon.

Coin-operated dry cleaning machine means a dry cleaning machine that is operated by the customer (that is, the customer places articles into the machine, turns the machine on, and removes articles from the machine).

Colorimetric detector tube means a glass tube (sealed prior to use), containing material impregnated with a chemical that is sensitive to perchloroethylene and is designed to measure the concentration of perchloroethylene in air.

Construction, for purposes of this subpart, means the fabrication (onsite), erection, or installation of a dry cleaning system subject to this subpart.

Desorption means regeneration of a carbon adsorber by removal of the perchloroethylene adsorbed on the carbon.

Diverter valve means a flow control device that prevents room air from passing through a refrigerated condenser when the door of the dry cleaning machine is open.

Dry cleaning means the process of cleaning articles using perchloroethylene.

Dry cleaning cycle means the washing and drying of articles in a dry-to-dry machine or transfer machine system.

Dry cleaning facility means an establishment with one or more dry cleaning systems.

Dry cleaning machine means a dry-to-dry machine or each machine of a transfer machine system.

Dry cleaning machine drum means the perforated container inside the dry cleaning machine that holds the articles during dry cleaning.

Dry cleaning system means a dry-to-dry machine and its ancillary equipment or a transfer machine system and its ancillary equipment.

Dryer means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see reclaimer).

Dry-to-dry machine means a one-machine dry cleaning operation in which washing and drying are performed in the same machine.

Exhaust damper means a flow control device that prevents the air-perchloroethylene gas-vapor stream from exiting the dry cleaning machine into a carbon adsorber before room air is drawn into the dry cleaning machine.

Existing means commenced construction or reconstruction before December 9, 1991.

Filter means a porous device through which perchloroethylene is passed to remove contaminants in suspension. Examples include, but are not limited to, lint filter (button trap), cartridge filter, tubular filter, regenerative filter, prefilter, polishing filter, and spin-disc filter.

Heating coil means the device used to heat the air stream circulated from the dry cleaning machine drum, after perchloroethylene has been condensed from the air stream and before the stream reenters the dry cleaning machine drum.

Major source means any dry cleaning facility that meets the conditions of § 63.320(g).

Muck cooker means a device for heating perchloroethylene-laden waste material to volatilize and recover perchloroethylene.

New means commenced construction or reconstruction on or after December 9, 1991.

Perceptible leaks mean any perchloroethylene vapor or liquid leaks that are obvious from:

(1) The odor of perchloroethylene;

(2) Visual observation, such as pools or droplets of liquid; or

(3) The detection of gas flow by passing the fingers over the surface of equipment.

Perchloroethylene consumption means the total volume of perchloroethylene purchased based upon purchase receipts or other reliable measures.

Reclaimer means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see dryer).

Reconstruction, for purposes of this subpart, means replacement of a washer, dryer, or reclaimer; or replacement of any components of a dry cleaning system to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source.

Refrigerated condenser means a vapor recovery system into which an air-perchloroethylene gas-vapor stream is routed and the perchloroethylene is condensed by cooling the gas-vapor stream.

Refrigerated condenser coil means the coil containing the chilled liquid used to cool and condense the perchloroethylene.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more dry cleaning facilities;

(2) For a partnership: A general partner;

(3) For a sole proprietorship: The owner; or

(4) For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking official.

Room enclosure means a stationary structure that encloses a transfer machine system, and is vented to a carbon adsorber or an equivalent control device during operation of the transfer machine system.

Source, for purposes of this subpart, means each dry cleaning system.

Still means any device used to volatilize and recover perchloroethylene from contaminated perchloroethylene.

Temperature sensor means a thermometer or thermocouple used to measure temperature.

Transfer machine system means a multiple-machine dry cleaning operation in which washing and drying are performed in different machines. Examples include, but are not limited to:

(1) A washer and dryer(s);

(2) A washer and reclaimer(s); or

(3) A dry-to-dry machine and reclaimer(s).

Washer means a machine used to clean articles by immersing them in perchloroethylene. This includes a dry-to-dry machine when used with a reclaimer.

Water separator means any device used to recover perchloroethylene from a water-perchloroethylene mixture.

Year or *Yearly* means any consecutive 12-month period of time.

§ 63.322 Standards.

(a) The owner or operator of each existing dry cleaning system shall comply with either paragraph (a)(1) or (a)(2) of this section and shall comply with paragraph (a)(3) of this section if applicable.

(1) Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or an equivalent control device.

(2) Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a carbon adsorber installed on the dry cleaning machine prior to September 22, 1993.

(3) Contain the dry cleaning machine inside a room enclosure if the dry cleaning machine is a transfer machine

system located at a major source. Each room enclosure shall be:

(i) Constructed of materials impermeable to perchloroethylene; and

(ii) Designed and operated to maintain a negative pressure at each opening at all times that the machine is operating.

(b) The owner or operator of each new dry cleaning system:

(1) Shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or an equivalent control device;

(2) Shall eliminate any emission of perchloroethylene during the transfer of articles between the washer and dryer(s); and

(3) Shall pass the air-perchloroethylene gas-vapor stream from inside the dry cleaning machine drum through a carbon adsorber or equivalent control device immediately before or as the door of the dry cleaning machine is opened if the dry cleaning machine is located at a major source.

(c) The owner or operator shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine, and shall keep the door closed at all other times.

(d) The owner or operator of each dry cleaning system shall operate and maintain the system according to the manufacturers' specifications and recommendations.

(e) Each refrigerated condenser used for the purposes of complying with paragraph (a) or (b) of this section and installed on a dry-to-dry machine, dryer, or reclaimer:

(1) Shall be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating;

(2) Shall be monitored according to § 63.323(a)(1); and

(3) Shall be operated with a diverter valve, which prevents air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser.

(f) Each refrigerated condenser used for the purpose of complying with paragraph (a) of this section and installed on a washer:

(1) Shall be operated to not vent the air-perchloroethylene gas-vapor contained within the washer to the atmosphere until the washer door is opened;

(2) Shall be monitored according to § 63.323(a)(2); and

(3) Shall not use the same refrigerated condenser coil for the washer that is used by a dry-to-dry machine, dryer, or reclaimer.

(g) Each carbon adsorber used for the purposes of complying with paragraphs (a) or (b) of this section:

(1) Shall not be bypassed to vent or release any air-perchloroethylene gas-vapor stream to the atmosphere at any time; and

(2) Shall be monitored according to the applicable requirements in § 63.323 (b) or (c).

(h) Each room enclosure used for the purposes of complying with paragraph (a)(3) of this section:

(1) Shall be operated to vent all air from the room enclosure through a carbon adsorber or an equivalent control device; and

(2) Shall be equipped with a carbon adsorber that is not the same carbon adsorber used to comply with paragraph (a)(2) or (b)(3) of this section.

(i) The owner or operator of an affected facility shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility.

(j) The owner or operator of an affected facility shall store all perchloroethylene and wastes that contain perchloroethylene in solvent tanks or solvent containers with no perceptible leaks.

(k) The owner or operator of a dry cleaning system shall inspect the following components weekly for perceptible leaks while the dry cleaning system is operating:

(1) Hose and pipe connections, fittings, couplings, and valves;

(2) Door gaskets and seatings;

(3) Filter gaskets and seatings;

(4) Pumps;

(5) Solvent tanks and containers;

(6) Water separators;

(7) Muck cookers;

(8) Stills;

(9) Exhaust dampers;

(10) Diverter valves; and

(11) Cartridge filter housings.

(l) The owner or operator of a dry cleaning facility with a total facility consumption below the applicable consumption levels of § 63.320(d) or (e) shall inspect the components listed in paragraph (k) of this section biweekly for perceptible leaks while the dry cleaning system is operating.

(m) The owner or operator of a dry cleaning system shall repair all perceptible leaks detected under paragraph (k) of this section within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt.

(n) If parameter values monitored under paragraphs (e), (f), or (g) of this section do not meet the values specified in § 63.323(a), (b), or (c), adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within 2 working days of detecting such a parameter value. Such repair parts shall be installed within 5 working days after receipt.

§ 63.323 Test methods and monitoring.

(a) When a refrigerated condenser is used to comply with § 63.322(a)(1) or (b)(1):

(1) The owner or operator shall measure the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer weekly with a temperature sensor to determine if it is equal to or less than 7.2 °C (45 °F). The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ± 1.1 °C (±2 °F).

(2) The owner or operator shall calculate the difference between the temperature of the air-perchloroethylene gas-vapor stream entering the refrigerated condenser on a washer and the temperature of the air-perchloroethylene gas-vapor stream exiting the refrigerated condenser on the washer weekly to determine that the difference is greater than or equal to 11.1 °C (20 °F).

(i) Measurements of the inlet and outlet streams shall be made with a temperature sensor. Each temperature sensor shall be used according to the manufacturer's instructions, and designed to measure at least a temperature range from 0 °C (32 °F) to 48.9 °C (120 °F) to an accuracy of ± 1.1 °C (± 2 °F).

(ii) The difference between the inlet and outlet temperatures shall be calculated weekly from the measured values.

(b) When a carbon adsorber is used to comply with § 63.322(a)(2) or exhaust is passed through a carbon adsorber immediately upon machine door opening to comply with § 63.322(b)(3), the owner or operator shall measure the concentration of perchloroethylene in the exhaust of the carbon adsorber weekly with a colorimetric detector tube, while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber to determine that the perchloroethylene

concentration in the exhaust is equal to or less than 100 parts per million by volume. The owner or operator shall:

(1) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of perchloroethylene in air to an accuracy of ± 25 parts per million by volume; and

(2) Use the colorimetric detector tube according to the manufacturer's instructions; and

(3) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

(c) If the air-perchloroethylene gas-vapor stream is passed through a carbon adsorber prior to machine door opening to comply with § 63.322(b)(3), the owner or operator of an affected facility shall measure the concentration of perchloroethylene in the dry cleaning machine drum at the end of the dry cleaning cycle weekly with a colorimetric detector tube to determine that the perchloroethylene concentration is equal to or less than 300 parts per million by volume. The owner or operator shall:

(1) Use a colorimetric detector tube designed to measure a concentration of 300 parts per million by volume of perchloroethylene in air to an accuracy of ±75 parts per million by volume; and

(2) Use the colorimetric detector tube according to the manufacturer's instructions; and

(3) Conduct the weekly monitoring by inserting the colorimetric detector tube into the open space above the articles at the rear of the dry cleaning machine drum immediately upon opening the dry cleaning machine door.

(d) When calculating yearly perchloroethylene consumption for the purpose of demonstrating applicability according to § 63.320, the owner or operator shall perform the following calculation on the first day of every month:

(1) Sum the volume of all perchloroethylene purchases made in each of the previous 12 months, as recorded in the log described in § 63.324(d)(1).

(2) If no perchloroethylene purchases were made in a given month, then the perchloroethylene consumption for that month is zero gallons.

(3) The total sum calculated in paragraph (d) of this section is the yearly perchloroethylene consumption at the facility.

§ 63.324 Reporting and recordkeeping requirements.

(a) Each owner or operator of a dry cleaning facility shall submit an initial report signed by a responsible official before a notary public certifying that the information provided in the initial report is accurate and true to the Administrator within 90 calendar days after September 22, 1993, which includes the following:

(1) The name and address of the owner or operator;

(2) The address (that is, physical location) of the dry cleaning facility;

(3) A brief description of the type of each dry cleaning machine at the dry cleaning facility;

(4) Documentation as described in § 63.323(d) of the yearly perchloroethylene consumption at the dry cleaning facility for the previous year to demonstrate applicability according to § 63.320; or an estimation of perchloroethylene consumption for the previous year to estimate applicability with § 63.320; and

(5) A description of the type of control device(s) that will be used to achieve compliance with § 63.322 (a) or (b) and whether the control device(s) is currently in use or will be purchased.

(6) Documentation to demonstrate to the Administrator's satisfaction that each room enclosure used to meet the requirements of § 63 322(a)(3) meets the requirements of § 63.322(a)(3) (i) and (ii).

(b) Each owner or operator of a dry cleaning facility shall submit a statement signed by a responsible official in the presence of a notary public to the Administrator by registered letter on or before the 30th day following the compliance dates specified in § 63.320 (b) or (c), certifying the following:

(1) The yearly perchloroethylene solvent consumption limit based upon the yearly solvent consumption calculated according to § 63.323(d);

(2) Whether or not they are in compliance with each applicable requirement of § 63.322; and

(3) All information contained in the statement is accurate and true.

(c) Each owner or operator of an area source dry cleaning facility that exceeds the solvent consumption limit certified in paragraph (b) of this section shall submit a statement signed by a responsible official in the presence of a notary public to the Administrator by registered letter on or before the 30th day following the compliance dates specified in § 63.320(f) or (i), certifying the following:

(1) The new yearly perchloroethylene solvent consumption limit based upon the yearly solvent consumption calculated according to § 63.323(d);

(2) Whether or not they are in compliance with each applicable requirement of § 63.322; and

(3) All information contained in the statement is accurate and true.

(d) Each owner or operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information and maintain such information on site and show it upon request for a period of 5 years:

(1) The volume of perchloroethylene purchased each month by the dry cleaning facility as recorded from perchloroethylene purchases; if no perchloroethylene is purchased during a given month then the owner or operator would enter zero gallons into the log;

(2) The calculation and result of the yearly perchloroethylene consumption determined on the first day of each month as specified in § 63.323(d);

(3) The dates when the dry cleaning system components are inspected for perceptible leaks, as specified in § 63.322(k) or (l), and the name or location of dry cleaning system components where perceptible leaks are detected;

(4) The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with § 63.322(m) and (n);

(5) The date and temperature sensor monitoring results, as specified in § 63.323 if a refrigerated condenser is used to comply with § 63.322(a) or (b); and

(6) The date and colorimetric detector tube monitoring results, as specified in § 63.323, if a carbon adsorber is used to comply with § 63.322(a)(2) or (b)(3).

(e) Each owner or operator of a dry cleaning facility shall retain onsite a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility.

§ 63.325 Determination of equivalent emission control technology.

(a) Any person requesting that the use of certain equipment or procedures be considered equivalent to the requirements under § 63.322 shall collect, verify, and submit to the Administrator the following information to show that the alternative achieves equivalent emission reductions:

(1) Diagrams, as appropriate, illustrating the emission control technology, its operation and integration into or function with dry-to-dry

machine(s) or transfer machine system(s) and their ancillary equipment during each portion of the normal dry cleaning cycle;

(2) Information quantifying vented perchloroethylene emissions from the dry-to-dry machine(s) or transfer machine system(s) during each portion of the dry cleaning cycle with and without the use of the candidate emission control technology;

(3) Information on solvent mileage achieved with and without the candidate emission control technology. Solvent mileage is the average weight of articles cleaned per volume of perchloroethylene used. Solvent mileage data must be of continuous duration for at least 1 year under the conditions of a typical dry cleaning operation. This information on solvent mileage must be accompanied by information on the design, configuration, operation, and maintenance of the specific dry cleaning system from which the solvent mileage information was obtained;

(4) Identification of maintenance requirements and parameters to monitor to ensure proper operation and maintenance of the candidate emission control technology;

(5) Explanation of why this information is considered accurate and representative of both the short-term and the long-term performance of the candidate emission control technology on the specific dry cleaning system examined;

(6) Explanation of why this information can or cannot be extrapolated to dry cleaning systems other than the specific system(s) examined; and

(7) Information on the cross-media impacts (to water and solid waste) of the candidate emission control technology and demonstration that the cross-media impacts are less than or equal to the cross-media impacts of a refrigerated condenser.

(b) For the purpose of determining equivalency to control equipment required under § 63.322, the Administrator will evaluate the petition to determine whether equivalent control of perchloroethylene emissions has been adequately demonstrated.

(c) Where the Administrator determines that certain equipment and procedures may be equivalent, the Administrator will publish a notice in the Federal Register proposing to consider this equipment or these procedures as equivalent. After notice and opportunity for public hearing, the Administrator will publish the final determination of equivalency in the Federal Register.

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Part II

Environmental Protection Agency

40 CFR Parts 9 and 63
National Emission Standards for Hazardous Air Pollutants for Source Categories and for Coke Oven Batteries; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD-FRL-4793-6]

RIN 2060-AD67

National Emission Standards for Hazardous Air Pollutants for Source Categories and for Coke Oven Batteries

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: On December 4, 1992 (57 FR 57534), the EPA proposed national emission standards for the control of emissions from new and existing coke oven batteries. This action promulgates the national emission standards and Methods 303 and 303A for the determination of visible emissions from by-product and nonrecovery coke oven batteries. These standards implement section 112 of the Clean Air Act (Act), which requires the Administrator to regulate emissions of hazardous air pollutants listed in section 112(b) of the Act, one of which is coke oven emissions. The final standards also implement section 112(d)(8) of the Act, which contains provisions specific to the regulation of coke oven emissions.

DATES: *Effective Date:* October 27, 1993.

See SUPPLEMENTARY INFORMATION section concerning Judicial Review.

ADDRESSES: *Docket.* A docket, number A-79-15, containing information considered during development of the promulgated standards, is available for public inspection between 8:30 a.m. and 3:30 p.m., Monday through Friday, at the EPA's Air Docket Section (LE-131), Waterside Mall, Room M1500, 1st Floor, Gallery 1, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Amanda Agnew, Standards Development Branch, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5268.

SUPPLEMENTARY INFORMATION:

I. The Standards

A. Background

The 1990 Amendments to the Clean Air Act establish specific requirements for the development of regulations governing coke oven emissions. Under section 112(d)(8), the EPA must promulgate standards based on maximum achievable control technology (MACT) for coke oven batteries by December 31, 1992. The MACT standards for existing sources can be no less stringent than the best performing 12 percent of existing sources, and standards for new sources cannot be less stringent than the limit achieved in practice by the best controlled existing source. In addition, the MACT standards for coke oven batteries must require, at a minimum, that coke oven emissions from each battery not exceed the following short-term limits: 8 percent leaking doors, 1 percent leaking topside port lids, 5 percent leaking offtake system(s), and 16 seconds of visible emissions per charge (with no exclusion for emissions during the period after the closing of self-sealing oven doors). In establishing the standards, the EPA must evaluate the use of luting compounds to prevent door leaks. (See section 112(d)(8)(A)(i).) The EPA also must evaluate use of Thompson nonrecovery coke oven batteries and other nonrecovery technologies as the basis of standards for new batteries. (See section 112(d)(8)(A)(ii).) The EPA is also to promulgate work practice regulations for new and existing coke oven batteries. These regulations are to require, as appropriate:

> The use of sodium silicate (or equivalent) luting compounds if EPA determines that the use of sodium silicate is an effective means of emissions control and is achievable, taking into account costs and reasonable commercial warranties for doors and related equipment * * * and jamb cleaning practices. (See sections 112(d)(8)(B)(i) and 112(d)(8)(B)(ii).)

In addition to these technology-based standards, the EPA is required to promulgate standards to address the risk remaining after technology-based standards are imposed. The EPA is to issue these standards for coke oven batteries within 8 years of promulgation of the MACT standards. (See section 112(f)(2)(C).) This technology-based rulemaking does not depend on the risk analysis of the Regulatory Impact Analysis (RIA), and that analysis will be revisited before any risk-based standard rulemaking for coke oven emissions.

Existing coke oven batteries must comply with the MACT standards by December 31, 1995. (See section 112(d)(8)(A).) The compliance date for meeting residual risk standards is within 90 days of promulgation, which may be extended up to 2 years under certain circumstances. (See sections 112(f)(3)-(4).) However, the Act provides an extension of the residual risk standards for coke oven batteries until January 1, 2020, provided the owner or operator of a coke oven battery complies with technology-based standards on an accelerated basis and that these technology-based standards become more stringent over time.

Under the extension track, to receive the deferral of the compliance date until the year 2020, the owner or operator must achieve the following short-term emission limitations by November 15, 1993: (1) 16 seconds of visible emissions per charge, (2) 8 percent leaking coke oven doors, (3) 1 percent leaking topside port lids, and (4) 5 percent leaking offtake systems. In addition, by January 1, 1998, the battery must meet an emission limitation that reflects the lowest achievable emission rate (LAER), as defined in section 171 of the Act. The LAER regulations may be no less stringent than the following short-term limits: 3 percent leaking doors on batteries with doors less than 6 m in height (i.e., a "short" coke oven battery) and 5 percent leaking doors on batteries with doors 6 m or more in height (i.e., a "tall" coke oven battery), 1 percent leaking topside port lids, 4 percent leaking offtake systems, and 16 seconds of visible emissions per charge. (The Administrator may consider an exclusion for emissions from doors during the period after the closing of self-sealing doors or the total mass emissions equivalent.)

In the LAER rulemaking, the EPA must establish an appropriate measurement methodology for determining compliance for coke oven doors. The measurement methodology must consider alternative methods that reflect the best technology and practices actually applied in the affected industries and must ensure that the final test methods are consistent with the performance of such best technologies and practices. Section 112(i)(8) requires that, if the LAER standard is not promulgated by January 1, 1998, the following short-term limits must be achieved: (1) 3 percent leaking doors (for short coke oven batteries), (2) 5 percent leaking doors (for tall coke oven batteries), (3) 1 percent leaking topside port lids, (4) 4 percent leaking offtake system(s), and (5) 16 seconds of visible emissions per charge, or the total mass emissions equivalent, with no exclusions for emissions during the period after the closing of self-sealing doors. (See section 112(i)(8)(B)(ii).)

The EPA must review and revise the LAER standard, as necessary, by January 1, 2007. (See section 112(i)(8)(C).) To continue to qualify for the deferral of the compliance date for the residual risk standards, the owner or operator must meet any revised LAER limits by the year 2010. (See section 112(i)(8)(C).) The owner or operator also must make

available to the surrounding community by January 1, 2000, the results of any risk assessment performed by the EPA to determine the appropriate level of a residual risk standard. (See section 112(i)(8)(E).)

Section 112(i)(8)(D) of the Act provides that, at any time prior to January 1, 1998, an owner or operator may elect to comply with residual risk standards under section 112(f) by the required date rather than comply with the LAER and revised LAER standards and compliance dates. Thus, coke oven batteries can opt out of the extension track. However, the owner or operator would be legally bound to comply with the 1995 MACT standards and the residual risk standards as of January 1, 2003. If EPA has not promulgated industry-wide residual risk standards by that time, the EPA must promulgate residual risk standards for those batteries that choose to meet residual risk standards by 2003.

B. Judicial Review

Under section 307(b)(1) of the Act, judicial review of national emission standards for a hazardous air pollutant (NESHAP) is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

C. Summary of Final Rule

Applicability. The final standards apply to all existing coke oven batteries, including by-product and nonrecovery coke oven batteries, and to all new coke oven batteries constructed on or after December 4, 1992. A "by-product coke oven battery" is defined as a source consisting of a group of ovens connected by common walls, where coal undergoes destructive distillation under positive pressure to produce coke and coke oven gas from which by-products are recovered. In a "nonrecovery coke oven battery," the coal undergoes destructive distillation under negative pressure to produce coke; the coke oven gas is combusted and by-products are not recovered. The list of operating coke oven batteries as of April 1, 1992, in appendix A to the rule, will be used to resolve any disputes that may arise concerning whether particular groups of ovens should be regarded as a single battery under these regulations.

Emission standards. The emission limitations included in the final rule for existing by-product coke oven batteries are shown in Table 1.

TABLE 1.—EMISSION LIMITS FOR EXISTING BY-PRODUCT BATTERIES[1]

Emission points	MACT track limits		LAER extension track limits		
	12/31/95	01/01/03	11/15/93	01/01/98	01/01/10
Tall doors, PLD	6.0	5.5	7.0	4.3	4.0
Foundry doors, PLD	5.5	5.0	7.0	4.3	4.0
All other doors, PLD	5.5	5.0	7.0	3.8	3.3
Lids, PLL	0.6	0.6	0.83	0.4	0.4
Offtakes, PLO	3.0	3.0	4.2	2.5	2.5
Charging, s/charge	12	12	12	12	12

PLD = Percent leaking doors; PLL = Percent leaking lids;
PLO = Percent leaking offtakes.
[1] The 11/15/93 numbers are the 30-run limits that are equivalent to the November 1993 extension track limits given in the Act, which are 5-run limits. The dates that are given in the table are the compliance dates for existing batteries.

The final standards require that, by December 31, 1995, coke oven emissions from each existing by-product coke oven battery not exceed: (1) 5.5 percent leaking doors for short batteries and 6.0 percent leaking doors for tall batteries, (2) 0.6 percent leaking topside port lids, (3) 3.0 percent leaking offtake system(s), and (4) 12 seconds of visible emissions per charge. On and after January 1, 2003, leaking doors for tall by-product coke oven batteries are limited to 5.5 percent, and emissions from short batteries must decrease to 5.0 percent leaking doors. These 2003 standards are applicable unless more stringent residual risk-based standards are promulgated under section 112(f). Unless otherwise noted, compliance with visible emission standards is determined on a 30-observation rolling average basis.

Visible emission limitations for a new by-product coke oven battery constructed at a new coke plant ("greenfield" construction) and for a new battery constructed at an existing coke plant if it results in an increase in the plant's coke capacity, are based on the emission control performance achieved by nonrecovery coke oven batteries, which are 0.0 percent leaking doors, topside port lids, and offtake system(s) and 34 seconds of visible emissions per charge.

The final standards also address by-product recovery batteries that may use a new technology in the future, such as larger ovens, operation under negative pressure, or a process with emission points different from those identified in this rule. After December 4, 1992, an owner or operator who constructs a new by-product coke oven battery or reconstructs a by-product coke oven battery and uses a new by-product recovery technology must apply for a case-by-case determination of applicable emission limitations. These case-by-case limits must be more stringent than 4.0 percent leaking doors for tall batteries, 3.3 percent leaking doors for short batteries, 0.4 percent leaking lids, 2.5 percent leaking offtakes, and 12 seconds per charge, or less than the equivalent level of mass emissions associated with these visible emission limits.

For door emissions from new and existing nonrecovery coke oven batteries, the NESHAP provides an option of either: (1) Meeting and recording an emission limitation of 0.0 percent leaking doors, or (2) monitoring and recording the pressure in each oven or common battery tunnel at least once each day to ensure that the ovens are operated under negative pressure. For charging on existing nonrecovery batteries, the owner or operator must implement specific work practices. New nonrecovery batteries must install, operate, and maintain an emission control system for the capture and control of charging emissions. If new nonrecovery batteries are constructed with lids or offtake systems, these batteries must meet limits of 0 percent leaking topside port lids and 0 percent leaking offtake system(s).

Standards for extension of compliance. As provided under section 112(i)(8) of the Act, the owner or operator of an existing coke oven battery

may choose to comply with alternative emission standards to qualify for an extension of the compliance date for residual risk standards. By November 15, 1993, coke oven emissions from existing by-product coke oven batteries are not to exceed 7.0 percent leaking doors, 0.83 percent leaking topside port lids, 4.2 percent leaking offtake system(s), and 12 seconds of visible emissions per charge. For nonrecovery batteries seeking an extension of the compliance date for residual risk, the owner or operator must meet the MACT standards for nonrecovery batteries by November 15, 1993. No additional requirements are included in the rule for LAER for nonrecovery batteries.

The final standards incorporate a tiered approach for LAER for door leaks at existing by-product coke oven batteries on this compliance track and one set of limits for LAER for the other emission points. By January 1, 1998, emissions are to be limited to: (1) 4.3 percent leaking doors for tall batteries and batteries owned or operated by foundry coke producers, (2) 3.8 percent leaking doors for all other by-product coke oven batteries, (3) 0.4 percent leaking topside port lids, (4) 2.5 percent leaking offtakes, and (5) 12 seconds of visible emissions per charge. By January 1, 2010, emissions are to be reduced to 4.0 percent leaking doors for tall batteries and batteries owned or operated by foundry coke producers, and to 3.3 percent leaking doors for all other by-product coke oven batteries, unless the Administrator has established a more stringent emission limitation under section 112(i)(8)(C). As an alternative to the LAER limits for percent leaking doors, the owner or operator of a coke oven battery with fewer than 30 ovens may comply with a 30-run average of two or fewer leaking coke oven doors per battery in lieu of the emission limitations to be achieved by 1998 and 2010.

The construction of a new battery at an existing plant without an increase in the plant's design capacity for coke production is termed a "brownfield" battery, and the complete reconstruction of a battery from the existing pad, without an increase in the plant's design capacity for coke, is called a "padup rebuild." Visible emissions from all brownfield or padup rebuild by-product coke oven batteries (except specific grandfathered batteries noted below) are limited to 3.3 percent leaking doors for short batteries, 4.0 percent leaking doors for tall batteries, 0.4 percent leaking topside port lids, 2.5 percent leaking offtake system(s), and 12 seconds of visible emissions per charge. If these grandfathered batteries do not commence construction by July 1, 1996, or 1 year after obtaining a construction permit (whichever is earlier), then they are subject to the more stringent LAER limits; otherwise, they are subject to the January 1, 1998, LAER limits. The batteries eligible to be rebuilt under this grandfather provision are Bethlehem Steel's Burns Harbor No. 2 battery, National Steel's Great Lakes No. 4 battery, and Koppers' Woodward No. 3 battery.

Under customary industry practice, a "padup rebuild" occurs when the existing brickwork of a battery is removed and a replacement battery is constructed on the old pad. Under the final rule, a "padup rebuild" includes any rebuilding project that effectively constitutes a replacement of the battery above the pad, even if some portion of the brickwork above the pad is retained (e.g., an end wall or several courses of bricks above the pad). Thus, a different test is applied than the traditional "reconstruction" test, which focuses on whether the source is substantially rebuilt. In other words, the term "padup rebuild" is not synonymous with the traditional term "reconstruction." However, any attempt to circumvent inappropriately the more stringent door leak requirement applicable to padup rebuilds will be found to constitute a padup rebuild. Accordingly, the rule provides the Administrator (or delegated State or local agency) the authority to determine whether a project is a "padup rebuild."

Batteries that were shut down but not dismantled ("cold-idle batteries") on or after November 15, 1990, can qualify for the extension track. Upon restarting, these batteries must meet the LAER limits for existing batteries and, if they are brownfield or padup rebuild batteries, they must meet the more stringent LAER requirements for these types of batteries. Batteries that were placed on cold idle prior to November 15, 1990, may also qualify for the extension track up to a total design capacity for coke of 2.7 million Mg/yr, which is based on 10 percent of the total coke capacity at the end of 1990. The EPA will process applications on a "first come-first served basis." The procedures include provisions under which an approval will lapse where a serious intention to use the capacity has not been demonstrated. If an approval lapses, the capacity of the battery is not included in the 2.7 million Mg/yr limit. After approval, the battery must meet the emission limits described above for other cold-idle batteries.

The rules also provide alternative door leak standards, to be developed on a case-by-case basis, for coke oven batteries equipped with sheds. (Sheds are enclosures attached to the side of a battery that capture emissions and route them to control devices.) Using the procedure described in the rule, the owner or operator may use an alternative emission limitation for door leaks from a new or existing coke oven battery equipped with a shed and emission control device. The alternative is expressed as the allowable percent leaking doors for doors that are controlled by the shed, an opacity limit for the control device, requirements to ensure that the structural integrity of the shed is maintained, and requirements to ensure that the shed's evacuation rate is maintained. An alternative emission limit will be approved if it is shown that the alternative achieves a reduction in coke oven emissions from the doors equal to or greater than the emission reduction that would be achieved by door leak emission controls installed to meet the emission limitations in the final standards. The determination of equivalency is based on maintaining an equivalent or lower mass emission rate for coke oven emissions emitted from the shed's control device. Inspections for door leaks under the shed are to be performed by the applicable enforcement agency on a specified schedule (weekly or monthly).

Test methods and inspections. Each of the visible emission limitations is based on a 30-run average. To determine compliance, a daily (once a day for 7 days) performance test is to be conducted for each coke oven battery using Method 303, "Determination of Visible Emissions from By-product Coke Oven Batteries," or Method 303A, "Determination of Visible Emissions from Nonrecovery Coke Oven Batteries."

The procedures described in Method 303 require the observer to walk the topside center line of by-product coke oven batteries and count the number of topside port lids and offtake systems from which any visible emissions are observed. To record leaks in the collecting main, the observer is required to walk along the topside edge closest to the main and on the catwalk over the main. Methods 303 and 303A require the observer to count leaking coke oven doors on by-product and nonrecovery ovens as the observer traverses the coke oven battery at ground level.

Various situations may arise that prevent the observer from viewing a door or a series of doors. Prior to the door inspection, the owner or operator may temporarily suspend charging operations for the duration of the inspection so that all of the doors can be viewed by the inspector. Two options

are included in the method for dealing with obstructions to view: (1) Stop the stopwatch and wait for the equipment to move or for the fugitive emissions to dissipate before completing the traverse, or (2) stop the stopwatch, skip the affected ovens, and move to a position to continue the traverse. If using the second option, the observer must return and inspect the affected ovens after completion of the traverse. If the equipment or fugitive emissions are still preventing the observer from viewing the doors, then the affected doors may be counted as not observed. If option 2 is used because of doors blocked by machines during charging operations, then, of the affected doors, the observer must exclude the door from the most recently charged oven from the inspection. The rule prohibits the owner or operator from deliberately blocking doors for the purpose of concealing door leaks during an inspection.

For each daily test, the observer must monitor and record five consecutive charges from each battery and conduct one valid and complete inspection of all doors, topside port lids, and offtake systems on each coke oven battery. The daily test results and the calculated 30-run average are provided to the owner or operator and the implementing agency by the observer. If the observer missed an observation for a day, no compliance determination is made for that day; calculation of the rolling 30-run average proceeds with the next valid observation made by the observer.

The inspection requirements for the alternative standard for sheds are different in that inspections are to be conducted once a week for safety reasons. If compliance with the alternative standard is achieved for 12 consecutive weeks, the inspection frequency decreases to monthly observations. If the limit is exceeded in any monthly inspection, the monitoring frequency increases to once a week. Because of the reduced inspection frequency, the alternative standard is not to be exceeded for any single observation and is not based on a 30-run rolling average.

Each performance test is to be conducted by a visible emission observer, certified according to the requirements of the test method and provided by the applicable enforcement agency at the company's expense. (The formula for payment of expenses included in the standard may be revised after a specified period to adjust the workload assumption, based on the enforcement agency's experience.) State agencies will be delegated authority to ensure that the inspections are conducted as required under the rule.

If a State is not delegated implementation authority or if a State is delegated implementation authority and the delegation has been revoked or withdrawn, or if the EPA has reassumed implementation authority under § 63.313(b), the regulation provides that the EPA will be the enforcement agency and the owner or operator will become responsible for contracting the required emissions inspections. A provision has been inserted in the regulation that requires the owner or operator of a battery for which the EPA is the enforcement agency to enter into a contract providing for the required inspections to be performed by a certified observer, at the expense of the owner or operator. This requirement would substitute for the requirement to pay the inspection fee. Such a contract must be in place within thirty (30) days of receipt by the owner or operator of notice from the Administrator that the EPA is the enforcement agency for the battery. The owner or operator may consult with the Agency concerning the terms of the contract and how it satisfies the requirements of the regulation. Language has also been inserted in the regulation providing that the inspection fee is to be paid on a quarterly basis, to provide an owner or operator some protection against having to enter into a subsequent inspection contract for a period of time for which an inspection fee has already been paid. While it is prudent to provide for the possibility of the EPA having to assume enforcement agency responsibilities, the Agency expects that it will rarely be required to do so. Agency policy is to delegate enforcement responsibilities under this regulation to the States; it fully expects that the States uniformly will undertake these enforcement responsibilities, and discharge them fully and adequately.

The certification requirements of Method 303 include a requirement to attend the lecture portion of the Method 9 training course, followed by classroom training, field inspections, and demonstration of proficiency in Method 303. Attendees of the course must certify that they have satisfied a 12 hour field observation requirement prior to attending the Method 303 certification course. A videotape explaining Method 303 will be made available to interested parties. This Method 303 training course will be conducted by or under the sanction of the EPA, and the field training will include instruction from experienced observers.

Observer proficiency will be demonstrated during actual visible emission tests to the satisfaction of a panel of three experienced and certified observers. However, until November 15, 1994, the EPA may waive the certification requirement (but not the experience requirement) for panel members. The panel members will be EPA, State, or local agency personnel who are designated by the EPA as certified and qualified panel members or private contractors approved by the Administrator. If the Administrator deems it necessary, the EPA will publish a list of qualified panel members in a separate notice.

Work practices. The work practice standards require the owner or operator of an existing or new coke oven battery to develop a written plan describing emission control work practices to be implemented for each battery. The plan, required by November 15, 1993, must include provisions for training and procedures for controlling emissions from coke oven doors, charging operations, topside port lids, and offtake system(s) on by-product coke oven batteries. Similar requirements are included for work practices at nonrecovery batteries for door leaks and charging emissions. Under specified conditions, the EPA may require revisions to the plan or the inclusion of additional work practices or requirements. The EPA expects work practice plans prepared for this rule and for OSHA requirements to be compatible and that the affected facility will comply with both requirements.

For coke oven batteries subject to visible emission limitations under the NESHAP on November 15, 1993 (i.e., extension track batteries), the work practice requirements become applicable following the second independent exceedance of the visible emission limitation for a particular emission point in any consecutive 6-month period. The second exceedance is independent if it is separated from the first by at least 30 days or if the 29-run average, calculated after deleting the highest observation in the 30-day period, still exceeds the applicable emission limit. A similar procedure is used to calculate independence in the case of charging emissions, under which the rolling logarithmic average is recomputed, excluding the daily set of observations with the highest daily arithmetic average. The owner or operator is required to implement the work practice requirements applicable to the emission point by no later than 3 days after written notification of the exceedance. The rule requires that the work practices be implemented each day until the visible emission limitation for the emission point is achieved for 90 consecutive days.

The owner or operator of a coke oven battery not subject to visible emission

limitations under the NESHAP until December 31, 1995 (i.e., a battery not on the extension track), is required to implement the provisions of the work practice plan for a particular emission point subject to visible emission limitations under these NESHAP (i.e., coke oven doors, topside port lids, offtake system(s), and charging operations) following the second exceedance of a federally enforceable State or local ordinance, regulation, order, or agreement for that emission point. The standards require that the work practice provisions be implemented within 3 days of receipt of written notification from the applicable enforcement agency and continued until compliance with the visible emission limitation is achieved for 90 days from the last exceedance.

For coke oven batteries with an approved alternative standard for sheds, work practices for doors under the shed must be implemented based on exceedances of the alternative standard for percent leaking doors under the shed. If one side of the coke oven battery does not have a shed, work practices for coke oven doors must be implemented based on exceedances of the applicable emission limitation for that side of the battery.

The Administrator may require revisions to the work practice plan for a particular emission point if there are two independent exceedances in the 6-month period starting 30 days after the work practices are required to be implemented. The owner or operator must notify the Administrator of any finding that the work practices are not related to the cause or the solution of the problem within 10 days of receiving a notification from the enforcement agency concerning the second independent exceedance. The Administrator may disapprove a revision or a statement that a revision is not needed. No more than two revisions per year may be requested; however, a revision in response to a disapproval of a revision, voluntary revisions, and statements that a revision is not needed do not count toward this limit.

Flares. The standards also require the installation, operation, and maintenance of a flare system (or equivalently effective alternative control device or system) by March 31, 1994, for the bypass/bleeder stacks of each existing by-product coke oven battery in operation as of December 31, 1995, that is capable of combusting 120 percent of the normal gas flow generated by the battery. New batteries must meet the flare requirements when production operations start.

The flare system must be designed to meet the EPA flare specifications in 40 CFR 60.18 (New Source Performance Standards), with certain modifications to take into account the special characteristics of the gas stream. For example, the specification for net heating values in 40 CFR 60.18(c)(3) is revised under the rule to establish a design specification for the net heating value of coke oven emissions for steam-assisted or air-assisted flares of 8.9 MJ/scm (240 Btu/scf) or greater. Installation of the flare will not constitute a physical or operational change for the purposes of determining the applicability of new source review requirements. To qualify for an exemption from the flare installation requirement, the owner or operator must submit a formal commitment to permanent closure of the battery by no later than 2 weeks from today's publication of the final rule. In no case may a battery for which the owner or operator has submitted such a closure notification operate past December 31, 1995.

Questions arose after proposal about the intent of the provision in § 63.307(b)(3)(ii) of the rule, which requires that ignition units be designed failsafe with respect to the flame detection thermocouples. A clarifying sentance was added to the rule to explain the intent of this provision. The intent was that the flame detection thermocouples are used only to indicate the presence of a flame and are not interlocked with the ignition units. Consequently, the flame detection thermocouples do not affect the operation of the ignition unit. In the event that the thermocouples fail and indicate the presence of a flame when one does not exist, the ignition unit is not deactivated and would continue to ignite any bypassed gas.

Collecting main. The collecting main is to be inspected for leaks at least once daily under the final standards. Any leaks detected must be temporarily sealed within 4 hours; a permanent repair must be initiated within 5 calendar days of detection and completed within 15 calendar days of detection unless extended by the Administrator. The time and date of collecting main leaks, temporary sealing, and repair also must be recorded.

Startups, shutdowns, and malfunctions. These provisions require the owner or operator to develop a written startup, shutdown, and malfunction plan that provides for the operation of the source in accordance with good air pollution control practices for minimizing emissions, and for procedures for correcting the malfunction as quickly as practicable. Associated reporting and recordkeeping provisions also are included.

Reporting and recordkeeping requirements. The regulation would require that certain records be maintained and the following reports be submitted: compliance certifications, notifications, and reports of uncontrolled venting episodes and certain startups, shutdowns, and malfunctions.

For each 6-month period following today's publication of the rule, the owner or operator is required to submit a semiannual compliance certification attesting that: (1) No coke oven gas was vented through the bypass/bleeder stack; (2) coke oven gas was vented through the bypass/bleeder flare system, which operated properly; or (3) a venting report was submitted because of problems with the bypass/bleeder flare system. Semiannual compliance certifications are also required to attest that: (1) No startup, shutdown, or malfunction event occurred, or such an event did occur and a report was provided as required; and (2) work practices were implemented according to the work practice provisions, if applicable.

The notification provisions include requirements for owners or operators to notify the Administrator of the compliance track election that has been made for each battery. In general, these provisions allow batteries to "straddle" (i.e., elect both tracks) up until 1998, when a binding commitment to one compliance track or the other must be made.

The recordkeeping provisions require owners or operators to keep specified records and make them accessible to the Administrator. These include certain monitoring records, records reflecting the implementation of work practice plan provisions, and records related to a startup, shutdown, or malfunction. Records also are to be maintained of data for the alternative emission standard for doors, including opacity data for the shed's control device, parameters that indicate that the evacuation rate is maintained, records of visual inspections, and operation/maintenance records for a continuous opacity monitoring system. For nonrecovery batteries, records are required of daily pressure monitoring and work practices for charging or, for new nonrecovery batteries, of design information for the charging emission control system. In addition, design information for flares or approved alternative control devices or systems must be maintained.

Provisions are also included requiring the owner or operator to make records or reports required to be maintained or required to be submitted to the enforcement agency available to the authorized collective bargaining representative for inspection and copying. The owner or operator must respond to a request within a reasonable period of time. Except for emission data as defined in 40 CFR part 2, documents (or parts of documents) containing trade secrets or confidential business information do not have to be produced, and the inspection or copying of documents will not affect any intellectual property rights of the owner or operator in the documents.

Relationship to existing regulations and requirements. Provisions also are included in the NESHAP that require the owner or operator to comply with all applicable State implementation plan (SIP) emission limitations (or subject to any expiration date, federally enforceable emission limitations contained in an order, decree, permit or settlement agreement) for the control of emissions from charging operations, topside port lids, offtake system(s), and coke oven doors in effect on September 15, 1992. Any change to these existing regulations must ensure that the applicable emission limitations and format in effect on September 15, 1992, will continue in effect; that the change includes a more stringent monitoring method and that no emission increase will occur; or that such modification makes the emission limitations more stringent while holding the format unchanged, makes the format more stringent while holding the emission limitations unchanged, or makes both more stringent. A provision also is included that addresses the relationship of the coke oven NESHAP to section 112(g) and that concludes that section 112(g) requirements will not apply to sources subject to the coke oven NESHAP.

II. Summary of Environmental, Cost, and Economic Impacts

No comments were received regarding the environmental, cost, and economic impact analyses presented for the proposed NESHAP, and no changes to the analyses have been made for the final rule. However, the list of operating batteries in appendix A to the rule has been revised to include the nonrecovery batteries. Additional information on the estimated environmental, cost, and economic impacts is included in the notice of proposed rulemaking (57 FR 57556, December 4, 1992) and the docket.

Implementation of the MACT standard is expected to reduce nationwide coke oven emissions from charging and leaks by the end of 1995 by about 80 percent to 160 Mg/yr, and emissions from bypass/bleeder stacks will be reduced by at least 98 percent to no more than 17 Mg/yr. Implementation of the LAER standard is expected to reduce nationwide coke oven emissions by the beginning of 1998 by 90 percent to about 80 Mg/yr. After the implementation of LAER and the installation of flares on bypass/bleeder stacks, the overall reduction in coke oven emissions is estimated at 94 percent. Because the control techniques focus on pollution prevention and containment within the by-product collection system, similar reductions in emissions are expected for both organic particulate matter and for the volatile organic compounds and other pollutants contained in coke oven emissions for the sources controlled under these standards.

The MACT standards for existing batteries are expected to be achieved without rebuilding the battery using improved equipment and increased maintenance, training, and inspections. The total nationwide capital cost of MACT for existing batteries is estimated at $66 million with a total annual cost of $25 million per year. Many batteries are currently achieving the MACT levels and would not incur any significant increase in costs. The MACT standard is expected to increase the price of furnace coke by 0.2 percent and the price of foundry coke by 1.1 percent. Coke production is projected to decrease by 0.7 percent for furnace coke and 1.1 percent for foundry coke. No coke batteries are projected to close as a result of the MACT standard.

The LAER standards may require the installation of new doors and jambs or the rebuilding of some of the older batteries. Assuming that all batteries will elect to meet the LAER standards, the total nationwide capital cost is estimated to be $510 million with a total annualized cost of $84 million. Both of these costs are cumulative in that they include the costs associated with MACT. The proposed LAER standard is projected to increase the price of furnace coke by 0.7 percent and foundry coke by 2.5 percent. Furnace coke production is estimated to decrease by 2.1 percent and foundry coke production to decrease by 2.6 percent. Two coke oven batteries producing furnace coke are projected to close and one coke oven battery producing foundry coke may close as a result of the LAER standard.

III. Public Participation

The EPA recognized the need for Federal regulation of coke oven emissions and the many issues and challenges posed in developing, proposing, and promulgating standards to meet the requirements of the Act. During the spring and summer of 1991, the EPA met with representatives of the industry, labor unions, States, and environmental groups to discuss available data to be used as the basis of the new regulations. A workshop format was used to explore and clarify the varying viewpoints. Following these informal discussions, the EPA announced its intention to establish a committee to negotiate a new approach for the control of coke oven emissions (57 FR 1730, January 15, 1992) and conducted formal meetings and informal workshops over the next several months to identify and resolve the many issues associated with the regulation of coke oven emissions (57 FR 4025, February 3, 1992; 57 FR 5267, February 13, 1992; 57 FR 6830, February 28, 1992; 57 FR 19295, May 5, 1992). The Committee members are listed in Table 2.

TABLE 2.—COKE OVEN BATTERIES ADVISORY COMMITTEE MEMBERSHIP

Members	Affiliation
David Anderson	Bethlehem Steel Corporation.
William Becker	State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials.
Larry Davis	Hoosier Environmental Council.
David Doniger	Natural Resources Defense Council.
Charles Drevna	Sun Coal Company.
Martin Dusel	Citizens Gas & Coke Utility.
Charles Goetz	Allegheny County Health Department.
Ralph Hall/Steve Lang.	Maryland Department of the Environment.
Philip Harter	Facilitator.
Bruce Jordan	Environmental Protection Agency.
Ward Kelsey	Pennsylvania Department of Environmental Resources.
Charles Knauss	Swidler & Berlin (representing the American Iron and Steel Institute).
Philip Mascianton/o.	USS, A Division of USX Corporation.
Robert McNelis	Citizens Organized to Keep Employment.
David Menotti	Perkins Cole (representing the American Coke and Coal Chemicals Institute).

TABLE 2.—COKE OVEN BATTERIES ADVISORY COMMITTEE MEMBERSHIP—Continued

Members	Affiliation
Tom Rarick	Indiana Department of Environmental Management.
John Seitz	Environmental Protection Agency.
Michael Shapiro	Environmental Protection Agency.
John Sheehan	United Steelworkers of America.
Bruce Steiner	American Iron and Steel Institute.
John Stinson	National Steel Corporation.
Shirley Virostek	Group Against Smog and Pollution.
Michael Wright	United Steelworkers of America.

Using various forums, the Committee discussed many challenging issues, including the emission data to be used to select a standard, potential regulatory formats and numerical emission limits, visible emission monitoring methods, costs and economics, other emission sources, and work practices. Associated issues such as enforcement and implementation needs, legal aspects, future research, and integration of the proposed rule with EPA's new permitting system also were identified and discussed.

Several of the Committee meetings were attended by representatives of local citizens groups and members of unions representing the workers at several coke plants. The union representatives made useful presentations to the Committee on several issues.

At the final negotiating session, the major issues were resolved conceptually. Thereafter, the Committee reviewed drafts of the regulatory language and the preamble, resolved remaining issues, and signed a formal agreement on October 28, 1992. The Committee members have agreed to support the standard as long as EPA promulgates a regulation and preamble with the same substance and effect of the regulation and preamble that were the subject of the final agreement.

It is important to note that the parties to the negotiation concurred with the regulation and preamble when considered as a whole. The parties did not attempt to agree on the accuracy or conclusions reached in various docket items (e.g., Regulatory Impacts Analysis). However, some of these documents served as background information to assist the parties in achieving a consensus. Inevitably in any negotiation, this means that some parties may have made concessions in one area in exchange for concessions from other parties in other areas.

Interested parties also were advised by public notice in the Federal Register (57 FR 46854, October 13, 1992) of a meeting of the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) to discuss the status of the NESHAP recommended for proposal. (See Docket Item VIII–J–7.) This meeting was held on November 18, 1992. The meeting was open to the public and each attendee was given an opportunity to comment on the standards recommended for proposal.

The standards were proposed in the Federal Register on December 4, 1992 (57 FR 57534). Public comments were solicited at the time of proposal, and copies of the proposed rule were distributed to interested parties. (See Docket Item X–C–1.)

To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was held on January 15, 1993, in Philadelphia, Pennsylvania. A total of 11 interested parties testified at the public hearing concerning issues relative to the proposed national emission standards for coke oven batteries. This hearing was open to the public, and each attendee was given an opportunity to comment on the proposed standards. (See Docket Item X–G–1.)

The public comment period was from December 10, 1992 to January 22, 1993. The record was held open for an additional 30 days to receive additional comments in support of, or in rebuttal to, the testimony presented at the hearing.

IV. Response to Public Comments

A total of 62 comment letters were received regarding the proposed standards. Commenters included one engineering firm, one trade association, one Federal agency, one State health agency, representatives of environmental groups in Pennsylvania, and Pennsylvania citizens who reside near the Clairton Works, the Nation's largest coke plant. A copy of each comment received is included in the rulemaking docket. A list of commenters, their affiliations, and the EPA docket number assigned to their correspondence is given in Table 3.

TABLE 3.—LIST OF COMMENTERS ON PROPOSED NATIONAL EMISSION STANDARDS FOR COKE OVEN BATTERIES

Docket item number	Commenter and affiliation
X–D–1	Jonathan P. Deason, Director, Office of Environmental Affairs, U.S. Department of the Interior, Washington, DC 20240.
X–D–2	Shirley Virostek, 1444 Washington Boulevard, Port Vue, PA 15133.
X–D–3	Janet Strahosky, Ohio River Basin Environmental Council, Post Office Box 41135, Pittsburgh, PA 15202.
X–D–4	Rosemary K. Coffey, 916 Bellefonte Street, Pittsburgh, PA 15232–2204.
X–D–5	Phillip J. Molé, Sun Eco Systems, Inc., 7949 West Country Club Lane, Elmwood Park, IL 60635.
X–D–6	Nancy F. Parks, Sierra Club, Pennsylvania Chapter, 201 West Aaron Square, Post Office Box 120, Aaronsburg, PA 16820–0120.
X–D–7	Marilyn Skolnick, Sierra Club—The Allegheny Group, 109 South Ridge Drive, Monroeville, PA 15146.
X–D–8	Robert P. DeTorre, 1500 Monongahela Boulevard, White Oak, PA 15131.
X–D–9	Marilyn Skolnick, Sierra Club—The Allegheny Group, 109 South Ridge Drive, Monroeville, PA 15146.
X–D–10	Richard Lawson, President, National Coal Association, 1130 17th Street, NW, Washington, DC 20036–4677.
X–D–11	Marie Kocoshis, Group Against Smog and Pollution, Post Office Box 5165, Pittsburgh, PA 15206.
X–D–12	Butch Allen, Jefferson County Department of Health, Birmingham, AL 35233.
X–D–13	Shirley Schultz, 111 Camino Court, Jefferson Borough, Clairton, PA 15025.
X–D–14	Hugh D. Young, 5746 Aylesboro Avenue, Pittsburgh, PA 15217.
X–D–15	Milton Deaner, American Iron and Steel Institute. Mark T. Engle, American Coke and Coal Chemicals Institute. David Doniger, Natural Resources Defense Council. S. William Becker, State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials. John J. Sheehan, United Steel Workers of America.
X–D–16	Marie Kocoshis, President, Group Against Smog and Pollution, Post Office Box 5165, Pittsburgh, PA 15206.
X–D–17	Barbara D. Hays, 1421 Wightman Street, Pittsburgh, PA 15217.

TABLE 3.—LIST OF COMMENTERS ON PROPOSED NATIONAL EMISSION STANDARDS FOR COKE OVEN BATTERIES—Continued

Docket item number[1]	Commenter and affiliation
X–D–18	Lawrence Stavish, 120 Bronx Avenue, Pittsburgh, PA 15229.
X–D–19	Judith Stack, 6408 Kentucky Avenue, Pittsburgh, PA 15206.
X–D–20	Gail Gregory.
X–D–21	Nicholas Kyriazi, 517 Avery Street, Pittsburgh, PA 15212.
X–D–22	Diane Doyle, President, League of Women Voters—Allegheny County Council, Community Information Center, YWCA Fourth and Wood Street, Pittsburgh, PA 15222.
X–D–23	Elissa M. Weiss, MD, 134 Dennis Drive, Glenshaw, PA 15116.
X–D–24	Suzanne M. Broughton, Director, North Area Environmental Council, 2377 Jenkinson Drive, Pittsburgh, PA 15237.
X–D–25	Mary Edmonds, 1116 Herberton Street, Pittsburgh, PA 15206.
X–D–26	Marvin L. Bellin, MD, Clinical Assistant Professor of Psychiatry, University of Pittsburgh Medical Center, 3811 O'Hara Street, Pittsburgh, PA 15213–2593.
X–D–27	Barbara Adler, 6019 Wellesley Avenue, Pittsburgh, PA 15206.
X–D–28	Linda Innocenti.
X–D–29	Louis B. Freeman, 399 Cavan Drive, Pittsburgh, PA 15236.
X–D–30	Matthew R. Brunner.
X–D–31	John Hummel, Upper Allegheny Preservation Association, Post Office Box 207, Kennerdell, PA 16374.
X–D–32	Timothy L. Cimino, 5135 Dearborn Street, Pittsburgh, PA 15224–2432.
X–D–33	Terri Polesky.
X–D–34	Harry Colgure, GWC Building, Apartment 712, Clairton, PA 15025–1754.
X–D–35	Samuel Hays, Chair, Conservation Committee, Sierra Club, Allegheny Group, 1421 Wightman Street, Pittsburgh, PA 15217.
X–D–36	Robert DeTorre, Group Against Smog and Pollution, 1500 Monongahela Boulevard, White Oak, PA 15131.
X–D–37	Shirley Virostek, Group Against Smog and Pollution, 1444 Washington Boulevard, Port Vue, PA 15133.
X–D–38	Janet Strahosky, Ohio River Basin Environmental Council, Post Office Box 41135, Pittsburgh, PA 15202.
X–D–39	Dennis Winters, Sierra Club, Eastern Pennsylvania Group, 619 Catharine Street, 3rd Floor, Philadelphia, PA 19147.
X–D–40	Sam Spofforth, Clean Water Action, 35 North 8th Street, Allentown, PA 18102.
X–D–41	Sara Nichols, Staff Attorney, Delaware Valley Citizen's Council for Clean Air, 311 Juniper Street, Room 603, Philadelphia, PA 19107.
X–D–42	Marie Kocoshis, President, Group Against Smog and Pollution, Post Office Box 5165, Pittsburgh, PA 15206.
X–D–43	Butch Allen, Jefferson County Department of Health, Birmingham, AL 35233.
X–D–44	Elenore Seidenberg, 220 North Dithridge Street, Number 301, Pittsburgh, PA 15213.
X–D–45	Donna Foljone, 307 Burlington Road, Pittsburgh, PA 15221.
X–D–46	Professor W. W. Mullins, Department of Metallurgical Engineering and Materials Science, Carnegie-Mellon University, 8309 Wean Hall, Pittsburgh, PA 15213.
X–D–47	Ms. Jonni Kay Pietin, 121 Kollar Drive, McKeesport, PA 15133.
X–D–48	Joanne R. Denworth, President, Pennsylvania Environmental Council, Benedum Trees Building, 223 4th Avenue, Suite 503, Pittsburgh, PA 15222.
X–D–49	David Jasnow, 5649 Marlborough Road, Pittsburgh, PA 15217.
X–D–50	Betsy Ensminger, 4118 Winterburn Avenue, Pittsburgh, PA 15207.
X–D–51	Maryann Hodzic, 2421 Pin Oak Place, Pittsburgh, PA 15220.
X–D–52	Suzanne Bailey, 1112 Greenfield Avenue, Pittsburgh, PA 15217.
X–D–53	Patricia B. Pelkofer, 252 South Winebiddle Street, Pittsburgh, PA 15224.
X–D–54	Peggy Allen Hledish, 531 Allenby Avenue, Pittsburgh, PA 15218.
X–D–55	Jim Lampl, 607 Cherokee Street, Irwin, PA 15642.
X–D–56	R. Joseph Weinzapfel, 5–G Jenny Lynn Court, Pittsburgh, PA 15239.
X–D–57	Mary Burlando, 241 Silver Oak Drive, Pittsburgh, PA 15220.
X–D–58	Mary S. Kostakos, Chatham College, Woodland Road, Pittsburgh, PA 15232–2826.
X–D–59	Mr. and Mrs. Louis E. Eback, Kingston Apartments, Number 609, Pittsburgh, PA 15202.
X–D–60	Dr. Maryann Donovan-Peluso, 643 East End Avenue, Pittsburgh, PA 15221.
X–D–61	Cindy J. Corbett, 5703 Jackson Street, Number 2, Pittsburgh, PA 15206.
X–D–63	Nancy F. Parks, Sierra Club, Pennsylvania Chapter, 201 West Aaron Square, Post Office Box 120, Aaronsburg, PA 16820–0120.

[1] The docket number for this rulemaking is A–79–15. Dockets are on file at the EPA's Air Docket Section, Waterside Mall, room 1500, 1st Floor, 401 M Street, SW., Washington, DC 20460.

Most of the comment letters contained multiple comments, which have been organized and addressed under the following general topics: General, Test Methods and Monitoring, Reporting and Recordkeeping, and Miscellaneous. These comments have been carefully considered, and, where determined to be appropriate by the Administrator, changes have been made in the final standards. A summary of the comments and the Agency's responses is given below.

A. General

Comment: A total of 57 environmental groups and local citizens comment that the proposed standards are too weak; 35 of these commenters specifically argue that the rule does not provide any incentive for improvement from the 19 batteries in Allegheny County, Pennsylvania, where stronger regulatory controls are already in practice (commenters X–D–2, X–D–3, X–D–4, X–D–9, X–D–13, X–D–14, X–D–16, X–D–17, X–D–18, X–D–19, X–D–20, X–D–21, X–D–22, X–D–23, X–D–25, X–D–27, X–D–28, X–D–29, X–D–31, X–D–32, X–D–33, X–D–40, X–D–41, X–D–42, X–D–44, X–D–45, X–D–46, X–D–47, X–D–49, X–D–50, X–D–52, X–D–58, X–D–60, X–D–61, and X–D–63).

Response: The EPA agrees that some of the batteries in Allegheny County have achieved exemplary levels of emission control performance, especially five batteries that are either new or recently rebuilt and are subject to some of the most stringent emission limits in the Nation. Performance data that were collected as a part of Allegheny County's regulatory program played a major role in the development of the emission limits in the rule. In addition, coke oven batteries in Allegheny County pioneered the widespread installation of controls for emissions from bypass/bleeder stacks,

for which controls have been included as a provision in the rule.

Consequently, other coke oven batteries in the United States will obtain significant emission reductions as they achieve the control levels demonstrated by the best performing batteries in Allegheny County. However, the EPA does not agree that the NESHAP will not result in additional improvement in emission control for the Allegheny County batteries. The format of the rule requires step-wise improvements in emission control over time (e.g., compliance with the most stringent limits for batteries on the extension track is required by January 1, 2010). Although the November 1993 limits, which were specified in the Clean Air Act for batteries on the extension track, will result in only a marginal improvement in control for batteries in Allegheny County, the step-wise increase in stringency will require all of the coke oven batteries in the County to improve their performance to comply with the LAER emission limits. As the standards increase in stringency over time, the emission control performance of most of the batteries in the County must improve to maintain compliance. For example, 12 of the 19 batteries must improve door leak control to meet the 2003 MACT limits for percent leaking doors (based on 1990 data). To meet the extension track limits in 2010, a total of 18 of the 19 batteries must improve door leak control.

The EPA examined emission control performance data for the USS-Clairton batteries separately and for all of the Allegheny County batteries collectively when they were operating at normal capacity in 1989 and 1990. The data for percent leaking doors, percent leaking topside port lids, percent leaking offtake system(s), and seconds of visible emissions per charge showed that if the 12 USS-Clairton batteries were placed on the extension track, emissions at their current level of performance would be reduced by 65 percent by 1998 and 70 percent by 2010. If these batteries are placed on the MACT track, current emissions would be reduced by 40 percent by 1995. If all 19 batteries at the 3 coke plants in Allegheny County are considered, emissions at their current level of performance would be reduced on the extension track by 70 percent in 1998 and by 75 percent in 2010. If these batteries are placed on the MACT track, emissions would be reduced by 50 percent in 1995. (See Docket Item X-B-1.)

As a consequence of the staged reduction in coke oven emissions, the exposure of residents to these emissions will also decrease. In addition, the 1990 Amendments to the Act specifically address citizen exposure by requiring the EPA to address the risk remaining after technology-based standards are imposed. The EPA is to issue these standards within 8 years of promulgation of the MACT standards.

Comment: Two commenters (X-D-2 and X-D-49) fear that coke plants in Allegheny County will "backslide" from existing control requirements (i.e., that the NESHAP may replace or "water down" regulatory controls already in practice). In support, one commenter submits that the long-term average performance at Clairton Coke of 4.3 percent leaking doors compared to the statutory long-term average performance of 5.8 percent leaking doors will result in relaxation of local standards.

Response: Provisions are included in the rule to prevent this situation. As discussed in the preamble at 57 FR 57544 (and stated in § 63.312 of the regulation), a SIP cannot be revised to be less stringent than it was prior to September 15, 1992. The coke oven batteries in Allegheny County will remain subject to any applicable State or local regulations in addition to this rule. Thus, the final standards will supplement and not weaken any regulatory controls now in place. The specific example of a long-term average of 5.8 percent leaking doors refers to the November 1993 limits specified in the Act and not to the more stringent emission limits developed by the Coke Oven Battery Advisory Committee that must be met at staged intervals (starting in December 1995 for MACT and extending through January 2010 for LAER). The emission limits developed by the Committee will require long-term performance levels below 5.8 percent leaking doors.

Comment: Local environmental groups and citizens residing near the Clairton facility do not agree with the scope of control under the proposed rule. According to commenters X-D-3, X-D-8, and X-D-42, controls are warranted for quenching, combustion stacks, pushing, and decarbonization. Combustion stacks, pushing, and decarbonization operations are also substantial sources of particulate matter warranting control, particularly in a PM-10 (particulate matter less than 10 microns in diameter) nonattainment area (commenters X-D-2, X-D-3, X-D-39, X-D-41, X-D-42, and X-D-53). Emissions of PM-10 are of great concern to the commenters because these aerosols can be contaminated with toxins and inhaled into the lungs.

Response: The EPA believes that the emission points subject to the rule are the major sources of the listed hazardous air pollutant "coke oven emissions" associated with a well-maintained and properly operated coke oven battery. The controls and work practice requirements included in the rule will provide concurrent control of many air toxics and hazardous pollutants included in the coke oven emissions from batteries or bypass/bleeder stacks. As discussed in the preamble, toxic or hazardous air pollutants (organics, metals, and particulate matter) can also be emitted from other sources such as quenching, pushing, combustion stacks, and decarbonization operations. In many cases, these emission points are subject to existing State or local regulations and consent decrees. New Federal regulations affecting air emissions from other emission sources in the plant also are now being implemented (e.g., NESHAP for by-product plants and benzene waste operations), which will result in emission reductions for benzene (and other hazardous pollutants) and volatile organic compounds. In addition, the EPA plans to collect information on emissions and emission control technologies for air emission sources associated with ferrous manufacturing and will develop MACT standards for them prior to the year 2000. The ferrous manufacturing source categories will include: (1) Review of the existing NESHAP for coke by-product recovery plants; (2) pushing, quenching, and battery stacks; (3) ferroalloys production; (4) integrated iron and steel manufacturing; (5) nonstainless steel manufacturing; (6) *stainless steel manufacturing;* (6) *iron foundries;* (7) *steel foundries;* and (8) *steel pickling—HCl process.* (See Docket Items VIII-J-6 and X-I-1.) Although the EPA understands and sympathizes with the commenters' desire for immediate further regulation of all emission points at these facilities, Congress did not mandate immediate controls for the emission points mentioned in their comments, and the EPA is not precluded from adopting regulations one step at a time.

Comment: Local environmental groups and citizens point to the high levels of unregulated toxic and hazardous pollutants emitted from the coke plants in Allegheny County. According to Commenter X-D-42, State legislation will not allow more stringent controls on coke ovens than those required under the 1990 Amendments. In addition, coke plants in the Pittsburgh area are located in heavily industrialized river valleys that are prone to air inversions (commenters X-D-3, X-D-38, X-D-47, X-D-48, X-D-

49, X–D–55, X–D–57, X–D–60, and X–D–63). The commenters ask that additional consideration be given to Allegheny County, which has the largest coke plant in the country, the largest concentration of coke oven batteries, and possibly the highest level of citizen exposure. They ask for the development of special standards specific to Allegheny County, a special health study, or for national standards that are geared to local communities where pollution exposure is particularly bad due to meteorology, clusters of facilities, local terrain, size of the facility, and/or total emissions from the facility (commenters X–D–35, X–D–36, X–D–38, X–D–41, X–D–42, X–D–53, X–D–58, X–D–61, and X–D–63). Commenter X–D–18 also suggested innovative approaches such as: (1) Fostering pollution prevention by including incentives for plants to invest in technology to reduce the volume of pollutants generated during the production process, (2) providing tax incentives for pollution reduction or research and development, (3) using money from fines to fund research and development of new technologies and methods, and (4) performing an international study on coke oven pollution control so new developments can be incorporated in the plant.

Response: The provisions in the Act with respect to coke ovens require the development of a technology-based standard to be followed by the development of a residual risk standard at a later date. The EPA certainly has acted reasonably in developing rules consistent with this approach. The opportunity for special provisions for Allegheny County, or any other location that may have high exposure levels and high risk, will be available under the risk standard. The final standards are technology-based and are applied uniformly to all coke plants in the United States. These coke plants all use the same cokemaking process and the same emission control technology applies to each of them; consequently, there was no basis for a special subcategorization for batteries in Allegheny County. However, the risk standard to be developed must address the site-specific nature of any high levels of residual risk that might remain after today's final standards are implemented.

The EPA is also interested in innovative approaches, and there are continuing and emerging efforts in this area. The EPA has identified and investigated the merits of new technology (including form cokemaking and, more recently, the Jewell nonrecovery process) and attempts to stay informed of any new foreign developments, especially by coke oven batteries in Great Britain, Germany, and Japan. Studies of new technologies are planned in an effort administered jointly by the U.S. Department of Energy and the EPA as required under the Act. (See Docket Item VIII–I–1.) Consequently, many of the commenter's suggestions are now being evaluated through funding of research and development programs to improve coke oven emission control technology.

Comment: A total of 42 commenters, consisting of local environmental groups and Allegheny County residents, argue that the standards are not adequate to protect public health (commenters X–D–2, X–D–3, X–D–4, X–D–13, X–D–14, X–D–16, X–D–17, X–D–18, X–D–20, X–D–21, X–D–22, X–D–23, X–D–26, X–D–27, X–D–29, X–D–30, X–D–33, X–D–34, X–D–35, X–D–36, X–D–37, X–D–39, X–D–41, X–D–42, X–D–44, X–D–45, X–D–46, X–D–47, X–D–48, X–D–49, X–D–50, X–D–51, X–D–52, X–D–53, X–D–54, X–D–56, X–D–57, X–D–58, X–D–59, X–D–60, X–D–61, and X–D–63). In support, commenters cite various cancer risk estimates of 1 in 55 over 70 years (commenters X–D–4, X–D–33, X–D–39, and X–D–41); 1 in 100 over 70 years (commenters X–D–52 and X–D–54); 1 in 300 over 70 years (commenter X–D–53); a range of 1 in 55 to 1 in 300; and 1 in 800 after control for benzo(a)pyrene (commenter X–D–56). Commenter X–D–42 states that recent benzo(a)pyrene readings from an ambient monitor atop a local school equate to a cancer risk of 1 in 240. Commenter X–D–39 compares the risk level after control to the 1 in 1,000,000 benchmark used in Clean Water Act regulations. Many of the commenters also point out that these risk estimates do not include risks other than lung cancer or chronic effects, the effects of other toxic and hazardous pollutants, emissions from other sources and facilities in the area, or special impacts on the elderly or children. In support, commenter X–D–60 cites a recent journal article ("Molecular and Genetic Damage in Humans from Environmental Pollution in Poland," Perera et al., *Nature*, 360:256–258) regarding the health effects of exposure to polycyclic aromatic hydrocarbons from industrial and residential burning of coal. Many of the commenters state that this risk is not acceptable and ask that the proposal be revised or withdrawn. Commenter X–D–35 also states that the Federal Register notice is insufficient because information as to the relative risk to surrounding communities is not presented.

Response: The proposed emission limits were developed under the 1990 Amendments to the Act and are based on available emission control technology and the performance levels that are achievable by the technology. The Act specifically defers immediate implementation of residual risk standards. Estimates of risk to the surrounding community simply do not play a role in the development of MACT standards. (See sections 112(d)(8) (a) and (c).) However, the EPA is required under the Act to develop residual risk standards within the next 8 years. Provisions within the Act will allow certain batteries to defer meeting this risk standard until the year 2020. To defer the risk standard, these batteries must meet the more stringent LAER emission limits.

Comment: Commenters X–D–2, X–D–16, X–D–35, X–D–37, X–D–42, and X–D–63 believe the regulatory negotiation process was unfair, exclusive, and tilted in favor of the industry over the interests of the citizens of Clairton.

Response: In any negotiation process, it is sometimes difficult to understand that some parties may have accepted certain provisions in exchange for others in order to reach consensus on the regulation as a whole. No one group or individual involved in the negotiations agreed with all the requirements or obtained all desired provisions. Many new precedents were set in this regulation (e.g., independent daily monitoring paid for by the industry), emission controls were included for one major emission point (bypass/bleeder stacks) beyond the battery proper, and strong work practice requirements were included. The emission reductions achieved by the rule will bring improvement to the community of Clairton as well as to other communities in the country where coke oven batteries are located. When viewed as a whole, the rule was accepted by many different parties with diverse interests.

The commenters speak of exclusion from the process. The EPA actively solicited public participation in this rulemaking process, and responding to these comments on the proposal is a continuing part of that effort. For practical reasons, not all citizens can participate in a regulatory negotiation; however, an effort was made to ensure that citizens and citizen groups, such as the Group Against Smog and Pollution, were represented on the Advisory Committee. In addition, there have been several opportunities for direct involvement by individuals, including NAPCTAC meetings, a 1987 public hearing in Clairton, Pennsylvania, and a

recent public hearing in Philadelphia, Pennsylvania. Several opportunities have also been given for the submission of written comments, all of which have been considered.

The EPA also believes it is productive for local citizens and environmental groups to continue to work with the industry, States, and local agencies to address site-specific problems and develop solutions. Local citizens have been effective in obtaining improved emission control of coke oven batteries, and the benefits of their efforts are now being applied to coke batteries nationwide under these NESHAP.

Comment: Commenter X–D–37 suggests that the language in the regulation be clarified to require an igniter for each bypass/bleeder stack as opposed to an igniter for each battery. No alternative method or allowance standard should be permitted. According to the commenter, the EPA also should update the preamble to state that 13 venting incidents had occurred over a 4-year period (1987 through 1990) rather than 12 incidents over a 3-year period (1987 through 1989). Commenter X–D–47 believes the EPA erred in requiring bleeder stack flares only for automatically operated stacks and that manually operated stacks would still be allowed to vent raw gas.

Response: The standards do not require an igniter for each bypass/bleeder stack; instead, a bypass/bleeder stack flare system must be installed that is capable of controlling 120 percent of the normal gas flow generated by the battery. This approach will provide the desired level of control, without imposing on battery operators the unnecessary additional costs that would be associated with a requirement to install flares on each bleeder stack, or a requirement to dismantle bleeder stacks that are not themselves individually igniter-equipped. The regulation prohibits venting other than through the flare system (or approved alternative control device), which provides an adequate safeguard against venting raw coke oven gas to the atmosphere. The EPA anticipates that most owners or operators will comply with these requirements by installing flares on one or more bypass/bleeder stacks. Coke oven gas would be routed to these flares (e.g., through the collecting main). The dampers on any other bypass/bleeder stacks that were not flare-equipped would be closed, which would prevent coke oven gas from being emitted to the atmosphere through these bypass/bleeder stacks. The requirement to install a bypass/bleeder stack flare system applies to both automatically or manually operated stacks. With approval by the Administrator, an equivalent alternative system with a destruction capability of at least 98 percent can also be used so as not to preclude the use of new or improved technology.

Comment: Commenter X–D–2 believes that daily inspections are unworkable in the long run and will not compensate for a 30-day rolling average computation. Other commenters add that the 30-day average smooths out all the spikes and, over time, masks real problems (commenters X–D–4, X–D–9, X–D–13, X–D–14, X–D–16, X–D–21, X–D–22, X–D–25, X–D–27, X–D–29, X–D–31, X–D–33, X–D–38, X–D–41, X–D–42, X–D–47, X–D–52, X–D–53, X–D–56, and X–D–60).

Response: This issue was discussed at length by the Advisory Committee, and an agreement was reached that would provide for limits based on a 30-run average for the rule while maintaining single-run limits for SIP's and consent decrees. The format of the rule is a 30-run average to reflect long-term emissions and exposure levels, which are associated with chronic health effects. However, the 30-run average will also limit the frequency and extent of some short-term excursions because a single high excursion can result in exceeding the 30-run limit for that day, and repeated poor performance may result in exceedance of the 30-run limit on additional days. Each daily exceedance of the 30-run limit may be considered a violation. If daily single-run limits were developed that were statistically equivalent to these 30-run limits, the single-run limits would have been significantly higher than the 30-run limits.

In addition, current SIP's and consent decrees are enforced based on exceeding a limit for any single observation. These limits will remain in effect (see the previous discussion of "backsliding") and provide a cap for a short-term excursion from a single high observation. The Committee agreed that the preferred approach would apply a 30-run average for the rule, with inspections by independent observers, and the maintenance of current single-run limits in SIP's.

Another factor that should result in fewer short-term excursions under the rule is that daily inspections are required. Many batteries, including those in Allegheny County, are inspected less frequently by the enforcement agency. In many cases, the data from these daily inspections can be used to improve the enforcement of SIP's and consent decrees.

Comment: According to commenter X–D–35, the Federal Register notice of proposal is also deficient because it did not present detailed information on discussion of the relative performance of various coke oven batteries at different levels of technical capability.

Response: The EPA does not agree that the notice of proposed rulemaking is deficient. The pace of the negotiations precluded compiling and analyzing the data in the level of detail desired by the commenter. However, all information and data considered by the Committee are in the docket and available for public inspection. These include performance data for individual batteries, data summaries, and a listing of batteries ranked by performance. This information was made available during the negotiation process to all Committee members, including the representatives from the Group Against Smog and Pollution.

B. Test Methods and Monitoring

Comment: Commenter X–D–12 explains that certain coke plants in Jefferson County, Alabama are performing charging and pushing operations at night when surveillance is not possible. For this reason, only a portion of Method 303 can be enforced.

Response: If a facility pushes and charges only at night, then that facility must, at its option, change their schedule and charge during daylight hours or provide adequate lighting so that visible emission inspections can be made at night. "Adequate lighting" will be determined by the enforcement agency.

Comment: Commenters X–D–33 and X–D–48, residents of the Pittsburgh area, note that coke oven emissions are higher at night and on weekends and holidays.

Response: The standards should eliminate this problem because independent monitoring will be required 7 days a week, including holidays. This type of enhanced monitoring, coupled with the new work practice rules, is expected to aid in improving emissions control.

Comment: Commenter X–D–12 asks how to differentiate ovens and the proper emission limits for merchant plants or batteries that produce a percentage of furnace and foundry coke, and if this compounds the required monitoring calculations.

Response: The definition of "foundry coke producer" included in the rule does not require differentiating ovens or additional monitoring calculations for daily inspections if the battery changes the type of coke produced during the year. The coke plant is considered to be a foundry producer and subject to numerical limits for foundry coke plants

if the annual design capacity on January 1, 1992, was less than 1.25 million Mg/yr (not including the capacity of the specific batteries identified under § 63.300(d)(2) of the rule or cold-idle batteries included in the design capacity pursuant to § 63.304(b)(6) of the rule) and the plant was not owned or operated by an integrated steel producer as of that date.

Comment: Commenter X–D–12 asks who is responsible for the cost of inspections on days when inspections cannot be performed (i.e., in the case of bad weather). Commenter X–D–41 asks what happens if the responsible agency fails to have the inspections done?

Response: The fees to be paid by the industry to cover the cost of monitoring and inspections will be provided annually with the expectation that inspections occur each day. The size of the fee is a function of the number of batteries at the plant, and it is not affected by the number of inspections that are made. Provisions are included in the rule to account for data from days on which inspections of one or more emission points cannot be performed; however, the EPA expects that this situation will occur very infrequently. If a State is not enforcing the program as required, the EPA regional office may take over and implement the enforcement program. In addition, the Act contains provisions to ensure that the enforcement agency does fulfill its obligations under the law.

Comment: Commenter X–D–12 asks if industry is still responsible for the cost of Method 303 inspections to enforce a SIP or consent decree with more stringent requirements.

Response: In the negotiations, the industry agreed to pay for Method 303 inspections. As long as Method 303 is applied, the cost of Method 303 inspections will be borne by the industry and will be based on the formula in the rule. Any data collected by Method 303 that are consistent with the SIP or consent decree inspection method can be used to enforce the SIP or consent decree. If the SIP or consent decree requires additional labor hours beyond those allotted for the Method 303 observer under this rule, the cost of these additional hours is not covered under the rule's formula for inspection cost.

Comment: Commenter X–D–43 asks EPA to clarify that emission fees collected under title V of the Act are not to be used to pay for the required inspections. The inspection fees are in addition to the title V fees.

Response: In the negotiations, it was understood that the inspection fees required under this rule are in addition to title V fees, so long as the title V fees do not cover the inspections required under this rule. (See § 63.309(a)(4)(iii).)

Comment: Commenter X–D–12 asks how many lids count in the calculation of percent leaking lids where there are four lids per oven but only three are ever used for staged charging. The concern is over the total number of lids that should be used in the denominator of the calculation of percent leaking lids.

Response: If the fourth lid can be removed and is used for charging or decarbonizing during normal operation, the calculation of percent leaking lids should be based on four lids per oven. If the fourth lid is not used for charging or decarbonizing during normal operation, the calculation should be based on three lids per oven.

Comment: Commenter X–D–12 notes that the term "B" in the equation for determining costs for inspections (see 57 FR 57567) is not defined.

Response: The "B" in the cost equation is a Federal Register typographical error and was not intended as part of the equation.

C. Reporting and Recordkeeping

Comment: Commenter X–D–12 suggests that the rule require all plants to report their commitment to either the MACT or LAER standard in 1993, with no provision for changing their initial decision to avoid situations where inspectors are hired but not needed because the plant decides to drop from the extension track.

Response: The rule allows the plants to "straddle" until a binding declaration is made in 1998. This means the owner or operator of the battery in question has chosen to meet both the MACT and LAER limits, and monitoring would begin in November 1993 rather than 1995. If the owner or operator of a plant changes from LAER to MACT in 1995, the plant will be required to meet MACT standards, which will require daily inspections. A commitment to meet the November 1993 limits is a commitment to pay for the cost of daily inspections annually, starting in November 1993.

Comment: Commenters X–D–9 and X–D–41 urge EPA not to implement self-certifying reporting requirements under the standards. (See 57 FR 57539.) Previous Federal and industry experience with self-certification has not worked according to these commenters.

Response: The rule includes the innovative provisions for daily inspections by an independent observer who must meet specific training requirements to qualify as a visible emission inspector. Because the independent inspector will make the visible emission observations for compliance determinations, the Agency does not agree that self-certification in the initial or semiannual compliance certifications included in the reporting requirements will, in this case, present the problems implied by the commenters.

D. Miscellaneous

Comment: Commenters X–D–4, X–D–9, X–D–13, X–D–14, X–D–16, X–D–21, X–D–22, X–D–27, X–D–28, X–D–29, X–D–31, X–D–33, X–D–38, X–D–39, X–D–41, and X–D–53 believe penalties for violations should be included in the rule.

Response: The commenters are mistaken that the rule fails to provide for civil and criminal penalties. Penalties for violations are not cited in the rule because enforcement of the rule (and permit requirements) is the responsibility of the EPA or delegated State (i.e., a State with an approved operating permit program). Provisions for maximum penalties (up to $25,000 per day per emission point) are included in the Act. The 30-day rolling average is calculated each day; consequently, a penalty can be assessed each day for any exceedance of the limit for each emission point. However, penalties are assessed at the discretion of the enforcement agency, which may consider many factors (frequency, duration, severity of violation, good faith efforts to correct, etc.) in determining an appropriate penalty. In addition, the Act includes provisions to ensure that the enforcement agency fulfills its responsibilities under the law.

Comment: Commenter X–D–12 asks if new operating permits based on Method 303 need to be issued now if the LAER track is followed.

Response: Yes, but approval of the State permit program is required before operating permits can be issued. As discussed in the preamble at 57 FR 57555, the EPA intends to delegate authority for implementing the NESHAP to the States as soon as possible after promulgation.

The LAER standards will become effective on November 15, 1993. Under the final rules establishing requirements for State operating permit programs (40 CFR part 70), States must submit proposed permit programs to EPA for approval by November 15, 1993. Sources subject to the permit program must submit complete permit applications within 1 year after a State program is approved (including an interim approval) or, where the State

program is not approved within 1 year after a program is promulgated by the EPA.

Comment: Commenter X–D–37 suggests the rule should include provisions for planned outages. Companies should be required to notify the regulatory agency of work plans at least a week in advance. This, coupled with a followup report, would prevent a plant from hiding emission releases during a planned outage.

Response: As discussed in the preamble to the proposed rule (see 57 FR 57548, December 4, 1992), the owner or operator must operate and maintain the battery and its air pollution control technology at all times, including during startups, shutdowns, and malfunctions, in a manner consistent with good air pollution control practices for minimizing emissions to the levels required by the applicable standards. Emissions in excess of the applicable standards occurring during a planned outage would be a violation unless the emissions were the result of an incident determined to constitute a malfunction. (However, it would be difficult to qualify a "planned" outage as a malfunction.) In addition, the provisions included in the rule for independent daily monitoring ensure that an inspector is at the site every day to ensure that proper procedures (e.g., those included in the startup, shutdown, and malfunction plan and the work practice plan) are followed as applicable. The presence of an independent inspector on the site each day should prevent the hidden release of emissions during an outage.

Comment: Commenter X–D–10 stresses the significance of the Committee agreement to support the standards as long as the EPA proposes and promulgates a regulation and preamble with the same substance and effect of the final agreement. The organizations that negotiated the agreement also reiterate their support (comment X–D–15).

Response: The EPA understands the importance of honoring this successful negotiated agreement and has made no change to the proposed rule or its rationale that would in any way alter the substance and effect of the agreement.

Comment: Nineteen commenters requested that the EPA hold a public hearing in Clairton, Pittsburgh, or Allegheny County, Pennsylvania (rather than at EPA facilities in Research Triangle Park, North Carolina) so that affected citizens residing near the Nation's largest coke plant could have an opportunity to express their views on the proposed rule. In subsequent written and oral testimony, commenters reiterated their request for a second hearing in Pittsburgh or Clairton so that more citizens wishing to discuss their concerns would be able to attend (commenters X–D–2, X–D–6, X–D–7, X–D–8, X–D–11, X–D–14, X–D–16, X–D–21, X–D–24, X–D–25, X–D–29, X–D–31, X–D–33, X–D–40, X–D–41, X–D–50, X–D–52, X–D–54, X–D–57, and X–D–63).

Response: The EPA agreed to the initial request of these residents and environmental groups and arranged a public hearing at the EPA regional offices in Philadelphia, Pennsylvania. At the request of the commenters, the EPA also delayed the date originally scheduled for the hearing from December 28, 1992, to January 15, 1993, to avoid conflicts with Christmas holidays for citizens wishing to present testimony. The transcript from this hearing is included in the docket. (See Docket Item X–G–1.)

In further discussion of this issue at the hearing, the EPA representatives explained that most public hearings for air standards are held in Research Triangle Park. This is because when national standards are proposed, requests for hearings typically come from all over the country. By holding the hearings in Research Triangle Park, no one person or group is given any unfair advantage. In this case, while a vast majority of the requests did come from the Pittsburgh area, people from other areas in Pennsylvania also wanted to attend. In holding the hearing in Philadelphia, the EPA tried to accommodate commenters from the Pittsburgh area as well as other Pennsylvania residents. The EPA representatives also explained that a public hearing, however important, is an adjunct to the written comment process. This process is fully available to everyone and is not dependent at all on location.

V. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and EPA responses to significant comments, the contents of the docket, except for interagency review materials, will serve as the record in case of judicial review. (See section 307(d)(7)(A).)

B. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq., and has assigned OMB control number 2060–0253.

Public reporting burden for this collection of information is estimated to average 2,461 hours per respondent per year, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

The control numbers assigned to collections of information in certain EPA regulations by the OMB have been consolidated under 40 CFR part 9. The information collection request for this NESHAP was previously subject to public notice and comment prior to OMB approval. As a result, the EPA finds that there is "good cause" under section 553(b)(B) of the Administrative Procedure Act to amend the applicable table in 40 CFR part 9 to display the OMB control number for this rule without prior notice and comment. Due to the technical nature of the table, further notice and comment would be unnecessary. For the same reasons, the EPA also finds that there is good cause under 5 U.S.C. 553(d)(3). For additional information, see 58 FR 18014, April 7, 1993 and 58 FR 27472, May 10, 1993.

C. Executive Order 12291

Under Executive Order 12291, the EPA is required to judge whether a regulation is a "major rule" and therefore subject to the requirements of a regulatory impact analysis (RIA). The EPA has determined that this regulation would result in none of the adverse economic effects set forth in section 1 of the Order as grounds for finding a regulation to be a "major rule." The total annual costs of the MACT standards range from $25 million to $33 million/year; the total annual cost of the

LAER standards range from $84 million to $95 million/year, including the MACT costs. These impacts are below the $100 million threshold. Only small market changes are projected. Increases in the price of coke would be minimal (less than 1 percent for furnace coke and about 1.1 to 2.5 percent for foundry coke). The decrease in coke production would also be minimal (0.7 percent for furnace coke and 1.1 percent for foundry coke under MACT standards; 2.1 percent for furnace and 2.6 for foundry coke under LAER standards). In addition, the rule will not cause significant adverse effects on domestic competition, employment, investment, productivity, innovation, or competition in foreign markets. The EPA has, therefore, concluded that this regulation is not a "major rule" under Executive Order 12291.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 requires the identification of potentially adverse impacts of Federal regulations upon small business entities. The Act specifically requires the completion of a Regulatory Flexibility Analysis in those instances where small business impacts are possible. Because these standards impose no adverse economic impacts on small businesses, a Regulatory Flexibility Analysis has not been conducted.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact *on a substantial number of small* business entities because no substantial number of small entities are affected and no significant impact on these small entities will result.

E. Miscellaneous

In accordance with section 112(f)(2)(C) of the Act, the EPA is required to determine whether additional standards are necessary to address the risk remaining after technology-based MACT standards are imposed. The EPA is to make that determination for coke oven batteries and to promulgate standards determined to be necessary by October 27, 2001. *Pursuant to section 112(i)(8)(C) of the* Act, the EPA also is required to review and revise the LAER standard by January 1, 2007.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Coke oven emissions, Hazardous substances, Reporting and recordkeeping requirements.

Dated: October 18, 1993.

Carol M. Browner,

Administrator.

Parts 9 and 63 of title 40, chapter I, of the Code of Federal Regulations are amended as follows:

PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR 1971–1975 Comp., p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding a new entry to the table under the indicated heading to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
• • •	•
National Emission Standards for Hazardous Air Pollutants for Source Categories	
• • •	•
63.302–63.311	2060–0253
• • •	•

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

3. The authority citation for part 63 continues to read as follows:

Authority: Secs. 101, 112, 114, 116, 301, Clean Air Act as amended (42 U.S.C. 7401, 7412, 7414, 7616, 7601).

4. Part 63 is amended by adding Subpart L to read as follows:

Subpart L—National Emission Standards for Coke Oven Batteries

Sec.

63.300 Applicability.
63.301 Definitions.
63.302 Standards for by-product coke oven batteries.
63.303 Standards for nonrecovery coke oven batteries.
63.304 Standards for compliance date extension.
63.305 Alternative standards for coke oven doors equipped with sheds.
63.306 Work practice standards.
63.307 Standards for bypass/bleeder stacks.
63.308 Standards for collecting mains.
63.309 Performance tests and procedures.
63.310 Requirements for startups, shutdowns, and malfunctions.
63.311 Reporting and recordkeeping requirements.
63.312 Existing regulations and requirements.
63.313 Delegation of authority.
Appendix A to Subpart L—Operating Coke Oven Batteries As Of April 1, 1992

Subpart L—National Emission Standards for Coke Oven Batteries

§ 63.300 Applicability.

(a) Unless otherwise specified in §§ 63.306, 63.307, and 63.311, the provisions of this subpart apply to existing by-product coke oven batteries at a coke plant and to existing nonrecovery coke oven batteries at a coke plant on and after the following dates:

(1) December 31, 1995, for existing by-product coke oven batteries subject to emission limitations in § 63.302(a)(1) or existing nonrecovery coke oven batteries subject to emission limitations in § 63.303(a);

(2) January 1, 2003, for existing by-product coke oven batteries subject to emission limitations in § 63.302(a)(2);

(3) November 15, 1993, for existing by-product and nonrecovery coke oven batteries subject to emission limitations in §§ 63.304(b)(1) or 63.304(c);

(4) January 1, 1998, for existing by-product coke oven batteries subject to emission limitations in §§ 63.304(b)(2) or 63.304(b)(7); and

(5) January 1, 2010, for existing by-product coke oven batteries subject to emission limitations in §§ 63.304(b)(3) or 63.304(b)(7).

(b) The provisions for new sources in §§ 63.302(b), 63.302(c), and 63.303(b) apply to each greenfield coke oven battery and to each new or reconstructed coke oven battery at an existing coke plant if the coke oven battery results in an increase in the design capacity of the coke plant as of November 15, 1990, (including any capacity qualifying under § 63.304(b)(6), and the capacity of any coke oven battery subject to a construction permit on November 15, 1990, which commenced operation before October 27, 1993.

(c) The provisions of this subpart apply to each brownfield coke oven battery, each padup rebuild, and each cold-idle coke oven battery that is restarted.

(d) The provisions of §§ 63.304(b)(2)(i)(A) and 63.304(b)(3)(i) apply to each foundry coke producer as follows:

(1) A coke oven battery subject to § 63.304(b)(2)(i)(A) or § 63.304(b)(3)(i)

must be a coke oven battery that on January 1, 1992, was owned or operated by a foundry coke producer, and

(2)(i) A coke oven battery owned or operated by an integrated steel producer on January 1, 1992, and listed in paragraph (d)(2)(ii) of this section, that was sold to a foundry coke producer before November 15, 1993, shall be deemed for the purposes of paragraph (d)(1) of this section to be owned or operated by a foundry coke producer on January 1, 1992.

(ii) The coke oven batteries that may qualify under this provision are the following:

(A) The coke oven batteries at the Bethlehem Steel Corporation's Lackawanna, New York facility; and

(B) The coke oven batteries at the Rouge Steel Company's Dearborn, Michigan facility.

(e) The emission limitations set forth in this subpart shall apply at all times except during a period of startup, shutdown, or malfunction. The startup period shall be determined by the Administrator and shall not exceed 180 days.

(f) After October 28, 1992, rules of general applicability promulgated under section 112 of the Act, including the General Provisions, may apply to coke ovens provided that the topic covered by such a rule is not addressed in this subpart.

§ 63.301 Definitions.

Terms used in this subpart are defined in the Act or in this section as follows:

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this subpart or its designated agent).

Brownfield coke oven battery means a new coke oven battery that replaces an existing coke oven battery or batteries with no increase in the design capacity of the coke plant as of November 15, 1990 (including capacity qualifying under § 63.304(b)(6), and the capacity of any coke oven battery subject to a construction permit on November 15, 1990, which commenced operation before October 27, 1993.

Bypass/bleeder stack means a stack, duct, or offtake system that is opened to the atmosphere and used to relieve excess pressure by venting raw coke oven gas from the collecting main to the atmosphere from a by-product coke oven battery, usually during emergency conditions.

By-product coke oven battery means a source consisting of a group of ovens connected by common walls, where coal undergoes destructive distillation under positive pressure to produce coke and coke oven gas, from which by-products are recovered. Coke oven batteries in operation as of April 1, 1992, are identified in appendix A to this subpart.

Certified observer means a visual emission observer, certified under (if applicable) Method 303 and Method 9 (if applicable) and employed by the Administrator, which includes a delegated enforcement agency or its designated agent. For the purpose of notifying an owner or operator of the results obtained by a certified observer, the person does not have to be certified.

Charge or *charging period* means, for a by-product coke oven battery, the period of time that commences when coal begins to flow into an oven through a topside port and ends when the last charging port is recapped. For a nonrecovery coke oven battery, *charge or charging period* means the period of time that commences when coal begins to flow into an oven and ends when the push side door is replaced.

Coke oven battery means either a by-product or nonrecovery coke oven battery.

Coke oven door means each end enclosure on the pusher side and the coking side of an oven. The chuck, or leveler-bar, door is part of the pusher side door. A *coke oven door* includes the entire area on the vertical face of a coke oven between the bench and the top of the battery between two adjacent buckstays.

Cold-idle coke oven battery means an existing coke oven battery that has been shut down, but is not dismantled.

Collecting main means any apparatus that is connected to one or more offtake systems and that provides a passage for conveying gases under positive pressure from the by-product coke oven battery to the by-product recovery system.

Collecting main repair means any measure to stop a collecting main leak on a long-term basis. A repair measure in general is intended to restore the integrity of the collecting main by returning the main to approximately its design specifications or its condition before the leak occurred. A repair measure may include, but is not limited to, replacing a section of the collecting main or welding the source of the leak.

Consecutive charges means charges observed successively, excluding any charge during which the observer's view of the charging system or topside ports is obscured.

Design capacity means the original design capacity of a coke oven battery, expressed in megagrams per year of furnace coke

Foundry coke producer means a coke producer that is not and was not on January 1, 1992, owned or operated by an integrated steel producer and had on January 1, 1992, an annual design capacity of less than 1.25 million megagrams per year (not including any capacity satisfying the requirements of § 63.300(d)(2) or § 63.304(b)(6)).

Greenfield coke oven battery means a coke oven battery for which construction is commenced at a plant site (where no coke oven batteries previously existed) after December 4, 1992.

Integrated steel producer means a company or corporation that produces coke, uses the coke in a blast furnace to make iron, and uses the iron to produce steel. These operations may be performed at different plant sites within the corporation.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures caused in part by poor maintenance or careless operation are not *malfunctions*.

New shed means a shed for which construction commenced after September 15, 1992. The shed at Bethlehem Steel Corporation's Bethlehem plant on Battery A is deemed not to be a *new shed*.

Nonrecovery coke oven battery means a source consisting of a group of ovens connected by common walls and operated as a unit, where coal undergoes destructive distillation under negative pressure to produce coke, and which is designed for the combustion of the coke oven gas from which by-products are not recovered.

Offtake system means any individual oven apparatus that is stationary and provides a passage for gases from an oven to a coke oven battery collecting main or to another oven. Offtake system components include the standpipe and standpipe caps, goosenecks, stationary jumper pipes, mini-standpipes, and standpipe and gooseneck connections.

Oven means a chamber in the coke oven battery in which coal undergoes destructive distillation to produce coke.

Padup rebuild means a coke oven battery that is a complete reconstruction of an existing coke oven battery on the same site and pad without an increase in the design capacity of the coke plant as of November 15, 1990 (including any capacity qualifying under § 63.304(b)(6), and the capacity of any coke oven battery subject to a construction permit on November 15, 1990, which commenced operation before October 27, 1993. The Administrator may

determine that a project is a *padup rebuild* if it effectively constitutes a replacement of the battery above the pad, even if some portion of the brickwork above the pad is retained.

Pushing, for the purposes of § 63.305, means that coke oven operation that commences when the pushing ram starts into the oven to push out coke that has completed the coking cycle and ends when the quench car is clear of the coke side shed.

Run means the observation of visible emissions from topside port lids, offtake systems, coke oven doors, or the charging of a coke oven that is made in accordance with and is valid under Methods 303 or 303A in appendix A to this part.

Shed means a structure for capturing coke oven emissions on the coke side or pusher side of the coke oven battery, which routes the emissions to a control device or system.

Short coke oven battery means a coke oven battery with ovens less than 6 meters in height.

Shutdown means the operation that commences when pushing has occurred on the first oven with the intent of pushing the coke out of all of the ovens in a coke oven battery without adding coal, and ends when all of the ovens of a coke oven battery are empty of coal or coke.

Standpipe cap means an apparatus used to cover the opening in the gooseneck of an offtake system.

Startup means that operation that commences when the coal begins to be added to the first oven of a coke oven battery that either is being started for the first time or that is being restarted and ends when the doors have been adjusted for maximum leak reduction and the collecting main pressure control has been stabilized. Except for the first startup of a coke oven battery, a startup cannot occur unless a shutdown has occurred.

Tall coke oven battery means a coke oven battery with ovens 6 meters or more in height.

Temporary seal means any measure, including but not limited to, application of luting or packing material, to stop a collecting main leak until the leak is repaired.

Topside port lid means a cover, removed during charging or decarbonizing, that is placed over the opening through which coal can be charged into the oven of a by-product coke oven battery.

§ 63.302 Standards for by-product coke oven batteries.

(a) Except as provided in § 63.304 or § 63.305, on and after the dates specified in this paragraph, no owner or operator shall cause to be discharged or allow to be discharged to the atmosphere, coke oven emissions from each affected existing by-product coke oven battery that exceed any of the following emission limitations or requirements:

(1) On and after December 31, 1995;

(i) For coke oven doors;

(A) 6.0 percent leaking coke oven doors for each tall by-product coke oven battery, as determined according to the procedures in § 63.309(d)(1); and

(B) 5.5 percent leaking coke oven doors for each short by-product coke oven battery, as determined according to the procedures in § 63.309(d)(1);

(ii) 0.6 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1);

(iii) 3.0 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1); and

(iv) 12 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

(2) On and after January 1, 2003, unless the Administrator promulgates more stringent limits pursuant to section 112(f) of the Act;

(i) 5.5 percent leaking coke oven doors for each tall by-product coke oven battery, as determined by the procedures in § 63.309(d)(1); and

(ii) 5.0 percent leaking coke oven doors for each short by-product coke oven battery, as determined by the procedures in § 63.309(d)(1).

(b) Except as provided in paragraph (c) of this section, no owner or operator shall cause to be discharged or allow to be discharged to the atmosphere, coke oven emissions from a by-product coke oven battery subject to the applicability requirements in § 63.300(b) that exceed any of the following emission limitations:

(1) 0.0 percent leaking coke oven doors, as determined by the procedures in § 63.309(d)(1);

(2) 0.0 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1);

(3) 0.0 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1); and

(4) 34 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

(c) The emission limitations in paragraph (b) of this section do not apply to the owner or operator of a by-product coke oven battery that utilizes a new recovery technology, including but not limited to larger size ovens, operation under negative pressure, and processes with emission points different from those regulated under this subpart. An owner or operator constructing a new by-product coke oven battery or reconstructing an existing by-product recovery battery that utilizes a new recovery technology shall:

(1) Notify the Administrator of the intention to do so, as required in § 63.311(c); and

(2) Submit, for the determination under section 112(g)(2)(B) of the Act, and as part of the application for permission to construct or reconstruct, all information and data requested by the Administrator for the determination of applicable emission limitations and requirements for that by-product coke oven battery.

(d) Emission limitations and requirements applied to each coke oven battery utilizing a new recovery technology shall be less than the following emission limitations or shall result in an overall annual emissions rate for coke oven emissions for the battery that is lower than that obtained by the following emission limitations:

(1) 4.0 percent leaking coke oven doors on tall by-product coke oven batteries, as determined by the procedures in § 63.309(d)(1);

(2) 3.3 percent leaking coke oven doors on short by-product coke oven batteries, as determined by the procedures in § 63.309(d)(1);

(3) 2.5 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1);

(4) 0.4 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1); and

(5) 12 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

§ 63.303 Standards for nonrecovery coke oven batteries.

(a) Except as provided in § 63.304, on and after December 31, 1995, no owner or operator shall cause to be discharged or allow to be discharged to the atmosphere coke oven emissions from each affected existing nonrecovery coke oven battery that exceed any of the following emission limitations or requirements:

(1) For coke oven doors;

(i) 0.0 percent leaking coke oven doors, as determined by the procedures in § 63.309(d)(1); or

(ii) The owner or operator shall monitor and record, once per day for each day of operation, the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure.

(2) For charging operations, the owner or operator shall implement, for each day of operation, the work practices specified in § 63.306(b)(6) and record the performance of the work practices as required in § 63.306(b)(7).

(b) No owner or operator shall cause to be discharged or allow to be discharged to the atmosphere coke oven emissions from each affected new nonrecovery coke oven battery subject to the applicability requirements in § 63.300(b) that exceed any of the following emission limitations or requirements:

(1) For coke oven doors;

(i) 0.0 percent leaking coke oven doors, as determined by the procedures in § 63.309(d)(1); or

(ii) The owner or operator shall monitor and record, once per day for each day of operation, the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure;

(2) For charging operations, the owner or operator shall install, operate, and maintain an emission control system for the capture and collection of emissions in a manner consistent with good air pollution control practices for minimizing emissions from the charging operation;

(3) 0.0 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1) (if applicable to the new nonrecovery coke oven battery); and

(4) 0.0 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1) (if applicable to the new nonrecovery coke oven battery).

§ 63.304 Standards for compliance date extension.

(a) An owner or operator of an existing coke oven battery (including a cold-idle coke oven battery), a padup rebuild, or a brownfield coke oven battery, may elect an extension of the compliance date for emission limits to be promulgated pursuant to section 112(f) of the Act in accordance with section 112(i)(8). To receive an extension of the compliance date from January 1, 2003, until January 1, 2020, the owner or operator shall notify the Administrator as described in § 63.311(c) that the battery will comply with the emission limitations and requirements in this section in lieu of the applicable emission limitations in §§ 63.302 or 63.303.

(b) Except as provided in paragraphs (b)(4), (b)(5), and (b)(7) of this section and in § 63.305, on and after the dates specified in this paragraph, no owner or operator shall cause to be discharged or allow to be discharged to the atmosphere coke oven emissions from a by-product coke oven battery that exceed any of the following emission limitations:

(1) On and after November 15, 1993;

(i) 7.0 percent leaking coke oven doors, as determined by the procedures in § 63.309(d)(1);

(ii) 0.83 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1);

(iii) 4.2 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1); and

(iv) 12 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

(2) On and after January 1, 1998;

(i) For coke oven doors:

(A) 4.3 percent leaking coke oven doors for each tall by-product coke oven battery and for each by-product coke oven battery owned or operated by a foundry coke producer, as determined by the procedures in § 63.309(d)(1); and

(B) 3.8 percent leaking coke oven doors on each by-product coke oven battery not subject to the emission limitation in paragraph (b)(2)(i)(A) of this section, as determined by the procedures in § 63.309(d)(1);

(ii) 0.4 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1);

(iii) 2.5 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1); and

(iv) 12 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

(3) On and after January 1, 2010, unless the Administrator promulgates more stringent limits pursuant to section 112(i)(8)(C) of the Act;

(i) 4.0 percent leaking coke oven doors on each tall by-product coke oven battery and for each by-product coke oven battery owned or operated by a foundry coke producer, as determined by the procedures in § 63.309(d)(1); and

(ii) 3.3 percent leaking coke oven doors for each by-product coke oven battery not subject to the emission limitation in paragraph (b)(3)(i) of this section, as determined by the procedures in § 63.309(d)(1).

(4) No owner or operator shall cause to be discharged or allow to be discharged to the atmosphere coke oven emissions from a brownfield or padup rebuild by-product coke oven battery, other than those specified in paragraph (b)(4)(v) of this section, that exceed any of the following emission limitations:

(i) For coke oven doors;

(A) 4.0 percent leaking coke oven doors for each tall by-product coke oven battery, as determined by the procedures in § 63.309(d)(1); and

(B) 3.3 percent leaking coke oven doors on each short by-product coke oven battery, as determined by the procedures in § 63.309(d)(1);

(ii) 0.4 percent leaking topside port lids, as determined by the procedures in § 63.309(d)(1);

(iii) 2.5 percent leaking offtake system(s), as determined by the procedures in § 63.309(d)(1); and

(iv) 12 seconds of visible emissions per charge, as determined by the procedures in § 63.309(d)(2).

(v) The requirements of paragraph (b)(4) of this section shall not apply and the requirements of paragraphs (b)(1), (b)(2), and (b)(3) of this section do apply to the following brownfield or padup rebuild coke oven batteries:

(A) Bethlehem Steel-Burns Harbor, Battery No. 2;

(B) National Steel-Great Lakes, Battery No. 4; and

(C) Koppers-Woodward, Battery No. 3.

(vi) To retain the exclusion provided in paragraph (b)(4)(v) of this section, a coke oven battery specified in paragraph (b)(4)(v) of this section shall commence construction not later than July 1, 1996, or 1 year after obtaining a construction permit, whichever is earlier.

(5) The owner or operator of a cold-idle coke oven battery that shut down on or after November 15, 1990, shall comply with the following emission limitations:

(i) For a brownfield coke oven battery or a padup rebuild coke oven battery, coke oven emissions shall not exceed the emission limitations in paragraph (b)(4) of this section; and

(ii) For a cold-idle battery other than a brownfield or padup rebuild coke oven battery, coke oven emissions shall not exceed the emission limitations in paragraphs (b)(1) through (b)(3) of this section.

(6) The owner or operator of a cold-idle coke oven battery that shut down prior to November 15, 1990, shall submit a written request to the Administrator to include the battery in the design capacity of a coke plant as of November 15, 1990. A copy of the request shall also be sent to Director, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711. The Administrator will review and approve or disapprove a request according to the following procedures:

(i) Requests will be reviewed for completeness in the order received. A complete request shall include:

(A) Battery identification;

(B) Design information, including the design capacity and number and size of ovens; and

(C) A brief description of the owner or operator's plans for the cold-idle battery, including a statement whether construction of a padup rebuild or a

brownfield coke oven battery is contemplated.

(ii) A complete request shall be approved if the design capacity of the battery and the design capacity of all previous approvals does not exceed the capacity limit in paragraph (b)(6)(iii) of this section.

(iii) The total nationwide coke capacity of coke oven batteries that receive approval under paragraph (b)(6) of this section shall not exceed 2.7 million Mg/yr.

(iv) If a construction permit is required, an approval shall lapse if a construction permit is not issued within 3 years of the approval date, or if the construction permit lapses.

(v) If a construction permit is not required, an approval will lapse if the battery is not restarted within 2 years of the approval date.

The owner or operator of a by-product coke oven battery with fewer than 30 ovens may elect to comply with an emission limitation of 2 or fewer leaking coke oven doors, as determined by the procedures in § 63.309(d)(4), as an alternative to the emission limitation for coke oven doors in paragraphs (b)(2)(i), (b)(3) (i) through (ii), (b)(4)(i), (b)(5), and (b)(6) of this section.

(c) On and after November 15, 1993, no owner or operator shall cause to be discharged or allow to be discharged to the atmosphere coke oven emissions from an existing nonrecovery coke oven battery that exceed any of the emission limitations or requirements in § 63.303(a).

(d) Each owner or operator of an existing coke oven battery qualifying for a compliance date extension pursuant to this section shall make available, no later than January 1, 2000, to the surrounding communities the results of any risk assessment performed by the Administrator to determine the appropriate level of any emission standard established by the Administrator according to section 112(f) of the Act.

§ 63.305 Alternative standards for coke oven doors equipped with sheds.

(a) The owner or operator of a new or existing coke oven battery equipped with a shed for the capture of coke oven emissions from coke oven doors and an emission control device for the collection of the emissions may comply with an alternative to the applicable visible emission limitations for coke oven doors in §§ 63.302 and 63.304 according to the procedures and requirements in this section.

(b) To qualify for approval of an alternative standard, the owner or operator shall submit to the Administrator a test plan for the measurement of emissions. A copy of the request shall also be sent to the Director, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711. The plan shall describe the procedures to be used for the measurement of particulate matter; the parameters to be measured that affect the shed exhaust rate (e.g., damper settings, fan power) and the procedures for measuring such parameters; and if applicable under paragraph (c)(5)(ii) of this section, the procedures to be used for the measurement of benzene soluble organics, benzene, toluene, and xylene emitted from the control device for the shed. The owner or operator shall notify the Administrator at least 30 days before any performance test is conducted.

(c) A complete test plan is deemed approved if no disapproval is received within 60 days of the submittal to the Administrator. After approval of the test plan, the owner or operator shall:

(1) Determine the efficiency of the control device for removal of particulate matter by conducting measurements at the inlet and the outlet of the emission control device using Method 5 in appendix A to part 60 of this chapter, with the filter box operated at ambient temperature and in a manner to avoid condensation, with a backup filter;

(2) Measure the visible emissions from coke oven doors that escape capture by the shed using Method 22 in appendix A to part 60 of this chapter. For the purpose of approval of an alternative standard, no visible emissions may escape capture from the shed.

(i) Visible emission observations shall be taken during conditions representative of normal operations, except that pushing shall be suspended and pushing emissions shall have cleared the shed; and

(ii) Method 22 observations shall be performed by an observer certified according to the requirements of Method 9 in appendix A to part 60 of this chapter. The observer shall allow pushing emissions to be evacuated (typically 1 to 2 minutes) before making observations;

(3) Measure the opacity of emissions from the control device using Method 9 in appendix A to part 60 of this chapter during conditions representative of normal operations, including pushing; and

(i) If the control device has multiple stacks, the owner or operator shall use an evaluation based on visible emissions and opacity to select the stack with the highest opacity for testing under this section.

(ii) The highest opacity, expressed as a 6-minute average, shall be used as the opacity standard for the control device.

(4) Thoroughly inspect all compartments of each air cleaning device prior to the performance test for proper operation and for changes that signal the potential for malfunction, including the presence of tears, holes, and abrasions in filter bags; damaged seals; and for dust deposits on the clean side of bags; and

(5) Determine the allowable percent leaking doors under the shed using either of the following procedures:

(i) Calculate the allowable percent leaking doors using the following equation:

$$PLD = \left[\frac{1.4(PLD_{std})^{2.5}}{(1.4 - eff/100)}\right]^{0.4} \qquad \text{(Eq. 1)}$$

where

PLD=Allowable percent leaking doors for alternative standard.

PLD_{std}=Applicable visible emission limitation of percent leaking doors under this subpart that would otherwise apply to the coke oven battery, converted to the single-run limit according to Table 1.

eff=Percent control efficiency for particulate matter for emission control device as determined according to paragraph (c)(1) of this section.

Table 1.—Conversion to Single-Run Limit

30-run limit	Single-pass limit (98 percent level)
7.0	11.0
6.0	9.5
5.5	8.7
5.0	8.1
4.3	7.2
4.0	6.7
3.8	6.4
3.3	5.8

or;

(ii) Calculate the allowable percent leaking doors using the following procedures:

(A) Measure the total emission rate of benzene, toluene, and xylene exiting the control device using Method 18 in appendix A to part 60 of this chapter and the emission rate of benzene soluble organics entering the control device as described in the test plan submitted pursuant to paragraph (b) of this section; or

(B) Measure benzene, toluene, xylene, and benzene soluble organics in the gas in the collector main as described in the test plan submitted pursuant to paragraph (b) of this section; and

(C) Calculate the ratio (R) of benzene, toluene, and xylene to benzene soluble organics for the gas in the collector main, or as the sum of the outlet emission rates of benzene, toluene, and xylene, divided by the emission rate of benzene soluble organics as measured at the inlet to the control device; and

(D) Calculate the allowable percent leaking doors limit under the shed using the following equation:

$$PLD = \left[\frac{(R+1)(PLD_{std})^{2.5}}{(R+1-eff/100)}\right]^{0.4} \quad \text{(Eq. 2)}$$

where

R=Ratio of measured emissions of benzene, toluene, and xylene to measured emissions of benzene soluble organics.

(iii) If the allowable percent leaking coke oven doors is calculated to exceed 15 percent leaking coke oven doors under paragraphs (c)(5)(i) or (c)(5)(ii) of this section, the owner or operator shall use 15 percent leaking coke oven doors for the purposes of this section.

(6) Monitor the parameters that affect the shed exhaust flow rate.

(7) The owner or operator may request alternative sampling procedures to those specified in paragraph (c)(5)(ii) (A) and (B) of this section by submitting details on the procedures and the rationale for their use to the Administrator. Alternative procedures shall not be used without approval from the Administrator.

(8) The owner or operator shall inform the Administrator of the schedule for conducting testing under the approved test plan and give the Administrator the opportunity to observe the tests.

(d) After calculating the alternative standard for allowable percent leaking coke oven doors, the owner or operator shall submit the following information to the Administrator:

(1) Identity of the coke oven battery;

(2) Visible emission limitation(s) for percent leaking doors currently applicable to the coke oven battery under this subpart and known future limitations for percent leaking coke oven doors;

(3) A written report including:

(i) Appropriate measurements and calculations used to derive the allowable percent leaking coke oven doors requested as the alternative standard;

(ii) Appropriate visible emission observations for the shed and opacity observations for the control device for the shed, including an alternative opacity standard, if applicable, as described in paragraph (c)(3) of this section based on the highest 6-minute average; and

(iii) The parameter or parameters (e.g., fan power, damper position, or other) to be monitored and recorded to demonstrate that the exhaust flow rate measured during the test required by paragraph (c)(1) of this section is maintained, and the monitoring plan for such parameter(s).

(iv) If the application is for a new shed, one of the following demonstrations:

(A) A demonstration, using modeling procedures acceptable to the Administrator, that the expected concentrations of particulate emissions (including benzene soluble organics) under the shed at the bench level, when the proposed alternative standard was being met, would not exceed the expected concentrations of particulate emissions (including benzene soluble organics) if the shed were not present, the regulations under this subpart were met, and the battery was in compliance with federally enforceable limitations on pushing emissions; or

(B) A demonstration that the shed (including the evacuation system) has been designed in accordance with generally accepted engineering principles for the effective capture and control of particulate emissions (including benzene soluble organics) as measured at the shed's perimeter, its control device, and at the bench level.

(e) The Administrator will review the information and data submitted according to paragraph (d) of this section and may request additional information and data within 60 days of receipt of a complete request.

(1) Except for applications subject to paragraph (e)(3) of this section, the Administrator shall approve or disapprove an alternative standard as expeditiously as practicable. The Administrator shall approve an alternative standard, unless the Administrator determines that the approved test plan has not been followed, or any required calculations are incorrect, or any demonstration required under paragraph (d)(3)(iv) of this section does not satisfy the applicable criteria under that paragraph. If the alternative standard is disapproved, the Administrator will issue a written notification to the owner or operator within the 60-day period.

(2) The owner or operator shall comply with the applicable visible emission limitation for coke oven doors and all other requirements in this subpart prior to approval of an alternative standard. The owner or operator may apply for an alternative standard at any time after December 4, 1992.

(3) An application for an alternative standard to the standard in § 63.304(b)(1)(i) for any shed that is not a new shed that is filed on or before June 15, 1993, is deemed approved if a notice of disapproval has not been received 60 days after submission of a complete request. An approval under paragraph (e)(3) of this section shall be valid for a period of 1 year.

(4) Notwithstanding the provisions of paragraph (e) of this section, no alternative standard shall be approved that exceeds 15 percent leaking coke oven doors (yard equivalent).

(f) After approval of an alternative standard, the owner or operator shall comply with the following requirements:

(1) The owner or operator shall not discharge or allow to be discharged to the atmosphere coke oven emissions from coke oven doors under sheds that exceed an approved alternative standard for percent leaking coke oven doors under sheds.

(i) All visible emission observations for compliance determinations shall be performed by a certified observer.

(ii) Compliance with the alternative standard for doors shall be determined by a weekly performance test conducted according to the procedures and requirements in § 63.309(d)(5) and Method 303 in appendix A to this part.

(iii) If the visible emission limitation is achieved for 12 consecutive observations, compliance shall be determined by monthly rather than weekly performance tests. If any exceedance occurs during a performance test, weekly performance tests shall be resumed.

(iv) Observations taken at times other than those specified in paragraphs (f)(1)(ii) and (f)(1)(iii) of this section shall be subject to the provisions of § 63.309(f).

(2) The certified observer shall monitor the visible coke oven emissions escaping capture by the shed on a weekly basis. The provision in paragraph (f)(6) of this section is applicable if visible coke oven emissions are observed during periods when pushing emissions have cleared the shed.

(3) The owner or operator shall not discharge or allow to be discharged to the atmosphere any visible emissions from the shed's control device exhibiting more than 0 percent opacity unless an alternative limit has been

approved under paragraph (e) of this section.

(4) The opacity of emissions from the control device for the shed shall be monitored in accordance with the requirements of either paragraph (f)(4)(i) or (f)(4)(ii) of this section, at the election of the owner or operator.

(i) The owner or operator shall install, operate, and maintain a continuous opacity monitor, and record the output of the system, for the measurement of the opacity of emissions discharged from the emission control system.

(A) Each continuous opacity monitoring system shall meet the requirements of Performance Specification 1 in appendix B to part 60 of this chapter; and

(B) Each continuous opacity monitoring system shall be operated, calibrated, and maintained according to the procedures and requirements specified in part 52 of this chapter; or

(ii) A certified observer shall monitor and record at least once each day during daylight hours, opacity observations for the control device for the shed using Method 9 in appendix A to part 60 of this chapter.

(5) The owner or operator shall visually inspect the structural integrity of the shed at least once a quarter for defects, such as deterioration of sheet metal (e.g., holes in the shed), that may allow the escape of visible emissions.

(i) The owner or operator shall record the time and date a defect is first observed, the time and date the defect is corrected or repaired, and a brief description of repairs or corrective actions taken;

(ii) The owner or operator shall temporarily repair the defect as soon as possible, but no later than 5 days after detection of the defect;

(iii) Unless a major repair is required, the owner or operator shall perform a complete repair of the defect within 15 days of detection of the defect. If a major repair is required (e.g., replacement of large sections of the shed), the owner or operator shall submit a repair schedule to the enforcement agency.

(6) If the no visible emission limit for the shed specified in paragraph (f)(2) of this section is exceeded, the Administrator may require another test for the shed according to the approved test plan as specified in paragraph (c) of this section. If the certified observer observes visible coke oven emissions from the shed, except during periods of pushing or when pushing emissions have not cleared the shed, the owner or operator shall check to ensure that the shed and control device are working properly.

(7) The owner or operator shall monitor the parameter(s) affecting shed exhaust flow rate, and record data, in accordance with the approved monitoring plan for these parameters.

(8) The owner or operator shall not operate the exhaust system of the shed at an exhaust flow rate lower than that measured during the test required under paragraph (c)(1) of this section, as indicated by the monitored parameters.

(g) Each side of a battery subject to an alternative standard for doors under this section shall be treated separately for purposes of §§ 63.306(c) (plan implementation) and 63.306(d) (plan revisions) of this subpart. In making determinations under these provisions for the side of the battery subject to an alternative standard, the requirement that exceedances be independent shall not apply. During any period when work practices for doors for both sides of the battery are required to be implemented, § 63.306(a)(3) shall apply in the same manner as if the provisions of a plan for a single emissions point were required to be implemented. Exceedances of the alternative standard for percent leaking doors under a shed is the only provision in this section implicating implementation of work practice requirements.

(h) Multiple exceedances of the visible emission limitation for door leaks and/or the provisions of an alternative standard under this section for door leaks at a battery on a single day shall be considered a single violation.

§ 63.306 Work practice standards.

(a) *Work practice plan.* On or before November 15, 1993, each owner or operator shall prepare and submit to the Administrator a written emission control work practice plan for each coke oven battery. The plan shall be designed to achieve compliance with visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations under this subpart or, for a coke oven battery not subject to visible emission limitations under this subpart, other federally enforceable visible emission limitations for these emission points.

(1) The work practice plan must address each of the topics specified in paragraph (b) of this section in sufficient detail and with sufficient specificity to allow the Administrator to evaluate the plan for completeness and enforceability.

(2) The Administrator may require revisions to the initial plan only where the Administrator finds either that the plan does not address each subject area listed in paragraph (b) of this section for each emission point subject to a visible emission standard under this subpart, or that the plan is unenforceable because it contains requirements that are unclear.

(3) During any period of time that an owner or operator is required to implement the provisions of a plan for a particular emission point, the failure to implement one or more obligations under the plan and/or any recordkeeping requirement(s) under § 63.311(f)(4) for the emission point during a particular day is a single violation.

(b) *Plan components.* The owner or operator shall organize the work practice plan to indicate clearly which parts of the plan pertain to each emission point subject to visible emission standards under this subpart. Each of the following provisions, at a minimum, shall be addressed in the plan:

(1) An initial and refresher training program for all coke plant operating personnel with responsibilities that impact emissions, including contractors, in job requirements related to emission control and the requirements of this subpart, including work practice requirements. Contractors with responsibilities that impact emission control may be trained by the owner or operator or by qualified contractor personnel; however, the owner or operator shall ensure that the contractor training program complies with the requirements of this section. The training program in the plan must include:

(i) A list, by job title, of all personnel that are required to be trained and the emission point(s) associated with each job title;

(ii) An outline of the subjects to be covered in the initial and refresher training for each group of personnel;

(iii) A description of the training method(s) that will be used (e.g., lecture, video tape);

(iv) A statement of the duration of initial training and the duration and frequency of refresher training;

(v) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion of the initial and refresher training; and

(vi) A description of the procedure to be used to document performance of plan requirements pertaining to daily operation of the coke oven battery and its emission control equipment, including a copy of the form to be used, if applicable, as required under the plan provisions implementing paragraph (b)(7) of this section.

(2) Procedures for controlling emissions from coke oven doors on by-product coke oven batteries, including:

(i) A program for the inspection, adjustment, repair, and replacement of coke oven doors and jambs, and any other equipment for controlling emissions from coke oven doors, including a defined frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

(ii) Procedures for identifying leaks that indicate a failure of the emissions control equipment to function properly, including a clearly defined chain of command for communicating information on leaks and procedures for corrective action;

(iii) Procedures for cleaning all sealing surfaces of each door and jamb, including identification of the equipment that will be used and a specified schedule or frequency for the cleaning of sealing surfaces;

(iv) For batteries equipped with self-sealing doors, procedures for use of supplemental gasketing and luting materials, if the owner or operator elects to use such procedures as part of the program to prevent exceedances;

(v) For batteries equipped with hand-luted doors, procedures for luting and reluting, as necessary to prevent exceedances;

(vi) Procedures for maintaining an adequate inventory of the number of spare coke oven doors and jambs located onsite; and

(vii) Procedures for monitoring and controlling collecting main back pressure, including corrective action if pressure control problems occur.

(3) Procedures for controlling emissions from charging operations on by-product coke oven batteries, including:

(i) Procedures for equipment inspection, including the frequency of inspections, and replacement or repair of equipment for controlling emissions from charging, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

(ii) Procedures for ensuring that the larry car hoppers are filled properly with coal;

(iii) Procedures for the alignment of the larry car over the oven to be charged;

(iv) Procedures for filling the oven (e.g., procedures for staged or sequential charging);

(v) Procedures for ensuring that the coal is leveled properly in the oven; and

(vi) Procedures and schedules for inspection and cleaning of offtake systems (including standpipes, standpipe caps, goosenecks, dampers, and mains), oven roofs, charging holes, topside port lids, the steam supply system, and liquor sprays.

(4) Procedures for controlling emissions from topside port lids on by-product coke oven batteries, including:

(i) Procedures for equipment inspection and replacement or repair of topside port lids and port lid mating and sealing surfaces, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances; and

(ii) Procedures for sealing topside port lids after charging, for identifying topside port lids that leak, and procedures for resealing.

(5) Procedures for controlling emissions from offtake system(s) on by-product coke oven batteries, including:

(i) Procedures for equipment inspection and replacement or repair of offtake system components, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

(ii) Procedures for identifying offtake system components that leak and procedures for sealing leaks that are detected; and

(iii) Procedures for dampering off ovens prior to a push.

(6) Procedures for controlling emissions from nonrecovery coke oven batteries including:

(i) Procedures for charging coal into the oven, including any special procedures for minimizing air infiltration during charging, maximizing the draft on the oven, and for replacing the door promptly after charging;

(ii) If applicable, procedures for the capture and control of charging emissions;

(iii) Procedures for cleaning coke from the door sill area for both sides of the battery after completing the pushing operation and before replacing the coke oven door;

(iv) Procedures for cleaning coal from the door sill area after charging and before replacing the push side door;

(v) Procedures for filling gaps around the door perimeter with sealant material, if applicable; and

(vi) Procedures for detecting and controlling emissions from smoldering coal.

(7) Procedures for maintaining, for each emission point subject to visible emission limitations under this subpart, a daily record of the performance of plan requirements pertaining to the daily operation of the coke oven battery and its emission control equipment, including:

(i) Procedures for recording the performance of such plan requirements; and

(ii) Procedures for certifying the accuracy of such records by the owner or operator.

(8) Any additional work practices or requirements specified by the Administrator according to paragraph (d) of this section.

(c) *Implementation of work practice plans.* On and after November 15, 1993, the owner or operator of a coke oven battery shall implement the provisions of the coke oven emission control work practice plan according to the following requirements:

(1) The owner or operator of a coke oven battery subject to visible emission limitations under this subpart on and after November 15, 1993, shall:

(i) Implement the provisions of the work practice plan pertaining to a particular emission point following the second independent exceedance of the visible emission limitation for the emission point in any consecutive 6-month period, by no later than 3 days after receipt of written notification of the second such exceedance from the certified observer. For the purpose of this paragraph (c)(1)(i), the second exceedance is "independent" if either of the following criteria is met:

(A) The second exceedance occurs 30 days or more after the first exceedance;

(B) In the case of coke oven doors, topside port lids, and offtake systems, the 29-run average, calculated by excluding the highest value in the 30-day period, exceeds the value of the applicable emission limitation; or

(C) In the case of charging emissions, the 29-day logarithmic average, calculated in accordance with Method 303 in appendix A to this part by excluding the valid daily set of observations in the 30-day period that had the highest arithmetic average, exceeds the value of the applicable emission limitation.

(ii) Continue to implement such plan provisions until the visible emission limitation for the emission point is achieved for 90 consecutive days if work practice requirements are implemented pursuant to paragraph (c)(1)(i) of this section. After the visible emission limitation for a particular emission point is achieved for 90 consecutive days, any exceedances prior to the beginning of the 90 days are not included in making a determination under paragraph (c)(1)(i) of this section.

(2) The owner or operator of a coke oven battery not subject to visible emission limitations under this subpart until December 31, 1995, shall:

(i) Implement the provisions of the work practice plan pertaining to a particular emission point following the second exceedance in any consecutive 6-month period of a federally enforceable emission limitation for that emission point for coke oven doors, topside port lids, offtake systems, or charging operations by no later than 3 days after receipt of written notification from the applicable enforcement agency; and

(ii) Continue to implement such plan provisions for 90 consecutive days after the most recent written notification from the enforcement agency of an exceedance of the visible emission limitation.

(d) *Revisions to plan.* Revisions to the work practice emission control plan will be governed by the provisions in this paragraph (d) and in paragraph (a)(2) of this section.

(1) The Administrator may request the owner or operator to review and revise as needed the work practice emission control plan for a particular emission point if there are 2 exceedances of the applicable visible emission limitation in the 6-month period that starts 30 days after the owner or operator is required to implement work practices under paragraph (c) of this section. In the case of a coke oven battery subject to visual emission limitations under this subpart, the second exceedance must be independent under the criteria in paragraph (c)(1)(i) of this section.

(2) The Administrator may not request the owner or operator to review and revise the plan more than twice in any 12 consecutive month period for any particular emission point unless the Administrator disapproves the plan according to the provisions in paragraph (d)(6) of this section.

(3) If the certified observer calculates that a second exceedance (or, if applicable, a second independent exceedance) has occurred, the certified observer shall notify the owner or operator. No later than 10 days after receipt of such a notification, the owner or operator shall notify the Administrator of any finding of whether work practices are related to the cause or the solution of the problem. This notification is subject to review by the Administrator according to the provisions in paragraph (d)(6) of this section.

(4) The owner or operator shall submit a revised work practice plan within 60 days of notification from the Administrator under paragraph (d)(1) of this section, unless the Administrator grants an extension of time to submit the revised plan.

(5) If the Administrator requires a plan revision, the Administrator may require the plan to address a subject area or areas in addition to those in paragraph (b) of this section, if the Administrator determines that without plan coverage of such an additional subject area, there is a reasonable probability of further exceedances of the visible emission limitation for the emission point for which a plan revision is required.

(6) The Administrator may disapprove a plan revision required under paragraph (d) of this section if the Administrator determines that the revised plan is inadequate to prevent exceedances of the visible emission limitation under this subpart for the emission point for which a plan revision is required or, in the case of a battery not subject to visual emission limitations under this subpart, other federally enforceable emission limitations for such emission point. The Administrator may also disapprove the finding that may be submitted pursuant to paragraph (d)(3) of this section if the Administrator determines that a revised plan is needed to prevent exceedances of the applicable visible emission limitations.

§ 63.307 Standards for bypass/bleeder stacks.

(a) (1) Except as otherwise provided in this section, on or before March 31, 1994, the owner or operator of an existing by-product recovery battery for which a notification was not submitted under paragraph (e)(1) of this section shall install a bypass/bleeder stack flare system that is capable of controlling 120 percent of the normal gas flow generated by the battery, which shall thereafter be operated and maintained.

(2) Coke oven emissions shall not be vented to the atmosphere through bypass/bleeder stacks, except through the flare system or the alternative control device as described in paragraph (d) of this section.

(3) The owner or operator of a brownfield coke oven battery or a pushing rebuild shall install such a flare system before startup, and shall properly operate and maintain the flare system.

(b) Each flare installed pursuant to this section shall meet the following requirements:

(1) Each flare shall be designed for a net heating value of 8.9 MJ/scm (240 Btu/scf) if a flare is steam-assisted or air-assisted, or a net value of 7.45 MJ/scm (200 Btu/scf) if the flare is non-assisted.

(2) Each flare shall have either a continuously operable pilot flame or an electronic igniter that meets the requirements of paragraphs (h)(3) and (h)(4) of this section.

(3) Each electronic igniter shall meet the following requirements:

(i) Each flare shall be equipped with at least two igniter plugs with redundant igniter transformers;

(ii) The ignition units shall be designed failsafe with respect to flame detection thermocouples (i.e., any flame detection thermocouples are used only to indicate the presence of a flame, are not interlocked with the ignition unit, and cannot deactivate the ignition system); and

(iii) Integral battery backup shall be provided to maintain active ignition operation for a minimum of 15 minutes during a power failure.

(iv) Each electronic igniter shall be operated to initiate ignition when the bleeder valve is not fully closed as indicated by an "OPEN" limit switch.

(4) Each flare installed to meet the requirements of this paragraph (b) that does not have an electronic igniter shall be operated with a pilot flame present at all times as determined by § 63.309(h)(2).

(c) Each flare installed to meet the requirements of this section shall be operated with no visible emissions, as determined by the methods specified in § 63.309(h)(1), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(d) As an alternative to the installation, operation, and maintenance of a flare system as required in paragraph (a) of this section, the owner or operator may petition the Administrator for approval of an alternative control device or system that achieves at least 98 percent destruction or control of coke oven emissions vented to the alternative control device or system.

(e) The owner or operator of a by-product coke oven battery is exempt from the requirements of this section if the owner or operator:

(1) Submits to the Administrator, no later than November 10, 1993, a formal

commitment to close the battery permanently; and

(2) Closes the battery permanently no later than December 31, 1995. In no case may the owner or operator continue to operate a battery for which a closure commitment is submitted, past December 31, 1995.

(f) Any emissions resulting from the installation of flares (or other pollution control devices or systems approved pursuant to paragraph (d) of this section) shall not be used in making new source review determinations under part C and part D of title I of the Act.

§ 63.308 Standards for collecting mains.

(a) On and after November 15, 1993, the owner or operator of a by-product coke oven battery shall inspect the collecting main for leaks at least once daily according to the procedures in Method 303 in appendix A to this part.

(b) The owner or operator shall record the time and date a leak is first observed, the time and date the leak is temporarily sealed, and the time and date of repair.

(c) The owner or operator shall temporarily seal any leak in the collecting main as soon as possible after detection, but no later than 4 hours after detection of the leak.

(d) The owner or operator shall initiate a collecting main repair as expeditiously as possible, but no later than 5 calendar days after initial detection of the leak. The repair shall be completed within 15 calendar days after initial detection of the leak unless an alternative schedule is approved by the Administrator.

§ 63.309 Performance tests and procedures.

(a) Except as otherwise provided, a daily performance test shall be conducted each day, 7 days per week for each new and existing coke oven battery, the results of which shall be used in accordance with procedures specified in this subpart to determine compliance with each of the applicable visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations in this subpart. If a facility pushes and charges only at night, then that facility must, at its option, change their schedule and charge during daylight hours or provide adequate lighting so that visible emission inspections can be made at night. "Adequate lighting" will be determined by the enforcement agency.

(1) Each performance test is to be conducted according to the procedures and requirements in this section and in Method 303 or 303A in appendix A to this part or Methods 9 and 22 in appendix A to part 60 of this chapter (where applicable).

(2) Each performance test is to be conducted by a certified observer.

(3) The certified observer shall complete any reasonable safety training program offered by the owner or operator prior to conducting any performance test at a coke oven battery.

(4) Except as otherwise provided in paragraph (a)(5) of this section, the owner or operator shall pay an inspection fee to the enforcement agency each calendar quarter to defray the costs of the daily performance tests required under paragraph (a) of this section.

(i) The inspection fee shall be determined according to the following formula:

$$F = H \times S \qquad \text{(Eq. 3)}$$

where

F=Fees to be paid by owner or operator.

H=Total person hours for inspections: 4 hours for 1 coke oven battery, 6.25 hours for 2 coke oven batteries, 8.25 hours for 3 coke oven batteries. For more than 3 coke oven batteries, use these hours to calculate the appropriate estimate of person hours.

S=Current average hourly rate for private visible emission inspectors in the relevant market.

(ii) The enforcement agency may revise the value for H in equation 3 within 3 years after October 27, 1993 to reflect the amount of time actually required to conduct the inspections required under paragraph (a) of this section.

(iii) The owner or operator shall not be required to pay an inspection fee (or any part thereof) under paragraph (a)(4) of this section, for any monitoring or inspection services required by paragraph (a) of this section that the owner or operator can demonstrate are covered by other fees collected by the enforcement agency.

(iv) Upon request, the enforcement agency shall provide the owner or operator information concerning the inspection services covered by any other fees collected by the enforcement agency, and any information relied upon under paragraph (a)(4)(ii) of this section.

(5) (i) The EPA shall be the enforcement agency during any period of time that a delegation of enforcement authority is not in effect or a withdrawal of enforcement authority under § 63.313 is in effect, and the Administrator is responsible for performing the inspections required by this section, pursuant to § 63.313(b).

(ii) Within thirty (30) days of receiving notification from the Administrator that the EPA is the enforcement agency for a coke oven battery, the owner or operator shall enter into a contract providing for the inspections and performance tests required under this section to be performed by a Method 303 certified observer. The inspections and performance tests will be conducted at the expense of the owner or operator, during the period that the EPA is the implementing agency.

(b) The enforcement agency shall commence daily performance tests on the applicable date specified in §§ 63.300 (a) or (c).

(c) The certified observer shall conduct each performance test according to the requirements in this paragraph:

(1) The certified observer shall conduct one run each day to observe and record visible emissions from each coke oven door (except for doors covered by an alternative standard under § 63.305), topside port lid, and offtake system on each coke oven battery. The certified observer also shall conduct five runs to observe and record the seconds of visible emissions per charge for five consecutive charges from each coke oven battery. The observer may perform additional runs as needed to obtain and record a visible emissions value (or set of values) for an emission point that is valid under Method 303 or Method 303A in appendix A to this part. Observations from fewer than five consecutive charges shall constitute a valid set of charging observations only in accordance with the procedures and conditions specified in sections 3.8 and 3.9 of Method 303 in appendix A to this part.

(2) If a valid visible emissions value (or set of values) is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value (or set of values) is obtained.

(3) After each performance test for a by-product coke oven battery, the certified observer shall check and record the collecting main pressure according to the procedures in section 6.3 of Method 303 in appendix A to this part.

(i) The owner or operator shall demonstrate pursuant to Method 303 in appendix A to this part the accuracy of the pressure measurement device upon request of the certified observer.

(ii) The owner or operator shall not adjust the pressure to a level below the

range of normal operation during or prior to the inspection.

(4) The certified observer shall monitor visible emissions from coke oven doors subject to an alternative standard under § 63.305 on the schedule specified in § 63.305(f).

(5) If applicable, the certified observer shall monitor the opacity of any emissions escaping the control device for a shed covering doors subject to an alternative standard under § 63.305 on the schedule specified in § 63.305(f).

(6) In no case shall the owner or operator knowingly block a coke oven door, or any portion of a door for the purpose of concealing emissions or preventing observations by the certified observer.

(d) Using the observations obtained from each performance test, the enforcement agency shall compute and record, in accordance with the procedures and requirements of Method 303 or 303A in appendix A to this part, for each day of operations on which a valid emissions value (or set of values) is obtained:

(1) The 30-run rolling average of the percent leaking coke oven doors, topside port lids, and offtake systems on each coke oven battery, using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303 (or section 3.4.3.2 of Method 303A) in appendix A to this part;

(2) For by-product coke oven battery charging operations, the logarithmic 30-day rolling average of the seconds of visible emissions per charge for each battery, using the equation in section 3.9 of Method 303 in appendix A to this part;

(3) For a battery subject to an alternative emission limitation for coke oven doors on by-product coke oven batteries pursuant to § 63.305, the 30-run rolling average of the percent leaking coke oven doors for any side of the battery not subject to such alternative emission limitation;

(4) For a by-product coke oven battery subject to the small battery emission limitation for coke oven doors pursuant to § 63.304(b)(7), the 30-run rolling average of the number of leaking coke oven doors;

(5) For an approved alternative emission limitation for coke oven doors according to § 63.305, the weekly or monthly observation of the percent leaking coke oven doors using Method 303 in appendix A to this part, the percent opacity of visible emissions from the control device for the shed using Method 9 in appendix A to part 60 of this chapter, and visible emissions from the shed using Method 22 in appendix A to part 60 of this chapter;

(e) The certified observer shall make available to the implementing agency as well as to the owner or operator, a copy of the daily inspection results by the end of the day and shall make available the calculated rolling average for each emission point to the owner or operator as soon as practicable following each performance test. The information provided by the certified observer is not a compliance determination. For the purpose of notifying an owner or operator of the results obtained by a certified observer, the person does not have to be certified.

(f) Compliance shall not be determined more often than the schedule provided for performance tests under this section. If additional valid emissions observations are obtained (or in the case of charging, valid sets of emission observations), the arithmetic average of all valid values (or valid sets of values) obtained during the day shall be used in any computations performed to determine compliance under paragraph (d) of this section or determinations under § 63.306.

(g) Compliance with the alternative standards for nonrecovery coke oven batteries in § 63.303; shed inspection, maintenance requirements, and monitoring requirements for parameters affecting the shed exhaust flow rate for batteries subject to alternative standards for coke oven doors under § 63.305; work practice emission control plan requirements in § 63.306; standards for bypass/bleeder stacks in § 63.307; and standards for collecting mains in § 63.308 is to be determined by the enforcement agency based on review of records and inspections.

(h) For a flare installed to meet the requirements of § 63.307(b):

(1) Compliance with the provisions in § 63.307(c) (visible emissions from flares) shall be determined using Method 22 in appendix A to part 60 of this chapter, with an observation period of 2 hours; and

(2) Compliance with the provisions in § 63.307(b)(4) (flare pilot light) shall be determined using a thermocouple or any other equivalent device.

(i) No observations obtained during any program for training or for certifying observers under this subpart shall be used to determine compliance with the requirements of this subpart or any other federally enforceable standard.

§ 63.310 Requirements for startups, shutdowns, and malfunctions.

(a) At all times including periods of startup, shutdown, and malfunction, the owner or operator shall operate and maintain the coke oven battery and its pollution control equipment required under this subpart, in a manner consistent with good air pollution control practices for minimizing emissions to the levels required by any applicable performance standards under this subpart. Failure to adhere to the requirement of this paragraph shall not constitute a separate violation if a violation of an applicable performance or work practice standard has also occurred.

(b) Each owner or operator of a coke oven battery shall develop and implement according to paragraph (c) of this section, a written startup, shutdown, and malfunction plan that describes procedures for operating the battery, including associated air pollution control equipment, during a period of a startup, shutdown, or malfunction in a manner consistent with good air pollution control practices for minimizing emissions, and procedures for correcting malfunctioning process and air pollution control equipment as quickly as practicable.

(c) During a period of startup, shutdown, or malfunction:

(1) The owner or operator of a coke oven battery shall operate the battery (including associated air pollution control equipment) in accordance with the procedure specified in the startup, shutdown, and malfunction plan; and

(2) Malfunctions shall be corrected as soon as practicable after their occurrence, in accordance with the plan.

(d) In order for the provisions of paragraph (i) of this section to apply with respect to the observation (or set of observations) for a particular day, notification of a startup, shutdown, or a malfunction shall be made by the owner or operator:

(1) If practicable, to the certified observer if the observer is at the facility during the occurrence; or

(2) To the enforcement agency, in writing, within 24 hours of the occurrence first being documented by a company employee, and if the notification under paragraph (d)(1) of this section was not made, an explanation of why no such notification was made.

(e) Within 14 days of the notification made under paragraph (d) of this section, or after a startup or shutdown, the owner or operator shall submit a written report to the applicable permitting authority that:

(1) Describes the time and circumstances of the startup, shutdown, or malfunction; and

(2) Describes actions taken that might be considered inconsistent with the startup, shutdown, or malfunction plan.

(f) The owner or operator shall maintain a record of internal reports which form the basis of each malfunction notification under paragraph (d) of this section.

(g) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the standard operating procedures manual for the battery, provided the manual meets all the requirements for this section and is made available for inspection at reasonable times when requested by the Administrator.

(h) The Administrator may require reasonable revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(1) Does not address a startup, shutdown, or malfunction event that has occurred;

(2) Fails to provide for the operation of the source (including associated air pollution control equipment) during a startup, shutdown, or malfunction event in a manner consistent with good air pollution control practices for minimizing emissions; or

(3) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable.

(i) If the owner or operator demonstrates to the satisfaction of the Administrator that a startup, shutdown, or malfunction has occurred, then an observation occurring during such startup, shutdown, or malfunction shall not:

(1) Constitute a violation of relevant requirements of this subpart;

(2) Be used in any compliance determination under § 63.309; or

(3) Be considered for purposes of § 63.306, until the Administrator has resolved the claim that a startup, shutdown, or malfunction has occurred. If the Administrator determines that a startup, shutdown, or malfunction has not occurred, such observations may be used for purposes of § 63.306, regardless of whether the owner or operator further contests such determination. The owner's or operator's receipt of written notification from the Administrator that a startup, shutdown, or malfunction has not occurred will serve, where applicable under § 63.306, as written notification from the certified observer that an exceedance has occurred.

§ 63.311 Reporting and recordkeeping requirements.

(a) After the effective date of an approved permit in a State under part 70 of this chapter, the owner or operator shall submit all notifications and reports required by this subpart to the State permitting authority. Use of information provided by the certified observer shall be a sufficient basis for notifications required under § 70.5(c)(9) of this chapter and the reasonable inquiry requirement of § 70.5(d) of this chapter.

(b) *Initial compliance certification.* The owner or operator of an existing or new coke oven battery shall provide a written statement(s) to certify compliance to the Administrator within 45 days of the applicable compliance date for the emission limitations or requirements in this subpart. The owner or operator shall include the following information in the initial compliance certification:

(1) Statement, signed by the owner or operator, certifying that a bypass/bleeder stack flare system or an approved alternative control device or system has been installed as required in § 63.307; and

(2) Statement, signed by the owner or operator, certifying that a written startup, shutdown, and malfunction plan has been prepared as required in § 63.310.

(c) *Notifications.* The owner or operator shall provide written notification(s) to the Administrator of:

(1) Intention to construct a new coke oven battery (including reconstruction of an existing coke oven battery and construction of a greenfield coke oven battery), a brownfield coke oven battery, or a padup rebuild coke oven battery, including the anticipated date of startup; and

(2) Election to meet emission limitation(s) in this subpart as follows:

(i) Notification of election to meet the emission limitations in §§ 63.304(b)(1) or 63.304(c) either in lieu of or in addition to the applicable emission limitations in § 63.302(a) or § 63.303(a) must be received by the Administrator on or before November 15, 1993; or

(ii) Notification of election to meet the emission limitations in § 63.302(a)(1) or § 63.303(a), as applicable, must be received by the Administrator on or before December 31, 1995; and

(iii) Notification of election to meet the emission limitations in § 63.304(b)(2) through (4) and § 63.304(c) or election to meet residual risk standards to be developed according to section 112(f) of the Act in lieu of the emission standards in § 63.304 must be received on or before January 1, 1998.

(d) *Semiannual compliance certification.* The owner or operator of a coke oven battery shall include the following information in the semiannual compliance certification:

(1) Certification, signed by the owner or operator, that no coke oven gas was vented except through the bypass/bleeder stack flare system of a by-product coke oven battery during the reporting period or that a venting report has been submitted according to the requirements in paragraph (e) of this section;

(2) Certification, signed by the owner or operator, that a startup, shutdown, or malfunction event did not occur for a coke oven battery during the reporting period or that a startup, shutdown, and malfunction event did occur and a report was submitted according to the requirements in § 63.310(e); and

(3) Certification, signed by the owner or operator, that work practices were implemented if applicable under § 63.306.

(e) *Report for the venting of coke oven gas other than through a flare system.* The owner or operator shall report any venting of coke oven gas through a bypass/bleeder stack that was not vented through the bypass/bleeder stack flare system to the Administrator as soon as practicable but no later than 24 hours after the beginning of the event. A written report shall be submitted within 30 days of the event and shall include a description of the event and, if applicable, a copy of the notification for a hazardous substance release required pursuant to § 302.6 of this chapter.

(f) *Recordkeeping.* The owner or operator shall maintain files of all required information in a permanent form suitable for inspection at an onsite location for at least 1 year and must thereafter be accessible within 3 working days to the Administrator for the time period specified in § 70.6(a)(3)(ii)(B) of this chapter. Copies of the work practice plan developed under § 63.306 and the startup, shutdown, and malfunction plan developed under § 63.310 shall be kept onsite at all times. The owner or operator shall maintain the following information:

(1) For nonrecovery coke oven batteries,

(i) Records of daily pressure monitoring, if applicable according to § 63.303(a)(1)(ii) or § 63.303(b)(1)(ii);

(ii) Records demonstrating the performance of work practice requirements according to § 63.306(b)(7); and

(iii) Design characteristics of each emission control system for the capture and collection of charging emissions, as required by § 63.303(b)(2).

(2) For an approved alternative emission limitation according to § 63.305;

(i) Monitoring records for parameter(s) that indicate the exhaust flow rate is maintained;

(ii) If applicable under § 63.305(f)(4)(i):

(A) Records of opacity readings from the continuous opacity monitor for the control device for the shed; and

(B) Records that demonstrate the continuous opacity monitoring system meets the requirements of Performance Specification 1 in appendix B to part 60 of this chapter and the operation and maintenance requirements in part 52 of this chapter; and

(iii) Records of quarterly visual inspections as specified in § 63.305(f)(5), including the time and date a defect is detected and repaired.

(3) A copy of the work practice plan required by § 63.306 and any revision to the plan;

(4) If the owner or operator is required under § 63.306(c) to implement the provisions of a work practice plan for a particular emission point, the following records regarding the implementation of plan requirements for that emission point during the implementation period;

(i) Copies of all written and audiovisual materials used in the training, the dates of each class, the names of the participants in each class, and documentation that all appropriate personnel have successfully completed the training required under § 63.306(b)(1);

(ii) The records required to be maintained by the plan provisions implementing § 63.306(b)(7);

(iii) Records resulting from audits of the effectiveness of the work practice program for the particular emission point, as required under §§ 63.306(b)(2)(i), 63.306(b)(3)(i), 63.306(b)(4)(i), or 63.306(b)(5)(i); and

(iv) If the plan provisions for coke oven doors must be implemented, records of the inventory of doors and jambs as required under § 63.306(b)(2)(vi); and

(5) The design drawings and engineering specifications for the bypass/bleeder stack flare system or approved alternative control device or system as required under § 63.307.

(6) Records specified in § 63.310(f) regarding the basis of each malfunction notification.

(g) Records required to be maintained and reports required to be filed with the Administrator under this subpart shall be made available in accordance with the requirements of this paragraph by the owner or operator to the authorized collective bargaining representative of the employees at a coke oven battery, for inspection and copying.

(1) Requests under paragraph (g) of this section shall be submitted in writing, and shall identify the records or reports that are subject to the request with reasonable specificity;

(2) The owner or operator shall produce the reports for inspection and copying within a reasonable period of time, not to exceed 30 days. A reasonable fee may be charged for copying (except for the first copy of any document), which shall not exceed the copying fee charged by the Administrator under part 2 of this chapter;

(3) Nothing in paragraph (g) of this section shall require the production for inspection or copying of any portion of a document that contains trade secrets or confidential business information that the Administrator would be prohibited from disclosing to the public under part 2 of this chapter; and

(4) The inspection or copying of a document under paragraph (g) of this section shall not in any way affect any property right of the owner or operator in such document under laws for the protection of intellectual property, including the copyright laws.

§ 63.312 Existing regulations and requirements.

(a) The owner or operator shall comply with all applicable State implementation plan emission limits and (subject to any expiration date) all federally enforceable emission limitations which are contained in an order, decree, permit, or settlement agreement for the control of emissions from offtake systems, topside port lids, coke oven doors, and charging operations in effect on September 15, 1992, or which have been modified according to the provisions of paragraph (c) of this section.

(b) Nothing in this subpart shall affect the enforcement of such State implementation plan emission limitations (or, subject to any expiration date, such federally enforceable emission limitations contained in an order, decree, permit, or settlement agreement) in effect on September 15, 1992, or which have been modified according to the provisions in paragraph (c) of this section.

(c) No such State implementation plan emission limitation (or, subject to any expiration date, such federally enforceable emission limitation contained in an order, decree, permit, or settlement agreement) in effect on September 15, 1992, may be modified under the Act unless:

(1) Such modification is consistent with all requirements of section 110 of the Act; and either

(i) Such modification ensures that the applicable emission limitations and format (e.g., single pass v. multiday average) in effect on September 15, 1992, will continue in effect; or

(ii) Such modification includes a change in the method of monitoring (except frequency unless frequency was indicated in the State implementation plan, or subject to any expiration date, other federally enforceable requirements contained in an order, decree, permit, or settlement agreement) that is more stringent than the method of monitoring in effect on September 15, 1992, and that ensures coke oven emission reductions greater than the emission reductions required on September 15, 1992. The burden of proof in demonstrating the stringency of the methods of monitoring is borne by the party requesting the modification and must be made to the satisfaction of the Administrator; or

(iii) Such modification makes the emission limitations more stringent while holding the format unchanged, makes the format more stringent while holding the emission limitations unchanged, or makes both more stringent.

(2) Any industry application to make a State implementation plan revision or other adjustment to account for differences between Method 303 in appendix A to this part and the State's method based on paragraph (c)(1)(ii) of this section shall be submitted within 12 months after October 27, 1993.

(d) Except as specified in § 63.307(f), nothing in this subpart shall limit or affect any authority or obligation of Federal, State, or local agencies to establish emission limitations or other requirements more stringent than those specified in this subpart.

(e) Except as provided in § 63.302(c), section 112(g) of the Act shall not apply to sources subject to this subpart.

§ 63.313 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (c) of this section shall be retained by the Administrator and not transferred to a State.

(b) Whenever the Administrator learns that a delegated agency has not fully carried out the inspections and performance tests required under § 63.309 for each applicable emission point of each battery each day, the Administrator shall immediately notify the agency. Unless the delegated agency demonstrates to the Administrator's satisfaction within 15 days of notification that the agency is

consistently carrying out the inspections and performance tests required under § 63.309 in the manner specified in the preceding sentence, the Administrator shall notify the coke oven battery owner or operator that inspections and performance tests shall be carried out according to § 63.309(a)(5). When the Administrator determines that the delegated agency is prepared to consistently perform all required inspections and performance tests each day, the Administrator shall give the coke oven battery owner or operator at least 15 days notice that implementation will revert back to the previously delegated agency.

(c) Authorities which will not be delegated to States:

(1) § 63.302(d);

(2) § 63.304(b)(6);

(3) §§ 63.305 (b), (d) and (e);

(4) § 63.307(d); and

(5) Section 2 of Method 303 in appendix A to this part.

(d) The authority to enforce this subpart is delegated to the States of: [Reserved]

APPENDIX A TO SUBPART L—OPERATING COKE OVEN BATTERIES AS OF APRIL 1, 1992

No.	Plant	Battery
1	ABC Coke, Tarrant, AL	A
		5
		6
2	Acme Steel, Chicago, IL	1
		2
3	Armco, Inc., Middletown, OH	1
		2
		3
4	Armco, Inc., Ashland, KY	3
		4
5	Bethlehem Steel, Bethlehem, PA	A
		2
		3
6	Bethlehem Steel, Burns Harbor, IN	1
		2
7	Bethlehem Steel, Lackawanna, NY	7
		8
8	Citizens Gas, Indianapolis, IN	E
		H
		1
9	Empire Coke, Holt, AL	1
		2
10	Erie Coke, Erie, PA	A
		B
11	Geneva Steel, Provo, UT	1
		2
		3

APPENDIX A TO SUBPART L—OPERATING COKE OVEN BATTERIES AS OF APRIL 1, 1992—Continued

No.	Plant	Battery
		4
12	Gulf States Steel, Gadsden, AL	2
		3
13	Inland Steel, East Chicago, IN	6
		7
		8
		9
		10
		11
14	Jewell Coal and Coke, Vansant, VA	2
		3A
		3B
		3C
15	Koppers, Woodward, AL	1
		2A
		2B
		4A
		4B
		5
16	LTV Steel, Cleveland, OH	6
		7
17	LTV Steel, Pittsburgh, PA	P1
		P2
		P3N
		P3S
		P4
18	LTV Steel, Chicago, IL	2
19	LTV Steel, Warren, OH	4
20	National Steel, Ecorse, MI	5
21	National Steel, Granite City, IL	A
		B
22	New Boston Coke, Portsmouth, OH	1
23	Sharon Steel, Monessen, PA	1B
		2
24	Shenango, Pittsburgh, PA	1
		4
25	Sloss Industries, Birmingham, AL	3
		4
		5
26	Toledo Coke, Toledo, OH	C
27	Tonawanda Coke, Buffalo, NY	1
28	USX, Clairton, PA	1
		2
		3
		7
		8
		9
		13
		14
		15
		19
		20
		B

APPENDIX A TO SUBPART L—OPERATING COKE OVEN BATTERIES AS OF APRIL 1, 1992—Continued

No.	Plant	Battery
29	USX, Gary, IN	2
		3
		5
		7
30	Wheeling-Pittsburgh, E. Steubenville, WV	1
		2
		3
		8

5. Appendix A to part 63 is amended by adding in numerical order Method 303 and Method 303A as follows:

Appendix A—Test Methods

* * * * *

METHOD 303—DETERMINATION OF VISIBLE EMISSIONS FROM BY-PRODUCT COKE OVEN BATTERIES

1. *Applicability and Principle*

1.1 Applicability. This method applies to the determination of visible emissions (VE) from the following by-product coke oven battery sources: Charging systems during charging, doors, topside port lids, and offtake systems on operating coke ovens; and collecting mains. In order for the test method results to be indicative of plant performance, the time of day of the run should vary.

1.2 Principle. A certified observer visually determines the VE from coke oven battery sources (the certification procedures are described in section 2). This method does not require that opacity of emissions be determined or that magnitude be differentiated.

1.3 Definitions.

1.3.1 Bench. The platform structure in front of the oven doors.

1.3.2 By-product Coke Oven Battery. A source consisting of a group of ovens connected by common walls, where coal undergoes destructive distillation under positive pressure to produce coke and coke oven gas, from which by-products are recovered.

1.3.3 Charge or Charging Period. The period of time that commences when coal begins to flow into an oven through a topside port and ends when the last charging port is recapped.

1.3.4 Charging System. An apparatus used to charge coal to a coke oven (e.g., a larry car for wet coal charging systems).

1.3.5 Coke Oven Door. Each end enclosure on the pusher side and the coking side of an oven. The chuck, or leveler-bar, door is considered part of the pusher side door. The coke oven door area includes the entire area on the vertical face of a coke oven between the bench and the top of the battery between two adjacent buck stays.

1.3.6 Coke Side. The side of a battery from which the coke is discharged from ovens at the end of the coking cycle.

1.3.7 Collecting Main. Any apparatus that is connected to one or more offtake systems

and that provides a passage for conveying gases under positive pressure from the by-product coke oven battery to the by-product recovery system.

1.3.8 Consecutive Charges. Charges observed successively, excluding any charge during which the observer's view of the charging system or topside ports is obscured.

1.3.9 Damper-off. To close off the gas passage between the coke oven and the collecting main, with no flow of raw coke oven gas from the collecting main into the oven or into the oven's offtake system(s).

1.3.10 Decarbonization Period. The period of time for combusting oven carbon that commences when the oven lids are removed from an empty oven or when standpipe caps of an oven are opened. The period ends with the initiation of the next charging period for that oven.

1.3.11 Larry Car. An apparatus used to charge coal to a coke oven with a wet coal charging system.

1.3.12 Log Average. Logarithmic average as calculated in section 3.8.

1.3.13 Offtake System. Any individual oven apparatus that is stationary and provides a passage for gases from an oven to a coke oven battery collecting main or to another oven. Offtake system components include the standpipe and standpipe caps, goosenecks, stationary jumper pipes, mini-standpipes, and standpipe and gooseneck connections.

1.3.14 Operating Oven. Any oven not out of operation for rebuild or maintenance work extensive enough to require the oven to be skipped in the charging sequence.

1.3.15 Oven. A chamber in the coke oven battery in which coal undergoes destructive distillation to produce coke.

1.3.16 Push Side. The side of the battery from which the coke is pushed from ovens at the end of the coking cycle.

1.3.17 Run. The observation of visible emissions from topside port lids, offtake systems, coke oven doors, or the charging of a single oven in accordance with this method.

1.3.18 Shed. Structures for capturing coke oven emissions on the coke side or pusher side of the coke oven battery, which route the emissions to a control device or system.

1.3.19 Standpipe Cap. An apparatus used to cover the opening in the gooseneck of an offtake system.

1.3.20 Topside Port Lid. A cover, removed during charging or decarbonizing, that is placed over the opening through which coal can be charged into the oven of a by-product coke oven battery.

1.3.21 Traverse Time. Accumulated time for a traverse as measured by a stopwatch. Traverse time includes time to stop and write down oven numbers but excludes time waiting for obstructions of view to clear or for time to walk around obstacles.

1.3.22 Visible Emissions (VE). Any emission seen by the unaided (except for corrective lenses) eye, excluding steam or condensing water.

2. *Observer Certification*

2.1 Certification Procedures. This method requires only the determination of whether VE occur and does not require the determination of opacity levels; therefore, observer certification according to Method 9 in appendix A to part 60 of this chapter is not required to obtain certification under this method. However, in order to receive Method 303 observer certification, the first-time observer (trainee) shall have attended the lecture portion of the Method 9 certification course. In addition, the trainee shall successfully complete the Method 303 training course, satisfy the field observation requirement, and demonstrate adequate performance and sufficient knowledge of Method 303. The Method 303 training course shall be conducted by or under the sanction of the EPA and shall consist of classroom instruction and field observations, and a proficiency test.

2.1.1 The classroom instruction shall familiarize the trainees with Method 303 through lecture, written training materials, and a Method 303 demonstration video. A successful completion of the classroom portion of the Method 303 training course shall be demonstrated by a perfect score on a written test. If the trainee fails to answer all of the questions correctly, the trainee may review the appropriate portion of the training materials and retake the test.

2.1.2 The field observations shall be a minimum of 12 hours and shall be completed before attending the Method 303 certification course. Trainees shall observe the operation of a coke oven battery as it pertains to Method 303, including topside operations, and shall also practice conducting Method 303 or similar methods. During the field observations, trainees unfamiliar with coke battery operations shall receive instruction from an experienced coke oven observer familiar with Method 303 or similar methods and the operation of coke batteries. The trainee must verify completion of at least 12 hours of field observation prior to attending the Method 303 certification course.

2.1.3 All trainees must demonstrate proficiency in the application of Method 303 to a panel of three certified Method 303 observers, including an ability to differentiate coke oven emissions from condensing water vapor and smoldering coal. Each panel member shall have at least 120 days experience in reading visible emissions from coke ovens. The visible emissions inspections that will satisfy the experience requirement must be inspections of coke oven battery fugitive emissions from the emission points subject to emission standards under subpart L of this part (i.e., coke oven doors, topside port lids, offtake system(s), and charging operations), using either Method 303 or predecessor State or local test methods. A "day's experience" for a particular inspection is a day on which one complete inspection was performed for that emission point under Method 303 or a predecessor State or local method. A "day's experience" does not mean 8 or 10 hours performing inspections, or any particular time expressed in minutes or hours that may have been spent performing them. Thus, it would be possible for an individual to qualify as a Method 303 panel member for some emission points, but not others (e.g., an individual might satisfy the experience requirement for coke oven doors, but not topside port lids). Until November 15, 1994, the EPA may waive the certification requirement (but not the experience requirement) for panel members. The composition of the panel shall be approved by the EPA. The panel shall observe the trainee in a series of training runs and a series of certification runs. There shall be a minimum of 1 training run for doors, topside port lids, and offtake systems, and a minimum of 5 training runs (i.e., 5 charges) for charging. During training runs, the panel can advise the trainee on proper procedures. There shall be a minimum of 3 certification runs for doors, topside port lids, and offtake systems, and a minimum of 15 certification runs for charging (i.e., 15 charges). The certifications runs shall be unassisted. Following the certification test runs, the panel shall approve or disapprove certification based on the trainee's performance during the certification runs. To obtain certification, the trainee shall demonstrate to the satisfaction of the panel a high degree of proficiency in performing Method 303. To aid in evaluating the trainee's performance, a checklist, provided by the EPA, will be used.

Caution: Because coke oven batteries have hazardous environments, the training materials and the field training shall cover the precautions required by the company to address health and safety hazards. Special emphasis shall be given to the Occupational Safety and Health Administration (OSHA) regulations pertaining to exposure of coke oven workers (see Citation 3 in the Bibliography). In general, the regulation requires that special fire-retardant clothing and respirators be worn in certain restricted areas of the coke oven battery. The OSHA regulation also prohibits certain activities, such as chewing gum, smoking, and eating in these areas.

2.2 Observer Certification/Recertification. The coke oven observer certification is valid for 1 year from date of issue. The observer shall recertify annually by viewing the training video and answering all of the questions on the certification test correctly. Every 3 years, an observer shall be required to pass the proficiency test in section 2.1.3 in order to be certified.

2.3 The EPA (or applicable enforcement agency) shall maintain records reflecting a certified observer's successful completion of the proficiency test, which shall include the completed proficiency test checklists for the certification runs.

2.4 An owner or operator of a coke oven battery subject to subpart L of this part may observe a training and certification program under this section.

3. *Procedure for Determining VE From Charging Systems During Charging*

3.1 Number of Oven Charges. Refer to § 63.309(c)(1) of this part for the number of oven charges to observe. The observer shall observe consecutive charges. Charges that are nonconsecutive can only be observed when necessary to replace observations terminated prior to the completion of a charge because of visual interferences. (See section 3.5.)

3.2 Data Records. Record all the information requested at the top of the charging system inspection sheet (Figure 303–1). For each charge, record the

identification number of the oven being charged, the approximate beginning time of the charge, and the identification of the larry car used for the charge.

3.3 Observer Position. Stand in an area or move to positions on the topside of the coke oven battery with an unobstructed view of the entire charging system. For wet coal charging systems or non-pipeline coal charging systems, the observer should have an unobstructed view of the emission points of the charging system, including larry car hoppers, drop sleeves, and the topside ports of the oven being charged. Some charging systems are configured so that all emission points can only be seen from a distance of five ovens. For other batteries, distances of 8 to 12 ovens are adequate.

3.4 Observation. The charging period begins when coal begins to flow into the oven and ends when the last charging port is recapped. During the charging period, observe all of the potential sources of VE from the entire charging system. For wet coal charging systems or non-pipeline coal charging systems, sources of VE typically include the larry car hoppers, drop sleeves, slide gates, and topside ports on the oven being charged. Any VE from an open standpipe cap on the oven being charged is included as charging VE.

3.4.1 Using an accumulative-type stopwatch with unit divisions of at least 0.5 seconds, determine the total time VE are observed as follows. Upon observing any VE emerging from any part of the charging system, start the stopwatch. Stop the watch when VE are no longer observed emerging, and restart the watch when VE reemerges.

3.4.2 When VE occur simultaneously from several points during a charge, consider the sources as one. Time overlapping VE as continuous VE. Time single puffs of VE only for the time it takes for the puff to emerge from the charging system. Continue to time VE in this manner for the entire charging period. Record the accumulated time to the nearest 0.5 second under "Visible emissions, seconds" on Figure 303–2.

3.5 Visual Interference. If fugitive VE from other sources at the coke oven battery site (e.g., door leaks or condensing water vapor from the coke oven wharf) prevent a clear view of the charging system during a charge, stop the stopwatch and make an appropriate notation under "Comments" on Figure 303–1. Label the observation an observation of an incomplete charge, and observe another charge to fulfill the requirements of section 3.1.

3.6 VE Exemptions. Do not time the following VE:

3.6.1 The VE from burning or smoldering coal spilled on top of the oven, topside port lid, or larry car surfaces;

Note: The VE from smoldering coal are generally white or gray. These VE generally have a plume of less than 1 meter long. If the observer cannot safely and with reasonable confidence determine that VE are from charging, do not count them as charging emissions.

3.6.2 The VE from the coke oven doors or from the leveler bar; or

3.6.3 The VE that drift from the top of a larry car hopper if the emissions had already been timed as VE from the drop sleeve.

Note: When the slide gate on a larry car hopper closes after the coal has been added to the oven, the seal may not be airtight. On occasions, a puff of smoke observed at the drop sleeves is forced past the slide gate up into the larry car hopper and may drift from the top; time these VE either at the drop sleeves or the hopper. If the larry car hopper does not have a slide gate or the slide gate is left open or partially closed, VE may quickly pass through the larry car hopper without being observed at the drop sleeves and will appear as a strong surge of smoke; time these as charging VE.

3.7 Total Time Record. Record the total time that VE were observed for each charging operation in the appropriate column on the charging system inspection sheet.

3.8 Five charging observations (runs) obtained in accordance with this method shall be considered a valid set of observations for that day. No observation of an incomplete charge shall be included in a daily set of observations that is lower than the lowest reading for a complete charge. If both complete and incomplete charges have been observed, the daily set of observations shall include the five highest values observed. Four or three charging observations (runs) obtained in accordance with this method shall be considered a valid set of charging observations only where it is not possible to obtain five charging observations, because of visual interferences (see section 3.5) or inclement weather prevent a clear view of the charging system during charging. However, observations from three or four charges that satisfy these requirements shall not be considered a valid set of charging observations if use of such set of observations in a calculation under section 3.9 would cause the value of A to be less than 145.

3.9 Log Average. For each day on which a valid daily set of observations is obtained, calculate the daily 30-day rolling log average of seconds of visible emissions from the charging operation for each battery using these data and the 29 previous valid daily sets of observations, in accordance with the following equation:

$$\text{logarithmic average} = e^{y} - 1 \quad \text{(Eq. 303-1)}$$

where

e=2.72,

$$y = \frac{\ln(X_1 + 1) + \ln(X_2 + 1) + \ldots \ln(X_A + 1)}{A}$$

ln=Natural logarithm, and

X_i=Seconds of VE during the ith charge.

A=150 or the number of valid observations (runs). The value of A shall not be less than 145, except for purposes of determinations under § 63.306(c) (work practice plan implementation) or § 63.306(d) (work practice plan revisions) of this part. No set of observations shall be considered valid for such a recalculation that otherwise would not be considered a valid set of observations for a calculation under this paragraph.

4. *Procedure for Determining VE From Coke Oven Door Areas.*

The intent of this procedure is to determine VE from coke oven door areas by carefully observing the door area from a standard distance while walking at a normal pace.

4.1 Number of Runs. Refer to § 63.309(c)(1) of this part for the appropriate number of runs.

4.2 Battery Traverse. To conduct a battery traverse, walk the length of the battery on the outside of the pusher machine and quench car tracks at a steady, normal walking pace, pausing to make appropriate entries on the door area inspection sheet (Figure 303–2). A single test run consists of two timed traverses, one for the coke side and one for the push side. The walking pace shall not exceed an average rate of 4 seconds per oven door, excluding time spent moving around stationary obstructions or waiting for other obstructions to move from positions blocking the view of a series of doors. Extra time is allowed for each leak for the observer to make the proper notation. A walking pace of 3 seconds per oven door has been found to be typical. Record the actual traverse time with a stopwatch.

4.2.1 Time only the time spent observing the doors and recording door leaks. To measure actual traverse time, use an accumulative-type stopwatch with unit divisions of 0.5 seconds or less. Exclude interruptions to the traverse and time required for the observer to move to positions where the view of the battery is unobstructed, or for obstructions, such as the door machine, to move from positions blocking the view of a series of doors.

4.2.2 Various situations may arise that will prevent the observer from viewing a door or a series of doors. Prior to the door inspection, the owner or operator may elect to temporarily suspend charging operations for the duration of the inspection, so that all of the doors can be viewed by the observer. The observer has two options for dealing with obstructions to view: (a) Stop the stopwatch and wait for the equipment to move or the fugitive emissions to dissipate before completing the traverse; or (b) stop the stopwatch, skip the affected ovens, and move to a position to continue the traverse. Restart the stopwatch and continue the traverse. After the completion of the traverse, if the equipment has moved or the fugitive emissions have dissipated, inspect the affected doors. If the equipment is still preventing the observer from viewing the doors, then the affected doors may be counted as not observed. If option (b) is used because of doors blocked by machines during charging operations, then, of the affected doors, exclude the door from the most recently charged oven from the inspection. Record the oven numbers and make an appropriate notation under "Comments" on the door area inspection sheet (Figure 303–2).

4.2.3 When batteries have sheds to control emissions, conduct the inspection from outside the shed unless the doors cannot be adequately viewed. In this case, conduct the inspection from the bench. Be aware of special safety considerations

pertinent to walking on the bench and follow the instructions of company personnel on the required equipment and operations procedures. If possible, conduct the bench traverse whenever the bench is clear of the door machine and hot coke guide.

4.3 Observations. Record all the information requested at the top of the door area inspection sheet (Figure 303–2), including the number of inoperable ovens. Record the clock time at the start of the traverse on each side of the battery. Record which side is being inspected, i.e., coke side or push side. Other information may be recorded at the discretion of the observer, such as the location of the leak (i.e., top of the door, chuck door, etc.), the reason for any interruption of the traverse, or the position of the sun relative to the battery and sky conditions (i.e., overcast, partly sunny, etc.).

4.3.1 Begin the test run by starting the stopwatch and traversing either the coke side or the push side of the battery. After completing one side, stop the watch. Complete this procedure on the other side. If inspecting more than one battery, the observer may view the push sides and the coke sides sequentially.

4.3.2 During the traverse, look around the entire perimeter of each oven door. The door is considered leaking if VE are detected in the coke oven door area. The coke oven door area includes the entire area on the vertical face of a coke oven between the bench and the top of the battery between two adjacent buck stays (e.g., the oven door, chuck door, between the masonry brick, buck stay or jamb, or other sources). Record the oven number and make the appropriate notation on the door area inspection sheet (Figure 303–2).

Note: Multiple VE from the same door area (e.g., VE from both the chuck door and the push side door) are counted as only one emitting door, not as multiple emitting doors.

4.3.3 Do not record the following sources as door area VE:

4.3.3.1 VE from ovens with doors removed. Record the oven number and make an appropriate notation under "Comments;" or

4.3.3.2 VE from ovens taken out of service. The owner or operator shall notify the observer as to which ovens are out of service. Record the oven number and make an appropriate notation under "Comments;" or

4.3.3.3 VE from hot coke that has been spilled on the bench as a result of pushing.

4.4 Criteria for Acceptance. After completing the run, calculate the maximum time allowed to observe the ovens by the following equation:

$$T = (4 \times D_t) + (10 \times L) \qquad \text{(Eq. 303–2)}$$

where

T=Total time allowed for traverse, seconds;
D_t=Total number of oven doors on the battery; and
L=Number of doors with VE.

4.4.1 If the total traverse time exceeds T, void the run, and conduct another run to satisfy the requirements of § 63.309(c)(1) of this part.

4.5 Calculations for Percent Leaking Doors (PLD). Determine the total number of doors for which observations were made on the coke oven battery as follows:

$$D_{ob} = (2 \times N) - (D_i + D_{no}) \qquad \text{(Eq. 303–3)}$$

where

D_{ob}=Total number of doors observed on operating ovens;
D_i=Number of doors on nonoperating ovens;
D_{no}=Number of doors not observed; and
N=Total number of ovens in the battery.

4.5.1 For each test run (one run includes both the coke side and the push side traverses), sum the number of doors with door area VE. For batteries subject to an approved alternative standard under § 63.305 of this part, calculate the push side and the coke side PLD separately.

4.5.2 Calculate percent leaking doors by using the following equation:

$$PLD = \frac{L_y}{D_{ob}} \times 100 \qquad \text{(Eq. 303–4)}$$

where

PLD=Percent leaking doors for the test run;
L_y=Number of doors with VE observed from the yard; and
D_{ob}=Total number of doors observed on operating ovens.

4.5.3 When traverses are conducted from the bench under sheds, calculate the coke side and the push side separately. Use the following equation to calculate a yard-equivalent reading:

$$L_b = L_s - (N \times 0.06) \qquad \text{(Eq. 303–5)}$$

where

N=Total number of ovens on the battery;
L_b=Yard-equivalent reading; and
L_s=Number of doors with VE observed from the bench under sheds.

If L_b is less than zero, use zero for L_b in Equation 303–6 in the calculation of PLD.

4.5.3.1 Use the following equation to calculate PLD:

$$PLD = \frac{L_b + L_y}{D_{ob}} \times 100 \qquad \text{(Eq. 303–6)}$$

where

PLD=Percent leaking coke oven doors for the run;
L_b=Yard equivalent reading;
L_y=Number of doors with VE observed from the yard on the push side; and
D_{ob}=Total number of doors observed on operating ovens.

Round off PLD to the nearest hundredth of 1 percent and record as the percent leaking coke oven doors for the run.

4.5.3.2 30-day Rolling Average. For each day on which a valid observation is obtained, calculate the daily 30-day rolling average for each battery using these data and the 29 previous valid daily observations, in accordance with the following equation:

$$PLD(30\text{-day}) = \frac{(PLD_1 + PLD_2 + \ldots + PLD_{30})}{30} \qquad \text{(Eq. 303–7)}$$

5. *Procedure for Determining VE from Topside Port Lids and Offtake Systems*

5.1 Number of Runs. Refer to § 63.309(c)(1) of this part for the number of runs to be conducted. Simultaneous runs or separate runs for the topside port lids and offtake systems may be conducted.

5.2 Battery Traverse. To conduct a topside traverse of the battery, walk the length of the battery at a steady, normal walking pace, pausing only to make appropriate entries on the topside inspection sheet (Figure 303–3). The walking pace shall not exceed an average rate of 4 seconds per oven, excluding time spent moving around stationary obstructions or waiting for other obstructions to move from positions blocking the view. Extra time is allowed for each leak for the observer to make the proper notation. A walking pace of 3 seconds per oven is typical. Record the actual traverse time with a stopwatch.

5.3 Topside Port Lid Observations. To observe lids of the ovens involved in the charging operation, the observer shall wait to view the lids until approximately 5 minutes after the completion of the charge. Record all the information requested on the topside inspection sheet (Figure 303–3). Record the clock time when traverses begin and end. If the observer's view is obstructed during the traverse (e.g., steam from the coke wharf, larry car, etc.), follow the guidelines given in section 4.2.2.

5.3.1 To perform a test run, conduct a single traverse on the topside of the battery. The observer shall walk near the center of the battery but may deviate from this path to avoid safety hazards (such as open or closed charging ports, luting buckets, lid removal bars, and topside port lids that have been removed) and any other obstacles. Upon noting VE from the topside port lid(s) of an oven, record the oven number and port number, then resume the traverse. If any oven is dampered-off from the collecting main for decarbonization, note this under "Comments" for that particular oven.

Note: Count the number of topside ports, not the number of points, exhibiting VE, i.e., if a topside port has several points of VE, count this as one port exhibiting VE.

5.3.2 Do not count the following as topside port lid VE:

5.3.2.1 VE from between the brickwork and oven lid casing or VE from cracks in the oven brickwork. Note these VE under "Comments;"

5.3.2.2 VE from topside ports involved in a charging operation. Record the oven number, and make an appropriate notation (i.e., not observed because ports open for charging) under "Comments;"

5.3.2.3 Topside ports having maintenance work done. Record the oven number and make an appropriate notation under "Comments;" or

5.3.2.4 Condensing water from wet-sealing material. Ports with only visible condensing water from wet-sealing material are counted as observed but not as having VE.

5.3.2.5 Visible emissions from the flue inspection ports and caps.

5.4 Offtake Systems Observations. To perform a test run, traverse the battery as in section 5.3.1. Look ahead and back two to four ovens to get a clear view of the entire offtake system for each oven. Consider visible emissions from the following points as offtake system VE: (a) the flange between the gooseneck and collecting main ("saddle"), (b) the junction point of the standpipe and oven ("standpipe base"), (c) the other parts of the offtake system (e.g., the standpipe cap), and (d) the junction points with ovens and flanges of jumper pipes.

5.4.1 Do not stray from the traverse line in order to get a "closer look" at any part of the offtake system unless it is to distinguish leaks from interferences from other sources or to avoid obstacles.

5.4.2 If the centerline does not provide a clear view of the entire offtake system for each oven (e.g., when standpipes are longer than 15 feet), the observer may conduct the traverse farther from (rather than closer to) the offtake systems.

5.4.3 Upon noting a leak from an offtake system during a traverse, record the oven number. Resume the traverse. If the oven is dampered-off from the collecting main for decarbonization and VE are observed, note this under "Comments" for that particular oven.

5.4.4 If any part or parts of an offtake system have VE, count it as one emitting offtake system. Each stationary jumper pipe is considered a single offtake system.

5.4.5 Do not count standpipe caps open for a decarbonization period or standpipes of an oven being charged as source of offtake system VE. Record the oven number and write "Not observed" and the reason (i.e., decarb or charging) under "Comments."

Note: VE from open standpipes of an oven being charged count as charging emissions. All VE from closed standpipe caps count as offtake leaks.

5.5 Criteria for Acceptance. After completing the run (allow 2 traverses for batteries with double mains), calculate the maximum time allowed to observe the topside port lids and/or offtake systems by the following equation:

$$T = (4\ \text{sec} \times N) + (10\ \text{sec} \times Z) \qquad \text{(Eq. 303-8)}$$

where

T=Total time allowed for traverse, seconds;
N=Total number of ovens in the battery; and
Z=Number of topside port lids or offtake systems with VE.

5.5.1 If the total traverse time exceeds T, void the run and conduct another run to satisfy the requirements of § 63.309(c)(1) of this part.

5.6 In determining the percent leaking topside port lids and percent leaking offtake systems, do not include topside port lids or offtake systems with VE from the following ovens:

5.6.1 Empty ovens, including ovens undergoing maintenance, which are properly dampered off from the main.

5.6.2 Ovens being charged or being pushed.

5.6.3 Up to 3 full ovens that have been dampered off from the main prior to pushing.

5.6.4 Up to 3 additional full ovens in the pushing sequence that have been dampered off from the main for offtake system cleaning, for decarbonization, for safety reasons, or when a charging/pushing schedule involves widely separated ovens (e.g., a Marquard system); or that have been dampered off from the main for maintenance near the end of the coking cycle. Examples of reasons that ovens are dampered off for safety reasons are to avoid exposing workers in areas with insufficient clearance between standpipes and the larry car, or in areas where workers could be exposed to flames or hot gases from open standpipes, and to avoid the potential for removing a door on an oven that is not dampered off from the main.

5.6.5 Topside Port Lids. Determine the percent leaking topside port lids for each run as follows:

$$PLL = \frac{P_{VE}}{P_{ovn}(N - N_i) - P_{NO}} \times 100 \qquad \text{(Eq. 303-9)}$$

where

PLL=Percent leaking topside port lids for the run;
P_{VE}=Number of topside port lids with VE;
P_{ovn}=Number of ports per oven;
N=Total number of ovens in the battery;
N_i=Number of inoperable ovens; and
P_{NO}=Number of ports not observed.

5.6.5.1 Round off this percentage to the nearest hundredth of 1 percent and record this percentage as the percent leaking topside port lids for the run.

5.6.5.2 30-day Rolling Average. For each day on which a valid daily observation is obtained, calculate the daily 30-day rolling average for each battery using these data and the 29 previous valid daily observations, in accordance with the following equation:

$$PLL(30\text{-day}) = \frac{(PLL_1 + PLL_2 + K + PLL_{30})}{30} \qquad \text{(Eq. 303-10)}$$

5.6.6. Offtake Systems. Determine the percent leaking offtake systems for the run as follows:

$$PLO = \frac{T_{VE}}{T_{ovn}(N - N_i) + J - T_{NO}} \times 100 \qquad \text{(Eq. 303-11)}$$

where

PLO=Percent leaking offtake systems;
T_{VE}=Number of offtake systems with VE;
T_{ovn}=Number of offtake systems (excluding jumper pipes) per oven;
N=Total number of ovens in the battery;
N_i=Total number of inoperable ovens;
T_{NO}=Number of offtake systems not observed; and
J=Number of stationary jumper pipes.

5.6.6.1 Round off this percentage to the nearest hundredth of 1 percent and record this percentage as the percent leaking offtake systems for the run.

5.6.7. 30-day Rolling Average. For each day on which a valid daily observation is obtained, calculate the daily 30-day rolling average for each battery using these data and the 29 previous valid daily observations, in accordance with the following equation:

$$PLO(30-day) = \frac{(PLO_1 + PLO_2 K + PLO_{30})}{30} \qquad \text{(Eq. 303-12)}$$

6. *Procedure for Determining VE From Collecting Mains*

6.1 Traverse. To perform a test run, traverse both the collecting main catwalk and the battery topside along the side closest to the collecting main. If the battery has a double main, conduct two sets of traverses for each run, i.e., one set for each main.

6.2 Data Recording. Upon noting VE from any portion of a collection main, identify the source and approximate location of the source of VE and record the time under "Collecting main" on Figure 303-3; then resume the traverse.

6.3 Collecting Main Pressure Check. After the completion of the door traverse, the topside port lids, and offtake systems, compare the collecting main pressure during the inspection to the collecting main pressure during the previous 8 to 24 hours. Record the following: (a) The pressure during inspection, (b) presence of pressure deviation from normal operations, and (c) the explanation for any pressure deviation from normal operations, if any, offered by the operators. The owner or operator of the coke battery shall maintain the pressure recording equipment and conduct the quality assurance/quality control (QA/QC) necessary to ensure reliable pressure readings and shall keep the QA/QC records for at least 6 months. The observer may periodically check the QA/QC records to determine their completeness. The owner or operator shall provide access to the records within 1 hour of an observer's request.

7. *Bibliography*

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4. U.S. Environmental Protection Agency. National Emission Standards for Hazardous Air Pollutants; Coke Oven Emissions from Wet-Coal Charged By-Product Coke Oven Batteries; Proposed Rule and Notice of Public Hearing. Washington, DC Federal Register. Vol. 52, No. 78 (13588). April 23, 1987.

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Company name:_____ Battery no.:_____ Date:_____ Run no.:_____

City, State:_____

Observer name:_____ Company representative(s):_____

Charge no.	Oven no.	Clock time	Visible Emissions, seconds	Comments

Figure 303-1. Charging system inspection.

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Company name:_____ Battery no.:_____ Date:_____

City, State:_____ Total no. of ovens in battery:_____

Observer name:_____ Certification expiration date:_____

Inoperable ovens:_____ Company representative(s):_____

Traverse time CS:_____ Traverse time PS:_____ Valid run (Y or N):_____

Time traverse started/ completed	PS/CS	Door Number	Comments (no. of blocked doors, interruptions to traverse, etc.)

Figure 303-2. Door area inspection.

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Company name:_____ Battery no.:_____ Date:_____

City, State:_____ Total no. of ovens in battery:_____

Observer name:_____ Certification expiration date:_____

Inoperable ovens:_____ Company representative(s):_____

Total no. of lids:_____ Total no. of offtakes:_____ Total no. of jumper pipes:_____

Ovens not observed:_____ Total traverse time:_____ Valid run (Y or N):_____

Time traverse started/ completed	Type of inspection (lids, offtakes, collecting main)	Location of VE (Oven #/Port #)	Comments

Figure 303-3. Topside inspection.

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METHOD 303A—DETERMINATION OF VISIBLE EMISSIONS FROM NONRECOVERY COKE OVEN BATTERIES

1. *Applicability and Principle*

1.1 Applicability. This method determines percent leaking doors.

1.2 Principle. A certified observer visually determines the VE from coke oven battery sources. This method does not require that opacity of emissions be determined or that magnitude be differentiated.

1.3 Definitions.

1.3.1 Bench. The platform structure in front of the oven doors.

1.3.2 Nonrecovery Coke Oven Battery. A source consisting of a group of ovens connected by common walls and operated as a unit, where coal undergoes destructive distillation under negative pressure to produce coke, and which is designed for the combustion of coke oven gas from which by-products are not recovered.

1.3.3 *Coke Oven Door.* Each end enclosure on the pusher side and the coking side of an oven.

1.3.4 Coke Side. The side of a battery from which the coke is discharged from ovens at the end of the coking cycle.

1.3.5 Operating Oven. Any oven not out of operation for rebuild or maintenance work extensive enough to require the oven to be skipped in the charging sequence.

1.3.6 Oven. A chamber in the coke oven battery in which coal undergoes destructive distillation to produce coke.

1.3.7 Push Side. The side of the battery from which the coke is pushed from ovens at the end of the coking cycle.

1.3.8 Run. The observation of visible emissions from coke oven doors in accordance with the procedures in this method.

1.3.9 Shed. An enclosure that covers the side of the coke oven battery, captures emissions from pushing operations and from leaking coke oven doors on the coke side or pusher side of the coke oven battery, and routes the emissions to a control device or system.

2. *Training*

2.1 Training. This method requires only the determination of whether VE occur and does not require the determination of opacity levels; therefore, observer certification according to Method 9 in appendix A to part 60 of this chapter is not required. However, the first-time observer (trainee) shall have attended the lecture portion of the Method 9 certification course. Furthermore, before conducting any VE observations, an observer shall become familiar with nonrecovery coke oven battery operations and with this test method by observing for a minimum of 4 hours the operation of a nonrecovery coke oven battery.

3. *Procedure for Determining VE From Coke Oven Door Areas*

The intent of this procedure is to determine VE from coke oven door areas by carefully observing the door area while walking at a normal pace.

3.1 Number of Runs. Refer to § 63.309(c)(1) of this part for the appropriate number of runs.

3.2 Battery Traverse. To conduct a battery traverse, walk the length of the battery on the outside of the pusher machine and quench car tracks at a steady, normal walking pace, pausing to make appropriate entries on the door area inspection sheet (Figure 303A–1). A single test run consists of two timed traverses, one for the coke side and one for the push side.

3.2.1 Various situations may arise that will prevent the observer from viewing a door or a series of doors. The observer has two options for dealing with obstructions to view: (a) Wait for the equipment to move or the fugitive emissions to dissipate before completing the traverse; or (b) skip the affected ovens and move to a position to continue the traverse. Continue the traverse. After the completion of the traverse, if the equipment has moved or the fugitive emissions have dissipated, complete the traverse by inspecting the affected doors. Record the oven numbers and make an appropriate notation under "Comments" on the door area inspection sheet (Figure 303A–1).

3.2.2 When batteries have sheds to control pushing emissions, conduct the inspection from outside the shed, if the shed allows such observations, or from the bench. Be aware of special safety considerations pertinent to walking on the bench and follow the instructions of company personnel on the required equipment and operations procedures. If possible, conduct the bench traverse whenever the bench is clear of the door machine and hot coke guide.

3.3 Observations. Record all the information requested at the top of the door area inspection sheet (Figure 303A–1), including the number of inoperable ovens. Record which side is being inspected, i.e., coke side or push side. Other information may be recorded at the discretion of the observer, such as the location of the leak (e.g., top of the door), the reason for any interruption of the traverse, or the position of the sun relative to the battery and sky conditions (i.e., overcast, partly sunny, etc.).

3.3.1 Begin the test run by traversing either the coke side or the push side of the battery. After completing one side, traverse the other side.

3.3.2 During the traverse, look around the entire perimeter of each oven door. The door is considered leaking if VE are detected in the coke oven door area. The coke oven door area includes the entire area on the vertical face of a coke oven between the bench and the top of the battery. Record the oven number and make the appropriate notation on the door area inspection sheet (Figure 303A–1).

3.3.3 Do not record the following sources as door area VE:

3.3.3.1 VE from ovens with doors removed. Record the oven number and make an appropriate notation under "Comments;"

3.3.3.2 VE from ovens where maintenance work is being conducted. Record the oven number and make an appropriate notation under "Comments;" or

3.3.3.3 VE from hot coke that has been spilled on the bench as a result of pushing.

3.4 Calculations for percent leaking doors (PLD). Determine the total number of doors for which observations were made on the coke oven battery as follows:

$$D_{ob} = (2 \times N) - (D_i + D_{no}) \quad \text{(Eq. 303A – 1)}$$

where

D_{ob}=Total number of doors observed on operating ovens;
D_i=Number of doors on nonoperating ovens;
D_{no}=Number of doors not observed; and
N=Total number of ovens in the battery.

3.4.1 For each test run (one run includes both the coke side and the push side traverses), sum the number of doors with door area VE.

Note: Multiple VE from the same door area are counted as only one emitting door, not as multiple emitting doors.

3.4.2 Calculate percent leaking doors by using the following equation:

$$PLD = \frac{L_y}{D_{ob}} \times 100 \quad \text{(Eq. 303A – 2)}$$

where

PLD=Percent leaking doors for the test run;
L_y=Number of doors with VE observed from the yard; and
D_{ob}=Total number of doors observed on operating ovens.

3.4.3 When traverses are conducted from the bench under sheds, calculate the coke side and the push side reading separately. Use the following equation to calculate a yard-equivalent reading for the coke side:

$$L_b = L_s - (N \times 0.06) \quad \text{(Eq. 303A – 3)}$$

where

N=Total number of ovens on the battery;
L_b=Yard-equivalent reading; and
L_s=Number of doors with VE observed from the bench under sheds.

If L_b is less than zero, use zero for Lb in Equation 303A–4 in the calculation of PLD.

3.4.3.1 Use the following equation to calculate PLD:

$$PLD = \frac{L_b + L_y}{D_{ob}} \times 100 \quad \text{(Eq. 303A – 4)}$$

where

PLD=Percent leaking coke oven doors for the run;
L_b=Yard equivalent reading;
L_y=Number of doors with VE observed from the yard on the push side; and
D_{ob}=Total number of doors observed on operating ovens.

Round off PLD to the nearest hundredth of 1 percent and record as the percent leaking coke oven doors for the run.

3.4.3.2 30-day Rolling Average. For each day on which a valid observation is obtained, calculate the daily 30-day rolling average for each battery using these data and the 29 previous valid daily observations, in accordance with the following equation:

$$PLD(30\text{-day}) = \frac{(PLD_1 + PLD_2 + \ldots + PLD_{30})}{30} \quad \text{(Eq. 303-5)}$$

4. *Bibliography*

1. Missan, R., and A. Stein. Guidelines for Evaluation of Visible Emissions Certification, Field Procedures, Legal Aspects, and Background Material. U.S. Environmental Protection Agency. EPA Publication No. EPA-340/1-75-007. April 1975.

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3. U.S. Occupational Safety and Health Administration. *Code of Federal Regulations.* Title 29, Chapter XVII, Section 1910.1029(g). Washington, DC Government Printing Office. July 1, 1990.

4. U.S. Environmental Protection Agency. National Emission Standards for Hazardous Air Pollutants; Coke Oven Emissions from Wet-Coal Charged By-Product Coke Oven Batteries; Proposed Rule and Notice of Public Hearing. Washington, DC Federal Register. Vol. 52, No. 78 [13586]. April 23, 1987.

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Company name:_____ Battery no.:_____ Date:_____

City, State:_____ Total no. of ovens in battery:_____

Observer name:_____ Certification expiration date:_____

Inoperable ovens:_____ Company representative(s):_____

Traverse time CS:_____ Traverse time PS:_____ Valid run (Y or N):_____

Time traverse started/ completed	PS/CS	Door Number	Comments (no. of blocked doors, interruptions to traverse, etc.)

Figure 303A-1. Door area inspection.

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Federal Register

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Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by January 28, 1994. 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).)

Executive Order 12866

This action has been classified as a Table 2 Action by the Regional Administrator under the procedures published in the Federal Register on January 19, 1989 (54 FR 2214–2225). On January 6, 1989, the Office of Management and Budget (OMB) waived Table 2 and Table 3 SIP revisions from the requirement of section 3 of Executive Order 12291 for a period of two years. U.S. EPA has submitted a request for a permanent waiver for Table 2 and Table 3 SIP revisions. The OMB has agreed to continue the waiver until such time as it rules on U.S. EPA's request. This request continues in effect under Executive Order 12866 which superseded Executive Order 12291 on September 30, 1993.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Environmental protection, Incorporation by reference, Intergovernmental relations, Particulate matter, Reporting and recordkeeping requirements.

Note: Incorporation by reference of the SIP for the State of New Mexico was approved by the Director of the Federal Register on July 1, 1982.

Dated: October 25, 1993.

Myron O. Knudson,

Acting Regional Administrator.

40 CFR part 52 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 GG—New Mexico

2. Section 52.1620 is amended by adding paragraph (c)(52) to read as follows:

§ 52.1620 Identification of plan.

* * * * *

(c) * * *

(52) A revision to the New Mexico SIP addressing CO for Albuquerque/Bernalillo County was submitted by the Governor of New Mexico by letter dated November 5, 1992.

(i) Incorporation by reference.

(A) Albuquerque/Bernalillo County Regulation 34–Woodburning, section 34.00, "Purpose;" section 34.01, "Definitions;" section 34.02, "Sale of New Wood Heaters–Certification Required;" section 34.03, "No-burn Periods;" section 34.04, "Notice Required;" Section 34.05, "Exemptions;" section 34.06, "Visible Emissions;" section 34.07, "Test Procedures;" and section 34.08, "Misfueling of Solid Fuel Heating Devices Prohibited," as filed with the State Records and Archives Center on November 27, 1991.

(B) Albuquerque/Bernalillo County Regulation 35–Alternative Fuels, section 35.00, "Purpose;" section 35.01, "Definitions;" section 35.02, "Oxygenated Fuels;" section 35.03, "Oxygenated Fuels Procedures Manual;" and section 35.07, "Severability Clause," as filed with the State Records and Archives Center on June 25, 1992.

(ii) Additional material.

(A) November 5, 1992, narrative plan addressing the Albuquerque/Bernalillo County CO nonattainment area, including the Albuquerque/Bernalillo County 1990 base year CO emissions inventory.

(B) A letter dated March 22, 1993, from Sarah B. Kotchian, Director, Albuquerque Environmental Health Department (Department), to A. Stanley Meiburg, Director, Air, Pesticides and Toxics Division, EPA Region 6, in which the Department committed to submitting future amendments to Regulation 34 to correct an enforceability deficiency, and in which the Department committed to using only EPA approved test methods until the future amendment correcting the enforceability deficiency is approved by the EPA.

(C) A memorandum dated September 8, 1992, from Kent A. Salazar, Manager, Albuquerque Vehicle Pollution Management Division, to Albert Salas, Quality Assurance Specialist Supervisor, Albuquerque Vehicle Pollution Management Division, addressing the suspension of the oxygenated fuels program due to oxygenate shortage.

[FR Doc. 93–29055 Filed 11–26–93; 8:45 am]
BILLING CODE 6560–50–F

40 CFR Part 63

[AS-FRL–4808–2]

National Emission Standards for Hazardous Air Pollutants; Amendments to Compliance Extensions for Early Reductions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Pursuant to section 112(i)(5) of the Clean Air Act (Act), a rule was promulgated in the **Federal Register** on December 29, 1992 to implement granting extensions to compliance with section 112(d) emission standards to sources that have achieved early reductions of hazardous air pollutants (HAPs). This action makes several amendments to the original Early Reductions Rule including: (1) Revisions to the deadlines for submitting permit applications, reduction demonstrations, and source testing results, (2) a clarification of the status of an enforceable commitment under certain situations, and (3) correction of a typographical error regarding the high-risk weighting factor for hexachlorocyclopentadiene. As EPA began implementation of the Early Reductions Rule it became apparent that certain timing problems existed with respect to demonstrations that early reductions had been achieved and the issuance of permits to sources that qualify for a compliance extension. Additionally, some questions were posed by potential program participants on the nature of enforceable commitments. This action is needed to alleviate the timing problems and clarify EPA's treatment of enforceable commitments. The intended results are to improve EPA's ability to determine that actual reductions are achieved before a compliance extension is granted, to make the permit issuance process more workable, and make the provisions of the Early Reductions Program more clear to potential participants.

EFFECTIVE DATE: November 29, 1993.

Docket. All information used in the development of this final action is contained in the preamble below. However, Docket No. A–90–47, containing the supporting information for the original Early Reductions Rule, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket Section, Waterside Mall, room M–1500, 1st floor, 401 M Street SW., Washington DC 20460. A

reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. David Beck, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 2771, telephone (919) 541–5421.

SUPPLEMENTARY INFORMATION: The information presented in this preamble is organized as follows:

I. Background
II. Summary of and Rationale for Rule Changes
A. Early Reductions Demonstration
B. Permit Application Deadlines
C. Enforceable Commitments
D. Hexachlorocyclopentadiene
E. Effective Date
F. Judicial Review
III. Administrative Requirements

I. Background

The Clean Air Act Amendments of 1990 revised section 112 of the Act, which directs EPA to establish national emission standards for sources of HAP. One of the new provisions, section 112(i)(5), offers sources that emit HAPs an incentive for achieving substantial emission reductions earlier than would be required by standards promulgated under section 112(d). Specifically, the early reductions provision allows granting an existing source emitting HAPs a six-year compliance date extension for an applicable section 112(d) standard, upon demonstration by the owner or operator that the source has achieved, prior to certain dates, a HAP reduction of 90 percent or more from established base year HAP emission levels (95 percent reduction is required for sources emitting particulate HAP).

Generally, participating sources would have to achieve the 90 (95) percent reduction prior to proposal of an applicable section 112(d) standard. However, sources that would be subject to early section 112(d) standards also have the option of participating by submitting to EPA, prior to proposal of an applicable section 112(d) standard, an enforceable commitment to achieve the 90 (95) percent reduction before January 1, 1994. Sources successfully demonstrating qualifying HAP reductions would be granted the compliance extension in a permit issued pursuant to title V of the Act. The permit would establish an alternative emission limitation to be met by the source to ensure that the early reductions are maintained.

On December 29, 1992, EPA promulgated in the Federal Register (57 FR 61970) an implementing rule for the early reductions provisions of the Act. As incorporated in the Code of Federal Regulations under title 40, part 63, subpart D, the Early Reductions Rule established procedures and requirements for source owners or operators wishing to obtain the six-year compliance extension. Among other provisions, the rule contains guidelines for demonstrating achievement of qualifying early reductions and established deadlines by which owners or operators must file permit applications to request a compliance extension.

II. Summary of Rule Changes and Rationale

A. Early Reductions Demonstration

According to section 112(i)(5), the early reductions are to be demonstrated with respect to verifiable and actual emissions in a base year not earlier than calendar year 1987. The EPA's interpretation of this language was that total actual HAP emissions from the source over the entire base year (calendar year basis) is the benchmark from which the early reductions will be measured. The Early Reductions Rule implemented this interpretation and required owners or operators to establish base year emissions using "the best available data accounting for actual emissions, during the base year, of all hazardous air pollutants from each emission point listed in the source * * *". As an example, an early reductions source may have actual HAP emissions of 100 tons in the base year selected.

To determine whether a source's reductions qualify for a compliance extension, post-reduction emissions must be established on a similar basis and compared to base year emissions. The Early Reductions Rule specifies post-reduction emissions as "the best available data on an annual basis accounting for actual emissions, after the base year and following employment of emission reduction measures, of all hazardous air pollutants from each emission point in the source * * *". Therefore, the source in the example from the preceding paragraph with base year emissions of 100 tons per year would be required to document actual post-reduction HAP emissions on a tons per year basis as well.

As stated previously, to obtain a compliance extension, a participating source must achieve sufficient reductions before proposal of an applicable section 112(d) standard or, for sources making enforceable commitments, before January 1, 1994. Emission reduction projects completed on the day before the applicable deadline would count toward the early reduction target of an overall 90 (95) percent reduction. However, after the deadline passes, the source would be expected to emit HAP at the 90 (95) percent reduced level on an annual basis. Therefore, a source having actual HAP emissions of 100 tons in the base year would be expected to emit 10 tons or less of actual HAP emissions during the year following the proposal date of an applicable 112(d) standard to qualify for a compliance extension. (And, of course, would have to maintain that level until the compliance extension expires). For sources making enforceable commitments, actual HAP emissions would have to be 10 tons or less during calendar year 1994 to qualify.

The Early Reductions Rule also required participants to request compliance extensions in the context of title V permit applications. The applications were to consist of two main parts: (1) The demonstration that early reductions had been achieved and (2) permit terms and conditions, including emission limits, monitoring methods, and recordkeeping and reporting requirements proposed by the owner or operator for the early reductions source. Applications had to be filed before proposal of an applicable standard or, for sources making enforceable commitments, by December 1, 1993. The combined requirements, to file permit applications on or before the date emission reductions have to be achieved and to include the reduction demonstration in the permit application, essentially precludes the source owner or operator from demonstrating post-reduction "actual" HAP emissions as envisioned by the early reductions provision of the Act. To provide a reduction demonstration under this scenario, the participant has to project what emissions will be for the post-reduction year. In most cases, this would mean that short-term emission rates for the emitting units in the early reductions source would have to be extrapolated using expected production conditions for the post-reduction year.

Such a situation is not satisfactory to ensure that sufficient early reductions actually are achieved before a compliance extension is granted. The HAP emission rate from a source can be expected to vary during a year due to seasonal factors, shifting production schedules, changing product mixes, or other factors. Therefore, it is possible that a source that can show a low emission rate the day before proposal of an applicable section 112(d) standard may have a much higher HAP emission

rate days, weeks, or months later. With the language in the Early Reductions Rule promulgated on December 29, 1992, it would be possible to grant a compliance extension to a source that never emits 90 (95) percent less than base year emissions, solely based on a "future-actual" extrapolation of a low, short-term, emission rate. Following through on the example of the source having base year emissions of 100 tons per year, suppose the source has made an enforceable commitment and on December 1, 1993 submits a permit application and a reduction demonstration showing that on November 20, 1993 emissions were 50 pounds per day. Based on that rate, the source projects 1994 emissions to be 18,250 lbs. or 9.1 tons per year (50 lbs. per day multiplied by 365 days) and would be eligible to obtain a compliance extension. However, since no permit would be in place for the source and wouldn't be until the title V permit is issued late in 1994, no monitoring and reporting requirements apply and EPA may never be sure that 1994 actual emissions would achieve the predicted level.

To rectify the apparent discrepancy between the promulgated Early Reductions Rule and the intent of the early reductions provisions of the Act regarding the demonstration of early reductions, EPA is making several changes to the rule. The demonstration of early reductions no longer will accompany the permit application. Rather, the reduction demonstration will be required after the end of the post-reduction year, which is the year following proposal of an applicable section 112(d) standard or calendar year 1994, for sources making enforceable commitments. Specifically, participants will have to submit reduction demonstrations after the end of the post-reduction year but within 13 months of the proposal date of an applicable emission standard or, for sources subject to enforceable commitments, by January 31, 1995. The description of post-reduction emissions from the promulgated Early Reductions Rule [§ 63.74(d)(2)] has been revised to state specifically that actual emissions for the post-reduction year must be demonstrated.

These changes ensure that EPA will receive an accounting of post-reduction emissions for the year immediately after the reduction deadline and ensure that no compliance extensions will be granted until actual post-reduction emissions are demonstrated and approved for the year after the reduction deadline. Early Reductions participants will have to track post-reduction emissions to make the year end demonstration, and EPA recommends that sources institute the monitoring procedures that the source will propose in the permit application to help in documenting post-reduction emissions.

Related to the revised requirement for demonstrating early reductions, two paragraphs from the original rule have been deleted. The first is § 63.74(d)(4), which required the owner or operator to submit evidence that emission reductions used to qualify for a compliance extension were achieved prior to the applicable reduction deadline. This provision was rendered superfluous by the change to require the post-reduction emission demonstration to represent actual emissions during the year after the applicable reduction deadline, instead of a projection of what actual post-reduction emissions likely would be. In other words, the criterion to determine whether the reduction deadline was met will be the showing that actual emissions in the post-reduction year were low enough to qualify the source for a compliance extension.

The second paragraph deleted is § 63.74(i), which instructed owners or operators to extrapolate post-reduction emission rates to an annual basis. Similar to the provision discussed in the above paragraph, this provision is now unnecessary because the post-reduction emissions demonstration no longer will be a prediction of emission levels for the post-reduction year.

B. Permit Application Deadlines

Two other date changes are being made to the Early Reductions Rule, primarily as a result of the change to the reduction demonstration submittal date. First, the permit application deadlines for sources participating in the Early Reductions Program have been revised. Originally, sources that had not made enforceable commitments were to submit applications by the date of proposal of the applicable section 112(d) standard or, if later, within 120 days of approval of the involved State's title V permit program. The revised deadline is 120 days after proposal of the applicable section 112(d) standard or, if later, within 120 days of establishment of a title V permit program (either a State or federal program). For sources that have made enforceable commitments, the application date is revised from December 1, 1993 to April 30, 1994.

Permits for early reductions sources are to be issued within 12 months of receipt of a complete application, and under the previously promulgated application dates, EPA technically could be required to issue permits before the post-reduction demonstration could be evaluated and a decision made on whether to grant a compliance extension. Moving the application submittal date to 120 days after proposal of an applicable section 112(d) standard, or April 30, 1994 for sources making enforceable commitments, would more closely match the date EPA must issue a permit with the date EPA would be ready to do so.

Another reason for delaying the December 1, 1993 application deadline for sources subject to enforceable commitments is that no title V permitting mechanism will be in place at that time. The December 1, 1993 deadline presumed that a title V permitting mechanism, either approved State title V programs or a promulgated federal title V program, would be operational by that time to process applications, and that such a program would be operational sufficiently ahead of the deadline to allow sources time to compose permit applications based on the permit program requirements. However, this is not the case. States likely will not obtain approval of their title V permit programs until late in 1994, or later, and a federal program for issuing title V permits probably will not be promulgated until 1995. Therefore, there will be no title V permitting mechanism in place before December 1, 1993.

To fill the permitting mechanism void, EPA intends to promulgate a specialty title V program solely for the purpose of processing and issuing permits for sources participating in the early reductions program. However, that program has not yet been promulgated, and probably won't be until mid-1994. At best, a specialty title V permit program will have just been proposed by the December 1, 1993 deadline, leaving little to no time for Early Reductions Program participants to see the proposed permit program requirements and prepare applications for submission. Revising the deadline to April 30, 1994 alleviates this problem.

Since the specialty permit program likely will not have been promulgated by the new April 30, 1994 deadline, participants will have to compose permit applications based on the proposed specialty program. In the event that there are significant changes between the proposed and promulgated versions of the specialty permit program, participants would be have to amend their permit applications to accommodate the changes.

The second change revises the deadline for submittal of source test results for sources subject to enforceable

commitments. The promulgated Early Reductions Rule, although requiring the post-reduction emission demonstration to accompany the permit application, allowed owners or operators to submit source test results in support of post-reduction emissions as late as 120 days after the deadline for submitting permit applications, or for sources subject to enforceable commitments, March 31, 1994. The later submittal of test results allowed sources that had implemented reduction measures just before the early reduction deadline time to perform source tests and analzye and compile the results. The test result submittal date for sources subject to enforceable commitments is being revised to April 30, 1994, coinciding with the revised permit application date for such sources. The date is not revised for other sources since it already coincides with the revised permit application date.

It may seem incongruent that the post-reduction emission demonstration does not have to be submitted until after the post-reduction year has ended, yet the results from any source testing done to support post-reduction emissions must be submitted well ahead of that time. However, the point of asking for test results earlier is to see that any planned source tests are performed early in the post-reduction year, thereby giving a timely indication of the performance of emission reduction measures. Allowing tests to be performed late in the post-reduction year would not ensure detection of initial emissions levels during the post-reduction year. It is emphasized that submittal of test results does not constitute the post-reduction emissions demonstration. Test results or other indications of short-term emission levels would have to be coupled with relevant monitoring information over the year to demonstrate actual, annual, post-reduction HAP emissions for the early reductions source. Relevant monitoring information could include monitoring emissions directly or monitoring process parameters or control device parameters that are related to emissions performance.

C. Enforceable Commitments

A new paragraph § 63.75(f) is added to clarify the status of enforceable commitments that have not been approved and are still undergoing the approval process. An enforceable commitment includes a description of the early reductions source, associated HAP emission estimates for the base year selected, and a commitment to reduce HAP emissions by 90 (95) percent before January 1, 1994. The EPA will review and approve/disapprove base year emissions contained in an enforceable commitment according to the procedures in § 63.76 of the Early Reductions Rule. This process was instituted to help verify the technical adequacy and representativeness of base year emission estimates and, in turn, assure that the resulting target post-reduction emission levels are appropriate to qualify sources for compliance extensions.

If EPA finds base year emissions to be deficient in some way, the source must revise the enforceable commitment to take into account EPA's comments. If the source owner or operator cannot or chooses not to respond to EPA comments on the base year emission estimates, the source will be considered withdrawn from the program. Without EPA approval of base year emissions, an enforceable commitment is not in effect and is not enforceable. The new language under § 63.75(f) clarifies this point and the fact that when an unapproved enforceable commitment is still undergoing the approval process after the date commitments can be withdrawn without penalty (December 1, 1993), the source does not have to continue to seek approval of the commitment and will not be subject to enforcement action. Once again, the enforceable commitment must be approved to be in effect and enforceable.

A related concern raised to EPA is whether a source that has made an enforceable commitment and that has demonstrated achieving the required reductions must actually receive the compliance extension and be issued the title V permit, or could the source give up the extension and simply meet the applicable section 112(d) standard on schedule and without penalty? This question arose from a concern expressed by potential participants that some of the terms and conditions imposed in a permit issued to an early-reductions source may be rigorous to the point that the source owner or operator would prefer compliance with the applicable standard under section 112(d) of the Act. While EPA considers the possibility of such a scenario remote, it is acknowledged that the terms and conditions of permits issued to early reductions sources may be more individualized and subject to judgements made by the permitting authority than permits issued to similar sources complying with section 112(d) standards. For example, section 112(d) standards likely will specify monitoring requirements for subject sources, which will then be implemented in title V permits, whereas the monitoring requirements for emission reduction measures employed by an early reductions source must be generated through reasoned application of existing information on monitoring similar sources in similar situations.

Should the scenario in the above paragraph arise, the source owner or operator could withdraw from the Early Reductions Program without penalty provided that the terms of the enforceable commitment were met. In an enforceable commitment, an owner or operator commits to achieving before January 1, 1994 a 90 (95) percent reduction in emissions from the established base year HAP emission level at the early reductions source. If the owner or operator submits a demonstration (as defined by the amended Early Reductions Rule) that promised reductions had been achieved before the deadline and that demonstration is approved by EPA, then the terms of the enforceable commitment will have been met and the source could decide to forego receiving the compliance extension and instead meet the applicable section 112(d) standard on schedule, without penalty.

D. Hexachlorocyclopentadiene

Finally, the high-risk weighting factor for hexachlorocyclopentadiene (CAS No. 77474) as listed in Table 1 of § 63.74 is corrected to read "10" instead of "100." This change simply corrects a typographical error from the publication of the Early Reductions Rule.

E. Effective Date

The EPA is publishing this rule as a final rule, and it is effective immediately upon publication. The Agency believes that this action is supported by the "good cause" exception in the Administrative Procedures Act, which permits an agency for "good cause" to proceed directly to a final rule where issuing a proposed rule would be "impracticable, unnecessary, or contrary to the public interest" (5 U.S.C. 553(b)(B)) and for "good cause found" (5 U.S.C. 553(d)) to dispense with the general requirement that a rule be published 30 days before its effective date. The EPA believes that "good cause" exists here to issue a final, immediately effective rule because of the nearness of the December 1, 1993 permit application deadline (for sources that have made enforceable commitments) specified in the December 29, 1992 version of the Early Reductions Rule. If the changes in this rulemaking were only being proposed, then the December 1, 1993 application date would still be in effect and this would negate the intent of the changes such as delaying the permit application date until April 30, 1994 for sources that have made enforceable commitments.

Furthermore, EPA views this action, which delays information submissions, but improves accounting measurements, as noncontroversial.

F. Judicial Review

Under section 307(b)(1) of the Act, judicial review of the actions taken by this final rule is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of publication of this action. Under section 307(b)(2) of the Act, the requirements that are the subject of this final rule may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

III. Administrative Requirements

A. Paperwork Reduction Act

The information collection requirements of the previously promulgated Early Reductions Rule (57 FR 61970) were submitted to and approved by the Office of Management and Budget. A copy of this Information Collection Request (ICR) document (OMB control number 2060–0222) may be obtained from Sandy Farmer, Information Policy Branch (PM–223Y); U.S. Environmental Protection Agency; 401 M Street, SW.; Washington, DC 20460 or by calling (202) 260–2740. Today's changes to the Early Reductions Rule do not affect the information collection burden estimates made previously, only the timing of submittal of the information requested has been affected somewhat. Therefore, the ICR has not been revised.

B. Executive Order 12866 Review

This rule was classified "non-significant" under Executive Order 12866 and, therefore was not reviewed by the Office of Management and Budget.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 requires the identification of potentially adverse impacts of federal regulations upon small business entities. The Act specifically requires the completion of a Regulatory Flexibility Analysis in those instances where small business impacts are possible. Because this rulemaking imposes no adverse economic impacts, a Regulatory Flexibility Analysis has not been prepared.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small business entities.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous air pollutants, Reporting and recordkeeping requirements.

Dated: November 22, 1993.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, 40 CFR part 63 is amended as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. In § 63.74 paragraph (d)(2) is revised and paragraphs (d)(4) and (i) are removed and reserved as follows:

§ 63.74 Demonstration of early reduction.

* * * * *

(d) * * *

(2) The best available data accounting for actual emissions, during the year following the applicable emission reduction deadline as specified in § 63.72(a)(2), of all hazardous air pollutants from each emission point in the source listed pursuant to paragraph (b)(2) of this section.

* * * * *

(d)(4) (Reserved).

* * * * *

(i) (Reserved).

* * * * *

3. In § 63.74 Table 1 entitled "List of High-Risk Pollutants," the entry for "hexachlorocyclopentadiene" (CAS No. 77474) is revised to read as follows:

§ 63.74 Demonstration of early reduction.

* * * * *

TABLE 1.—LIST OF HIGH RISK POLLUTANTS

Cas. No.	Chemical	Weighting factor
*	*	*
77474	Hexachlorocyclopentadiene.	10
*	*	*

4. Section 63.75 is amended by adding paragraph (f) to read as follows:

§ 63.75 Enforceable commitments.

* * * * *

(f) An enforceable commitment submitted under this section shall not be in effect and enforceable until the base year emissions contained in the commitment have been approved according to the procedures in § 63.76. An owner or operator is under no obligation to continue to seek approval of commitments that have not been approved by December 1, 1993.

5. Section 63.77 is revised to read as follows:

§ 63.77 Application procedures.

(a) To apply for an alternative emission limitation under § 63.72, an owner or operator of the source shall file a permit application with the appropriate permitting authority.

(b) Except as provided in paragraph (e) of this section, the permit application shall contain the information required by § 63.74, as applicable, and the additional information required for a complete permit application as specified by the applicable permit program established pursuant to title V of the Act.

(c) Permit applications under this section for sources not subject to enforceable commitments shall be submitted by the later of the following dates:

(1) 120 days after proposal of an otherwise applicable standard issued under section 112(d) of the Act; or

(2) 120 days after the date an applicable permit program is approved or established pursuant to title V of the Act.

(d) Permit applications for sources subject to enforceable commitments pursuant to § 63.75 shall be submitted no later than April 30, 1994.

(e) The post-reduction emissions information required under § 63.74 (d)(2), (d)(3), and (d)(5) shall not be filed as part of the initial permit application but shall be filed later as a supplement to the application. This supplementary information shall be filed no earlier than one year after the date early reductions had to be achieved according to § 63.72(a)(2) and no later than 13 months after such date.

(f) If a source test will be the supporting basis for establishing post-reduction emissions for one or more emissions units in the early reductions source, the test results shall be submitted by the applicable deadline for submittal of a permit application as specified in paragraph (c) or (d) of this section.

(g) Review and disposition of permit applications submitted under this section will be accomplished according to the provisions of the applicable permit program established pursuant to title V of the Act.

[FR Doc. 93–29143 Filed 11–26–93; 8:45 am]
BILLING CODE 6560–50–P

40 CFR Part 81

[CA-44-1-5804; FRL-4807-3]

Designation of Areas for Air Quality Planning Purposes; California

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Pursuant to the Clean Air Act as amended November 15, 1990 (Act), the Environmental Protection Agency (EPA) is authorized to redesignate areas (or portions thereof) as nonattainment for the PM-10 (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) national ambient air quality standards (NAAQS). Additionally, under this section of the Act, the Governor of any state (or his/her designee) may, on the Governor's own motion, submit to EPA a revised designation of any area or portion of an area in a state. EPA, in turn, must approve or deny such redesignation.

In this final action, EPA is approving the California Air Resources Board's (CARB) (the Governor's designee) recommendation regarding the PM-10 designation for the Mono Basin portion of Mono County, California. EPA is taking final action to revise the PM-10 designation for this area from "unclassifiable" to "nonattainment." The redesignation is based upon recorded violations of the PM-10 NAAQS which occurred on or after January 1, 1989. A more detailed discussion regarding the Mono Basin portion of Mono County is provided in the following portions of this notice.

EFFECTIVE DATE: December 29, 1993.

ADDRESSES: Information supporting this final action can be obtained by contacting: Wallace Woo, Chief, Plans Development Section, Air Planning Branch (A-2-2), United States Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California, 94105, (415) 744-1207.

FOR FURTHER INFORMATION CONTACT:

Stephanie Valentine, Plans Development Section (A-2-2), Air Planning Branch, United States Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California, 94105, (415) 744-1178.

Barbara A. Bates (PM-10), Plans Development Section (A-2-2), Air Planning Branch, United States Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, California, 94105, (415) 744-1206.

SUPPLEMENTARY INFORMATION:

I. PM-10 Background

On July 1, 1987, EPA revised the NAAQS for particulate matter (52 FR 24634), replacing total suspended particulates as the indicator for particulate matter with a new indicator called "PM-10" that includes only those particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers ("μ"). At the same time, EPA set forth regulations for implementing the revised particulate matter standards and announced EPA's State implementation plan (SIP) development policy elaborating PM-10 control strategies necessary to assure attainment and maintenance of the PM-10 NAAQS (see generally 52 FR 24672). EPA adopted a PM-10 SIP development policy dividing all areas of the country into three categories based upon their probability of violating the new NAAQS: (1) Areas with a strong likelihood of violating the new PM-10 NAAQS and requiring substantial SIP adjustments were placed in Group I; (2) areas that might well have been attaining the PM-10 NAAQS and whose existing SIP's most likely needed less adjustment were placed in Group II; (3) areas with a strong likelihood of attaining the PM-10 NAAQS and, therefore, needing adjustments only to their preconstruction review program and monitoring network were placed in Group III (52 FR 24672, 24679-24682).

Pursuant to sections 107(d)(4)(B) and 188(a) of the Act, areas previously identified as Group I, as well as Group II and Group III areas which had monitored violations of the PM-10 NAAQS prior to January 1, 1989 were, by operation of law upon enactment of the 1990 Amendments to the Clean Air Act (Pub. L. No. 101-549, 104 Stat. 2399), designated as moderate nonattainment areas for PM-10. All other areas of the country with no violations of the PM-10 NAAQS prior to January 1, 1989, including Mono Basin, were designated as unclassifiable for PM-10 by operation of law upon enactment of the 1990 Amendments (section 107(d)(4)(B)(iii) of the Act). Formal codification in 40 CFR part 81 of those areas designated nonattainment and unclassifiable for PM-10 by operation of law upon enactment was announced in a Federal Register notice dated November 6, 1991 (56 FR 56694). See also 57 FR 56762 (November 30, 1992).

II. EPA's Final Action to Redesignate Mono Basin

On the basis of air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate, EPA is authorized to initiate redesignation of unclassifiable areas (or portions thereof) as nonattainment for PM-10 pursuant to section 107(d)(3) of the Act by notifying the state that available information indicates that the designation of the area should be revised. After providing an opportunity for the State to respond, EPA must promulgate the redesignation that EPA deems necessary and appropriate, consistent with section 107(d)(3)(C) of the Act. In addition, section 107(d)(3)(D) provides that a Governor of a state (or his/her designee) may, on his or her own initiative, submit to EPA a revised designation of an area within the state. EPA must approve or deny the redesignation.

In a letter to EPA, dated August 1, 1991, the California Air Resources Board (CARB), the Governor's designee, recommended that EPA redesignate the Mono Basin portion of Mono County as nonattainment for the 24-hour PM-10 NAAQS. In a Federal Register notice dated July 16, 1993 (58 FR 38331) EPA proposed to approve redesignation of the Mono Basin as nonattainment for PM-10 and solicited comments on this proposal. The public comment period closed August 16, 1993.

As described in more detail in the proposal, exceedances of the 24-hour PM-10 NAAQS were measured at the Warm Springs monitoring site in 1988 and 1990 (the monitor did not operate during 1989 for reasons unrelated to air quality). Two such exceedances were monitored in 1991. Four exceedances were measured in the area during 1992, two at the Warm Springs monitoring site and two at the Simis Ranch site.

Section 107(d)(1)(A) of the Act sets out definitions of nonattainment, attainment, and unclassifiable status. These definitions provide the applicable legal standard for designations or redesignations to the relevant attainment status. A nonattainment area is defined as any area that does not meet, or that significantly contributes to ambient air quality in a nearby area that does not meet, the national primary or secondary ambient air quality standard for the relevant pollutant [see section 107(d)(1)(A)(i) [1]]. The exceedance monitored in the Mono Basin area demonstrate that the area does not meet the 24-hour PM-10 NAAQS. Further, in determining appropriate boundaries for

[1] The EPA has construed the definition of nonattainment area to require some material or significant contribution to a violation in a nearby area. The Agency believes it is reasonable to conclude that something greater than a molecular impact is required.

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Friday
December 3, 1993

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the facility, chemical and submission the petitioner is concerned with.

Respondents: Owners/operators of fixed facilities required to report to State and local authorities, and EPA the presence, use and release of extremely hazardous substances (described in Sections 302 and 304) and hazardous and toxic chemicals (described in Sections 311, 312 and 313).

Estimated No. of Respondents: 469 (459 facilities, 10 petitioners).

Estimated No. of Responses per Respondent: 1.

Estimated Total Annual Burden on Respondents: 14,210 hours.

Frequency of Collection: on occasion, when needed to protect the chemical identity of an EPCRA submission.

Send comments regarding the burden estimate, or any other aspect of this information collection, including suggestions for reducing the burden, to:

Sandy Farmer, U.S. Environmental Protection Agency, Information Policy Branch (PM–223Y), 401 M Street SW., Washington, DC 20460 and

Tim Hunt, Office of Management and Budget, Office of Information and Regulatory Affairs, 725 17th Street NW., Washington, DC 20530.

Dated: November 24, 1993.

Paul Lapsley,

Director, Regulatory Management Division.

[FR Doc. 93–29614 Filed 12–2–93; 8:45 am]

BILLING CODE 6560–50–M

[AD–FRL–4808–8]

National Emission Standards for Hazardous Air Pollutants Schedule for the Promulgation of Emission Standards Under Section 112(e) of the Clean Air Act Amendments of 1990

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of the source category schedule for standards.

SUMMARY: This notice publishes the schedule for standards as required under section 112(e) of the Clean Air Act as amended in 1990 (1990 Amendments). A draft schedule for the promulgation of emission standards providing the opportunity for public comment was published in the Federal Register (57 FR 44147, September 24, 1992). This schedule, which satisfies the requirement of section 112(e)(3) that the Administrator publish a schedule for the promulgation of emission standards, was established after considering the public comments and further EPA review. This schedule establishes deadlines for the promulgation of emission standards for the categories of sources emitting hazardous air pollutants (HAP's) initially listed pursuant to section 112(c)(1) and (3).

The initial list of categories of sources, developed under section 112(c), was published in the Federal Register (57 FR 31576, July 16, 1992). The initial list includes 166 categories of major sources and eight categories of area sources for a total of 174 source categories. The schedule for standards is organized such that the 174 listed source categories are grouped in four separate timeframes with promulgation deadlines of November 15, 1992, November 15, 1994, November 15, 1997, or November 15, 2000.

Sources within the listed categories will be subject to emission standards developed pursuant to section 112(d) in accordance with today's schedule. In the event an applicable standard is not promulgated on schedule for a listed category of major sources, the owner or operator of a major source in such category may be subject to emission limitations determined on a case-by-case basis, pursuant to section 112(j). Section 112(j) requires that the owner or operator of any major source, in a category for which emissions standards are delayed by at least 18 months from today's scheduled date for promulgation of standards, must submit a permit application to the applicable permit authority in compliance with title V of the 1990 Amendments. The case-by-case equivalent emission limitations by permit, under section 112(j), are discussed more thoroughly in section I.B. of today's notice.

EFFECTIVE DATE: December 3, 1994.

ADDRESSES: Relevant information can be found in the Federal Register notice (57 FR 44147, September 24, 1992) entitled "National Emission Standards for Hazardous Air Pollutants (NESHAP); Availability: Draft Schedule for the Promulgation of Emission Standards" and also in the Federal Register notice (57 FR 31576, July 16, 1992) entitled "Initial List of Categories of Sources Under section 112(c)(1) of the Clean Air Act Amendments of 1990.".

Docket: Docket No. A–91–14, containing information considered by the EPA in development of the schedule for standards, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at the EPA's Air Docket Section, Room M1500, U.S. EPA, 401 M Street, Southwest, Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information concerning categories involving the production, handling, refining or use of chemicals or petroleum, or products thereof, contact Mr. David Svendsgaard, Chemicals and Petroleum Branch (MD–13), Emission Standards Division, U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–2380. For information concerning categories involving fuel combustion, incineration, metals and minerals processing, contact Mr. William Maxwell, Industrial Studies Branch (MD–13), telephone number (919) 541–5430, at the above address. For information concerning pollutant health effects and the Source Category Ranking System, contact Mr. Charles French, Pollutant Assessment Branch (MD–13), telephone number (919) 541–0467 at the above address. For general information concerning this notice contact Mr. French or Mr. Svendsgaard.

SUPPLEMENTARY INFORMATION: The information in this notice is organized as follows:

I. Introduction
- A. Initial List of Categories of Sources
- B. Clean Air Act Requirements for the Schedule
- C. Schedule for Coke Oven Batteries
- D. Schedule for Publicly Owned Treatment Works

II. Background to the Schedule for Standards
- A. Criteria for Establishing the Schedule
- B. The Source Category Ranking System
- C. Application of Efficiency of Grouping
- D. Other Considerations for Scheduling

III. Summary of Public Comments and EPA's Responses
- A. Overview
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  1. General
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- F. Comments and Responses Related to Flexibility
- G. Comments and Responses Concerning Efficiency of Grouping
- H. Comments and Responses Related to Other Considerations

IV. Changes to the Draft Schedule

V. Schedule for Promulgation of Emission Standards

VI. Administrative Requirements
- A. Docket
- B. Regulatory Requirements
  1. General
  2. Executive Order and Office of Management and Budget Review

VII. Organization of the Schedule for Standards

Table 1.—Categories of Sources and Regulation Promulgation Schedule by Industry Group

Table 2.—Categories of Sources and Regulation Promulgation Schedule by Regulatory Deadlines

Acronym List:
ATB=Aquatic Toxicity and Bioconcentration
CTG=Control Techniques Guidelines
EPA=Environmental Protection Agency
FR=Federal Register
HAP=Hazardous Air Pollutant
HON=Hazardous Organic NESHAP
MACT=Maximum Achievable Control Technology
NESHAP=National Emission Standards for Hazardous Air Pollutants
RTECS=Registry of Toxic Effects of Chemical Substances
SCRS=Source Category Ranking System
SIC=Standard Industrial Classification
SOCMI=Synthetic Organic Chemical Manufacturing Industry

I. Introduction

A. Initial List of Categories of Sources

A preliminary draft list of over 700 categories and subcategories of sources emitting one or more of the HAP's listed in section 112(b)(1) of the 1990 Amendments was published in the Federal Register for public comment on June 21, 1991 (56 FR 28548). After consideration of public comment and further EPA review, the list was revised and now contains 174 categories of sources (i.e., source categories). This initial list was published as required by section 112(c)(1) of the 1990 Amendments on July 16, 1992 (57 FR 31576). The reader is referred to that notice for information regarding the development of the list of source categories.

B. Clean Air Act Requirements for the Schedule

Section 112(e) of the 1990 Amendments requires the publication of a schedule for the promulgation of emission standards for listed source categories and subcategories (hereafter referred to as categories), that will result in the promulgation of regulations pursuant to section 112(d) for all initially listed source categories within 10 years of the date of enactment of the 1990 Amendments (i.e., by November 15, 2000). Section 112(e)(1) requires the EPA to promulgate regulations for 40 source categories within 2 years of enactment of the 1990 Amendments (i.e., by November 15, 1992); for coke oven batteries by December 31, 1992; for 25 percent of all initially listed categories within 4 years (i.e., by November 15, 1994); for an additional 25 percent of all initially listed categories within 7 years (i.e., by November 15, 1997); and to complete the promulgation of regulations for all initially listed source categories within 10 years (i.e., by November 15, 2000).

In determining priorities for promulgating emission standards, section 112(e)(2) specifies that the EPA consider three criteria: (1) The known or anticipated adverse effects of HAP's on public health and the environment; (2) the quantity and location of emissions or reasonably anticipated emissions of HAP's; and (3) the efficiency of grouping source categories according to the pollutants emitted, or the processes or technologies used.

Today's emission standards promulgation schedule was required to be published, after consideration of public comments pursuant to section 112(e)(3). Today's schedule will establish the timeframe for the promulgation of section 112(d) standards for each initially listed category of sources.

Section 112(e)(3) explicitly states that "the determination of priorities for the promulgation of standards * * * is not a rulemaking and shall not be subject to judicial review, except that, failure to promulgate any standard pursuant to the schedule * * * shall be subject to review under section 304 of this Act". Therefore, the schedule for standards published today is not a rulemaking and is not subject to judicial review.

The Equivalent Emission Limitation by Permit rule, pursuant to section 112(j), which was proposed in the Federal Register on July 13, 1993 (58 FR 37778), provides for additional actions in the event the Administrator fails to meet the schedule for establishing regulations for any listed category of sources. Pursuant to section 112(j), the owner or operator of any major source, in a category for which emissions standards are delayed by at least 18 months from the date contained in today's schedule for promulgation of standards, must submit a permit application to the applicable permit authority in compliance with rules implementing Title V of the 1990 Amendments. (The final rule published on July 21, 1992 (57 FR 32250) establishes requirements for state permit programs, and a final future rulemaking will establish similar requirements for Federally issued permits.) This permitting requirement is not applicable until after the effective date of a permit program in a State and not sooner than 42 months after enactment of the 1990 Amendments (i.e., May 15, 1994). The permit must specify emissions limitations that, on a case-by-case basis, are determined by the Administrator (or the State) to be equivalent to the level of control that would have been required by emission standards established under section 112(d). These permits will be reviewed and approved by the permitting authority on a case-by-case basis. For more information and specifics concerning section 112(j), readers are referred to the proposed Equivalent Emission Limitations by Permit rule which was published in the Federal Register on July 13, 1993 (58 FR 37778).

Section 112(e)(1) requires EPA to develop the schedule for emission standards based on categories of sources "* * * initially listed for regulation pursuant to subsection (c)(1)." * * *" The EPA has interpreted this to mean that the categories of sources included in today's schedule for standards must be the same categories of sources as listed in the Federal Register (57 FR 31576, July 16, 1992).

Today's schedule for standards is consistent with the section 112(c) list. Pursuant to section 112(c)(5), source categories subsequently added to the section 112(c) list shall be scheduled for regulation by November 15, 2000, or 2 years after the source categories are listed, whichever is later.

Section 112(e)(3) requires the EPA to publish a schedule for promulgating standards for listed categories by November 15, 1992. However, section 112(e) is silent concerning the permissibility of amending that schedule. The EPA has no intent to defer regulation in any way that would compromise the numerical and temporal requirements in section 112(e)(1). However, because data on many categories of sources are still very limited, the EPA anticipates that there may be circumstances where revision of the schedule would better serve the prioritizing criteria in section 112(e)(2). For example, the EPA might obtain new information, after publication of today's schedule, indicating that emissions from some categories scheduled for early regulation pose less public health and/or environmental concerns than emissions from categories scheduled for regulation in a later timeframe. Because of resource constraints, it is unlikely that the more hazardous categories could be regulated earlier than planned unless regulation of the relatively less hazardous categories could be deferred. In such case, EPA would wish to comply with the directive in the Conference Report that "[t]he conferees wish to emphasize that in promulgating standards, the EPA should devote its resources first to those pollutants which present the greatest risk to the public health and the environment." (Conference Report. on S. 1630, H.R. Rept. 101-952, 101st Cong., 2d Sess. at 338, 1990). For example, if EPA could shift five categories from the 10-year timeframe to the 7-year timeframe, and

shift five others from the 7-year timeframe to the 10-year timeframe, this action might more effectively reduce hazards to public health earlier than would strict adherence to today's schedule. In addition, the EPA may, at its discretion, establish standards for listed categories or subsequently defined subcategories sooner than scheduled under section 112(e). The EPA may consider broader categories for establishing standards. The EPA may aggregate categories or subcategories which have been disaggregated on the initial list into a single category on any revised list. This may be done for the purpose of setting a single emission standard for the aggregated category.

C. Schedule for Coke Oven Batteries

The 1990 Amendments establish a specific timeframe for the regulation of coke oven batteries (charging, topside, and door leaks). As specified in section 112(d)(8), the EPA was required to promulgate emissions standards for this source category by December 31, 1992. An emissions standard for this source category was published in the Federal Register on October 27, 1993 (58 FR 57898).

D. Schedule for Publicly Owned Treatment Works

The 1990 Amendments establish a specific schedule for promulgation of emission standards applicable to Publicly Owned Treatment Works (POTW's). Section 112(e)(5) requires the EPA to promulgate emissions standards pursuant to section 112(d) for POTW's by November 15, 1995.

II. Background to the Schedule for Standards

A. Criteria for Establishing the Schedule

In determining priorities for promulgating emission standards, section 112(e)(2) specifies that the EPA consider three criteria: (1) The known or anticipated adverse effects of HAP's on public health and the environment; (2) the quantity and location of emissions or reasonably anticipated emissions of HAP's; and (3) the efficiency of grouping categories according to the pollutants emitted, or the processes or technologies used. The first two criteria are addressed by the Source Category Ranking System (SCRS) which is discussed in section II.B. of this notice. The efficiency of grouping criterion allows for optimizing regulatory efficiency by considering similarities among categories of sources, including emission mechanisms and control technologies. In addition to these criteria, other factors, such as the public comments, further technical analyses; the availability of data for standard development, time needed to develop standards, and the ability to meet the section 112(e) numerical and temporal requirements, were considered in establishing today's schedule.

The EPA interprets the regulatory schedule mandated by the 1990 Amendments as the placement of source categories into groups to be regulated within the required deadlines. For this reason, today's schedule shows whether the regulatory effort for a given category of sources is scheduled for completion by November 15, 1992; November 15, 1994; November 15, 1997; or November 15, 2000. This schedule does not establish the order in which the rules for particular categories will be proposed or promulgated. Rather, it requires that emissions standards pursuant to section 112(d) for a given category of sources be promulgated by the specified date.

B. The Source Category Ranking System

To assist in its effort to meet the statutory requirements for schedule prioritization, the EPA developed the Source Category Ranking System (SCRS). The SCRS combines readily available health effects data, emission estimates, and population information to rank source categories. By incorporating this information the SCRS considers a broad range of toxicological effects which address "* * * the known or anticipated adverse effects." * * * on public health * * *" criterion under section 112(e)(2)(A), and also addresses the "* * * quantity and location * * *" criterion under section 112(e)(2)(B).

The SCRS generates a score for each source category based on emissions estimates, estimates of the toxicity of HAP's, and to a lesser degree, the location of the emitting facilities. The result is a scoring system by which a source category is ranked in relation to other listed source categories. Details on scoring methodology and data input are discussed in the Federal Register notice for the draft schedule for standards (57 FR 44147, September 24, 1992) as well as in the "Methodology for the Source Category Ranking System" document (Docket No. A-91-14, Item No. IV-A-1).

In developing the schedule for standards, the EPA gathered as much information as was reasonably practical to prioritize the listed categories of sources. The EPA recognizes that the SCRS could not duplicate the level of analysis performed in a regulatory source assessment effort for an individual standard or in a site specific risk assessment. Given that the SCRS was designed to aid in prioritizing categories of sources for developing the schedule based on varying levels of information, the SCRS was a useful tool that assisted in the grouping of source categories into the four timeframes specified in section 112(e). The SCRS was not the sole determining factor in establishing the schedule for standards, but was the basis of EPA's consideration of the quantity and location of emissions, and public health effects criteria. The third criterion for establishing priorities, the efficiency of grouping, is discussed in the following section.

C. Application of Efficiency of Grouping

In developing the schedule for standards, the EPA sought to group separate categories of sources into single regulatory development efforts due to similar processes, emission characteristics, and applicable control technologies. There are some lower priority categories, based on the SCRS results, that have similarities to higher priority categories. Through application of the efficiency of grouping criterion, a standard may be completed for several similar categories of sources at the same time. By using the SCRS scores in combination with the efficiency of grouping criterion, EPA has sought to avoid duplication of effort and optimize the regulatory development process. As a result, some categories of sources that might have been scheduled for regulatory development at a later date based solely on the SCRS ranking are scheduled earlier due to the efficiency of grouping. An example of this efficiency is the polymers and resins I group. Currently, there are nine source categories in the polymers and resins I group that are all scheduled in the 4-year timeframe. In this industrial group, regulatory efforts initiated for a few relatively high-ranking categories are also applicable to additional categories that ranked lower in the SCRS.

The efficiency of grouping criterion was also applied to schedule lower ranked categories with other similar categories where regulatory development activities have been initiated or are planned. Section 183 of the 1990 Amendments requires development of 13 control technology guidelines (CTG's) for volatile organic compounds (VOC's) emissions by November, 1993. Many of the categories for which CTG's are being developed also emit HAP's. Hence, efficiency of grouping may be achieved by evaluating HAP's concurrently with VOC's. This allows EPA to consider the requirements for establishing CTG's and maximum achievable control

technology (MACT) standards at the same time, and to make them compatible. This strategy provides the affected industries with greater certainty about both sets of requirements, so that both can be considered at about the same time by an owner or operator in developing an overall control strategy.

D. Other Considerations for Scheduling

In addition to the three priority-setting criteria specified in section 112(e)(2), the 1990 Amendments also require that the EPA regulate certain percentages of the list of source categories by certain dates. For example, the EPA is required to regulate 25 percent of the listed categories within 4 years after enactment. When establishing the schedule for standards, the EPA also considered the time and resources required for development of emissions standards. Several categories of sources have been studied previously by EPA, and a good understanding of the basis of a technology-based standard is available. All the 2-year, and a substantial portion of the 4-year scheduled standards cover industries that were already under study in preparation for regulations at the time the 1990 Amendments were passed.

For other categories, where little information is currently available, considerable time and effort may be necessary to adequately study the category, analyze the processes, identify emission points, establish regulatory baselines, evaluate potential control strategies, and determine the appropriate regulatory strategy. Therefore, the amount of available information was another factor in the prioritization of source categories.

III. Summary of Public Comments and EPA's Responses

A. Overview

A draft schedule for standards was published in the Federal Register on September 24, 1992 (57 FR 44147), and was followed by a public comment period which concluded on October 26, 1992. A total of 18 letters commenting on the draft schedule were submitted by industry representatives and government agencies. These comments have been reviewed and placed in the docket (Docket No. A-91-14, Category IV-D). A summary of the public comments and EPA's responses is also available in the docket (Docket No. A-91-14, Item No. IV-A-3). The major comments relevant to the development of the schedule for standards and EPA's responses are summarized below.

B. Comments and Responses Related to Category Definitions

Five commenters requested that the EPA provide additional information with the schedule notice to assist owners and operators in determining which source category their sources might be included in. They contended that the sources and HAP's which will be controlled in each of the categories were not well-defined in the source category schedule or in the source category list Federal Register publications. The commenters asserted that the EPA should publish a description of each source category and its associated HAP's along with the schedule. One commenter suggested the EPA develop a decision tree for determining regulatory applicability, similar to the one being developed for the SOCMI source category (57 FR 62608, December 31, 1992). Another commenter recommended a hotline be established so facilities can obtain assistance in determining which category a process falls into. The commenter noted that written communication would be needed and that the determination would need to be binding.

Several commenters suggested that a list of major products from each category be included in the schedule. One commenter suggested that a list of relevant Standard Industrial Classification (SIC) codes also be included. The commenters asserted that such additional information would assist operators in identifying the regulations to which they would be subject, and in planning and allocating resources for compliance.

Many commenters suggested the EPA include table 3.1 of the December 14, 1990 document "Draft Documentation for Developing the Source Category List" in the schedule notice because this table provides the corresponding speciation profiles used to associate HAP's with source categories and thus helps clarify the sources and HAP's intended to be regulated under each category.

Two commenters stated it was essential that a mechanism be developed for determining under which category a production unit is included, to make decisions concerning equivalent emissions limitations under section 112(j), and to file compliance extension requests under the section 112(i)(5) early reduction program.

In response to these comments, some of the information the commenters requested is provided in the EPA report for the initial list, "Documentation for Developing the Initial Source Category List—Final Report" (EPA-450/3-91-030; July 1992. Docket No. A-90-49, Item No. IV-A-55). Hereafter in today's notice, this document is termed the "final report." This final report contains descriptions of each listed category of major sources. Information provided includes the types of operations, processes, and equipment included within each category. However, the source category descriptions in the final report are preliminary, and may be revised during the regulatory development process. Also, during this process, the EPA may discover new information about the various industries (such as different processes or emission points) that require adding new distinct source categories to the section 112(c) list. Tables 3.1 and 4.1 of this report contain listings of some of the HAP's currently associated with each category of major sources, and area sources, respectively. These tables are too lengthy to incorporate into a Federal Register notice, but may be accessed by viewing the final report contained in the docket (Docket No. A-90-49, Item No. IV-A-55). Also, people can obtain copies of this final report by contacting the National Technology Information Service (NTIS) at 5285 Port Royal Road, Springfield, Virginia 22161, telephone number 703-487-4650. The NTIS order number for this final report is PB92-218429. Because of current data limitations, a more comprehensive discussion of processes and equipment, and all associated HAP's for each category is not currently available. During the course of regulatory development, each category will be further examined to refine the source category descriptions and determine specifics about processes, equipment, products, HAP emissions and applicability. During this process, relevant SIC codes might be identified on a source category basis where good correlations can be determined. This information will be available from the respective EPA standard development teams, who will be communicating with trade groups, and other interested parties, during the development of emission standards. As stated in the source category list Federal Register notice:

> The Agency recognizes that these descriptions (of what each listed source category comprises), like the list itself, may be revised from time to time as better information becomes available. The Agency intends to revise these descriptions as part of the process of establishing standards for each category. Ultimately, a definition of each listed category, or subsequently listed subcategories, will be incorporated in each

rule establishing a NESHAP for a category. (57 FR 31576, July 16, 1992).

Therefore, the EPA cannot make such preliminary descriptions binding. The EPA encourages interested parties to communicate with appropriate EPA standard development teams early in the regulatory process.

In response to the comments relating to section 112(j), the EPA intends to make information available regarding source category definitions, applicability, and controls before the section 112(j) provisions would take effect for a source category. The EPA encourages interested parties to communicate with the appropriate EPA project teams well in advance of the time that section 112(j) provisions might apply for a source category. Readers are referred to the proposed Equivalent Emission Limitations by Permit Rule, which was published in the Federal Register on July 13, 1993 (58 FR 37778).

The comments relevant to section 112(i)(5) of the 1990 Amendments have been submitted to the EPA project team implementing this program. The early reductions project team is aware of the commenter's concerns about applicability. Again, the EPA encourages the interested parties to communicate with the appropriate project teams to discuss these concerns.

Regarding the commenter's suggestion to develop decision trees to assist with determining regulatory applicability, the EPA believes that the commenter is referring to the applicability decision framework included in section VI.A. of the proposed emission standard for the SOCMI (57 FR 62608, December 31, 1992), which is commonly referred to as the Hazardous Organic NESHAP (HON). Similar decision trees, if developed, would be produced under individual standard development activities after more information about each category is gathered. Also, the EPA does not plan to establish a hotline for source category determinations. However, status updates on standards and other rulemakings are typically presented through such forums as the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) and the National Air Toxics Inventory Clearinghouse (NATICH). In addition, a Regulatory Agenda is published in the Federal Register approximately twice per year which provides descriptions of various regulatory projects and the EPA personnel to contact for more information.

C. Comments and Responses Related to the Source Category List

Several commenters discussed issues related to determinations made during the development of the initial source category list (57 FR 31576, July 16, 1992). The decisions to list source categories, and potential revisions to the source category list, are not being addressed under today's schedule action. As stated in the draft schedule for standards Federal Register publication on September 24, 1992 (57 FR 44147), comments on today's action were solicited regarding scheduling of regulatory deadlines for source categories. A public comment period was provided for source category list determinations following the publication of the draft list of source categories on June 21, 1991 (56 FR 28548). During the course of regulatory development for the various source categories, the EPA will study individual source categories in greater detail. Listing determinations and potential source category list revisions such as addition, removal, aggregation, and subcategorization of source categories will be studied during this process. The public comments submitted relating to the listing of various source categories have been forwarded to the appropriate EPA project teams. If the EPA determines that revisions to the source category list are appropriate, then a revised source category list will likely be published in the FR sometime in the future. The public comments relating to source category list determinations that were submitted during the public comment period for the draft schedule for standards, and the EPA's responses, are summarized in a background information document entitled "Schedule for Standards: Summary of Public Comments and Responses" (Docket No. A-91-14, Item No. IV-A-3).

D. Comments and Responses Related to the Ranking Methodology

1. General

Many commenters approved of the EPA's use of the SCRS in prioritizing source categories. One commenter considered the SCRS approach to be consistent with section 112(e) criteria for determining the schedule. Others were pleased that SCRS scores are derived by combining health effects scores with exposure scores for each pollutant. However, many commenters also stressed that the SCRS has limited or no applicability elsewhere. A group of these commenters agreed with the EPA's position that a higher SCRS score does not necessarily mean a greater risk than a lower SCRS score. One commenter wanted the EPA to confirm in the Federal Register notice supporting the final schedule that: (1) The SCRS was used only for this preliminary screening and is not to be used for either risk assessment or any other regulatory purpose; (2) more accurate and realistic information shall be used in developing the section 112 regulations for the scheduled categories; and (3) the commenter may submit additional information in the future that may be relevant to schedule adjustments.

One commenter asserted that the SCRS process must be validated to assure that the ranking it produces has some basis to justify using it for developing the schedule. The commenter suggested doing an in-depth study on a few of the categories to confirm the results from the SCRS process, noting that this could demonstrate whether or not the results are consistent with results that would be expected from a more complete review.

In response to these comments, the EPA emphasizes that the SCRS addresses two of the section 112(e)(2) criteria (i.e., adverse effects of the HAP's on public health; and the quantity and location of emissions of HAP's) by generating a relative ranking score for each source category based on emission estimates, toxicity data, and to a lesser degree, the location of emitting facilities. However, the SCRS does not estimate absolute or relative risk, population exposure, or impacts.

Several factors were considered when developing the schedule for standards including: the SCRS ranking scores; the EPA's capability to meet the numerical and temporal requirements of section 112(e); and the efficiency of grouping categories in the same timeframe. Admittedly, the SCRS methodology and data input have limitations. However, for its limited use, the SCRS and its present results are adequate for assisting with the development of the schedule for standards. It was the only tool reasonably available that could address the criteria of section 112(e)(2) for a large number of source categories in the short time available. The EPA does not plan to revise and rerun the SCRS with new data. Currently, the EPA does not intend to use the SCRS for any other regulatory purposes. The EPA realizes the restricted utility of the SCRS and encourages the public and other government agencies not to use incorrectly, or misinterpret, the SCRS results.

The SCRS methodology includes several assumptions and utilizes simplified algorithms. In order to evaluate thoroughly the SCRS ranking, more facility-specific data would be needed, along with other data such as EPA-verified health effects benchmarks.

Currently, this information is not available for many of the categories or pollutants. The EPA considers the current SCRS results to be adequate for assisting with the development of the schedule for standards.

2. Exposure Score

One commenter was concerned with the use of average county population density within a 50-kilometer (km) radius of the facility for the long-term aggregate exposure score because the resulting score may underestimate the risk to individuals that live closer to the facility. Another commenter objected to the use of average population density because this method gives unwarranted priority to facilities located in unpopulated parts of a heavily populated county. One commenter suggested that the EPA incorporate the census-based population exposure capabilities of the Human Exposure Model (HEM) into the SCRS. The commenter was concerned that several assumptions made in the SCRS might underestimate the impact of emissions from source categories, such as the use of: (1) Nationwide estimates; (2) uniform population exposure; and (3) constant average dispersion parameters for all pollutants and sources.

For detailed information on SCRS methodology, readers are referred to the draft schedule Federal Register notice (57 FR 44147 September 24, 1992) and the SCRS Methodology document (Docket No. A-91-14, Item No. IV-A-1). In summary, the SCRS calculated four separate exposure scores: the long-term aggregate, the long-term maximum, short-term aggregate, and the short-term maximum exposure scores. Emissions estimates were the most sensitive factors in the calculation of each of the four source category exposure scores. Population information, although limited, was factored into one of the four exposure scores, the long-term aggregate. Since the SCRS contains many assumptions, and uses generic algorithms and readily available data of varying quality, the exposure scores are meant as screening tools and are not to be considered exposure estimates.

In response to the comment on use of a 50-km radius, the long-term aggregate exposure score theoretically represents a population-based exposure score and is not intended to represent the maximally exposed individual. A 50-km radius was incorporated into the long term aggregate exposure score algorithm because it is the maximum downwind distance to which meteorological dispersion conditions are considered to be reliable using the EPA's dispersion models. A second long-term score, the long-term maximum exposure score, is used to represent a theoretical maximally exposed individual. In this algorithm, it is assumed that the highest concentration is typically 200 meters (m) downwind. However, since these values are constants incorporated into generic algorithms by which all source categories are scored, and since the SCRS does not estimate exposure or risk, it is arbitrary what radii and distances are used in the SCRS exposure scores. If other constant values for radii or distance were to be used (e.g., 20 km and 100 m, respectively) in the generic algorithms, the SCRS relative ranking results would change very little, if at all.

Exposure modeling using detailed census data (e.g. such as using the HEM model) was not used in the SCRS because the EPA did not have adequate facility-specific data for many of the source categories. Also, performing exposure modeling for all facilities in each of the listed source categories could require an enormous level of effort and is beyond the scope of work believed to be necessary to support the schedule for standards. Average population density, and other assumptions such as constant dispersion parameters for all pollutants, are appropriate for the SCRS given its limited use and data availability.

3. Health Effects Score

One commenter recommended that the EPA use acute health effects endpoints rather than the lethal dose to 50 percent of the exposed population (LD_{50}) currently used in the SCRS. The commenter was also concerned about the combination of health effects data on acute lethality, reproductive effects, and other noncancer effects that may underestimate public health impacts.

In addition, it was argued by a commenter that the nationwide emission estimates and national population density do not accurately show the public health impact from exposure to area source emissions. The commenter also recommended incorporating uncertainty factors and environmental effects in the SCRS.

Another commenter expressed concern over the use of data from the Registry of Toxic Effects of Chemical Substances (RTECS), since it is not a peer-reviewed journal, and recommended using well-supported toxicity data for individual chemicals, if available, to develop the health effects score. Another commenter mentioned that the data used are very limited and frequently out-of-date, and noted that the RTECS data base is 6 years old. The commenter cautioned that the SCRS mathematical scoring, on several levels, crosses such a diverse stratum of health effects and agents that any scientific relevance is distorted. The commenter also protested that the SCRS approach does not address whether the health effects only occur when a threshold limit is exceeded.

Another commenter noted that the SCRS is too ill-defined for the assignment of potential health effects for a particular source category, and therefore, contended that the term "source category risk score" is not correctly used. The commenter also claimed that the health effects score, particularly the use of RTECS data, should be scientifically based. The commenter pointed out that RTEC's contains a number of inaccurate values, missing data, and misinterpretations on severity.

As part of the response to the above comments, the following summary of the health effects scoring methodology is provided. The health effects score for each pollutant was based on four health effects endpoints (i.e., cancer, reproductive/developmental effects, acute lethality, and "other toxicity"). The "other toxicity" endpoint was based on acute or chronic health effects data other than cancer (i.e., noncancer effects), that were not included in the reproductive/developmental or acute lethality endpoints. The LD_{50} and lethal concentration to 50 percent of exposed population (LC_{50}) were used to calculate the score for acute lethality. These values were a useful measure of relative toxicity since the data were readily available and the endpoint (i.e., 50 percent death) is consistent across pollutants. Other acute benchmarks, such as levels of concern (LOC's) and doses immediately dangerous to life and health (IDLH's) are based on LD_{50} and LC_{50} data, and therefore, would have yielded similar relative results. The LD_{50} and LC_{50} data were useful for scoring the pollutants in one of the four health effects endpoints. The lowest oral dose reported to cause a health effect (TD_{LO}), or lowest concentration when the substance is in air (TC_{LO}), from the RTECS data base, were used to derive the reproductive/ developmental health effects score, and the "other toxicity" score for most pollutants in the SCRS.

The primary source of information for noncancer health effects was RTECS, which is a data base developed and maintained by the National Institute of Occupational Safety and Health. The RTECS data base is widely used by both industry and regulatory agencies as a source of toxicity data. The RTECS represents one of the most readily available and comprehensive sources of information on noncancer toxicological

endpoints. When the health effects data were being compiled for the SCRS, the most current RTECS data were used (see Docket No. A–91–14, Item No. II-A–1). It would have been desirable to obtain peer-reviewed, noncancer health data, and verified health effects benchmarks such as the EPA's inhalation reference concentrations (RfC's). However, RfC's are not available for a significant number of the HAP's, and therefore, RfC's were not used in the SCRS. Since LD_{50}'s, LC_{50}'s, TD_{LO}'s and TC_{LO}'s were available for most of the HAP's, these values were used in the SCRS. Although the RTECS data base itself is not formally peer reviewed, the data are from the scientific literature. The EPA recognizes the limitations associated with the lack of peer review; however, for compiling health effects information for the 189 HAP's for incorporating into a screening tool such as the SCRS, RTECS was a valuable source.

Threshold limits were not considered in the SCRS. For many pollutants, data are inadequate to determine threshold limits, if they exist. More importantly, since the SCRS does not estimate exposure or risk, it cannot determine if a threshold effect level might be exceeded. The pollutants were scored based on relative potency. The SCRS generates a relative ranking based on emissions and toxicity data, but does not attempt to determine if public health impacts actually exist. Therefore, threshold levels were not considered.

The terminology "source category risk score" was used in some earlier docket items. After further review, the EPA recognized that this terminology could be misleading since the SCRS does not estimate risk. Therefore, in the draft schedule notice (57 FR 44147, September 24, 1992), and in the more recent docket items, including the "Methodology for the Source Category Ranking System" (Docket No. A–91–14, Item No. IV–A–1), this terminology has been changed to "source category score." The draft schedule Federal Register notice, today's notice, and the methodology document clearly indicate that the SCRS does not estimate risk. The EPA encourages the public not to misinterpret the SCRS results.

As mentioned above, the health effects score was derived for four types of endpoints. This approach was used so that the SCRS would cover a wide range of health concerns. There are other possible methods for combining various toxicity and emissions data to rank source categories. However, given the limitations on time and data availability, the EPA considers the methodology used in the SCRS to be adequate for its limited purpose.

In response to the commenter who suggested that the EPA incorporate uncertainties in the SCRS, the EPA recognizes that uncertainty factors are a very important concern when conducting risk assessments, and that defensible risk assessments should contain uncertainty analyses. For estimating risk or impacts, it is important to consider both quantitative and qualitative uncertainty. However, uncertainty analyses would have limited utility for producing a relative ranking. Since the SCRS generates a relative ranking, and does not estimate risk or impacts, and since the SCRS was only a tool used in conjunction with the efficiency of grouping and other considerations in developing the regulatory schedule, uncertainty factors were not incorporated into the SCRS. Needless to say, outputs from the SCRS are highly uncertain, even on a relative basis.

4. Environmental Effects

Two commenters suggested that potential adverse effects to the environment also be considered in developing the schedule. Specifically, one of these commenters recommended that aquatic toxicity, bioaccumulation, effects on terrestrial wildlife, and the effects of metals on plants be considered. This commenter did, however, recognize that the availability of toxicity data for effects on the environment are limited.

Section 112(e)(2) of the 1990 Amendments states, "In determining priorities for promulgating standards * * * the Administrator shall consider * * * adverse effects to public health and the environment." In response to these comments on environmental effects, and after further EPA review, the EPA has conducted a limited technical analysis to address ecological concerns. The analysis consists of two relative rankings of the source categories. One ranking is based on emissions estimates, aquatic toxicity, and bioconcentration. The other ranking is based on the same three parameters plus environmental partitioning. The ecological data (i.e., aquatic toxicity, bioconcentration, and environmental partitioning) were primarily obtained from the draft "Focus Chemicals for the Clean Air Act Amendments Great Waters Study" report, hereafter called the "Focus Chemicals" report, (Docket No. A–91–14, Item No. IV–A–2). The emissions estimates were gathered from the SCRS data base (Docket No. A–91–14, Item No. II–B–5 and II–B–8). The resulting relative rankings are called the Aquatic Toxicity and Bioconcentration (ATB) rankings in the remainder of this notice. Environmental persistence of the HAP's was not incorporated into the ATB rankings because of the limited available data. Persistence data (from the Focus Chemicals report) were available for less than 50 percent of the HAP's. Although the persistence data were not incorporated into the ATB rankings, source categories were identified if they emit HAP's which were considered persistent in the Focus Chemicals report. Effects on terrestrial species were not considered because of the limitations in readily available data, and the limited time and resources available to the EPA for finalizing the schedule for standards by the deadlines imposed by the 1990 Amendments. The ATB rankings are not ecological risk assessments, but rather relative rankings based on some readily available environmental data. A thorough discussion of methodology, input data, and results are contained in Docket No. A–91–14.

After analyzing the ATB relative rankings along with the separate effort to identify source categories that emit persistent HAP's, and after re-addressing all the other considerations that factored into the development of the schedule (such as the section 112(e)(1) requirements, SCRS results, efficiency of grouping, time needed to develop standards, EPA resources, and ability to meet the numerical and temporal requirements of section 112(e)), some changes have been made to the schedule for standards. These changes are discussed in section IV "Changes to the Draft Schedule."

E. Comments and Responses Concerning Category Specific Scheduling

Two commenters affirmed placement of their particular source categories on the schedule. One of the commenters reported, however, that the docket for the draft schedule did not provide sufficient information regarding the ranking of individual source categories, and the data used in the ranking.

One commenter asserted that the oil and natural gas production category should not be regulated in the 7-year timeframe because a methodological flaw in the SCRS has probably overstated the risk from this category. The commenter argued that this category should have a lower priority because it has low emission rates, and because the remote location of most operations results in lower exposure potential than predicted.

A second commenter voiced concern about the division of petroleum refinery operations into two separate source categories on the initial list, and the

different timeframes to which they were assigned within the draft schedule. The commenter was concerned that there might be insufficient time to develop MACT standards for the source category "petroleum refineries—other sources not distinctly listed" before the 1994 deadline. Additionally, the commenter asserted that this separation would preclude emissions trading between these two source categories, even when collocated.

A third commenter argued that the pollutant and emissions information used to list and to develop the SCRS score for the iron foundries and steel foundries source categories was incorrect and ultimately skewed the SCRS ranks upon which the regulatory schedules for the iron foundries and steel foundries source categories are based. Another commenter asserted that, given the current asbestos NESHAP's efficacy and the reduction in asbestos use, the EPA should not schedule the asbestos processing source category for rulemaking anytime in the near future. Also, one commenter requested a 60-day extension to the comment period, in order to further review SCRS ranking information.

For further discussion of public comments and responses relevant to the scheduling of source categories, the reader is referred to a document entitled "Schedule for Standards: Summary of Public Comments and Responses" (Docket No. A–91–14, Item No. IV–A–3). In response to the above comment regarding docket information, the docket number A–91–14 and the referenced docket number A–90–49, contain information, including emissions estimates and health effects data, incorporated into SCRS. In response to the comments relevant to the listing of source categories, the decisions to list categories and to subdivide or aggregate categories such as petroleum refinery operations are not a part of today's schedule publication action. As discussed previously, the source category list will likely be revised sometime in the future.

In response to the specific scheduling comments, the scheduling decision for each source category was made after reviewing all the considerations previously discussed in this notice. The SCRS was considered an adequate tool to assist in the development of the schedule. The commenters did not submit new data on emissions, health effects, or specific facility parameters. After further EPA review, evaluating all the considerations and criteria previously discussed in today's notice, the EPA decided to move the iron foundries and steel foundries source categories to the 10-year timeframe. However, the EPA does not have sufficient information indicating that the other suggested changes should be made. Therefore, none of these suggested changes has been made, except for the movement of the iron and steel foundries categories to the 10-year timeframe.

After further review, the EPA decided not to extend the comment period as requested by one commenter. The EPA realizes that a 30-day comment period challenges the public to review and respond quickly to the notice. However, the 1990 Amendments imposed an extremely ambitious schedule, and to lengthen the comment period may have resulted in additional delays beyond those which this project has already encountered. The EPA has, however, contacted the commenter directly to clarify some confusion about the SCRS ranking, and to provide assistance in locating the items in the docket related to that particular source category.

F. Comments and Responses Related to Flexibility

Many commenters discussed the need for some degree of flexibility within the schedule, and said that the EPA should have the flexibility to adjust the schedule for regulating source categories after the schedule for standards is published. Some commenters noted that the present rankings should be subject to change in the event that new information becomes available and prompts the EPA to recalculate a source category score which might alter the relative rank upon which its scheduled promulgation date is based. Many commenters asserted that as data quality and availability improves, a new SCRS analysis changing the relative ranking may prove that greater risk reduction may be achieved in a shorter timeframe by amending the schedule.

One commenter stated that flexibility was needed if new source categories are added to the source category list and schedule. Another commenter stressed the importance of revising the methodology used to develop the SCRS as new information becomes available. The commenter suggested that the EPA should have the authority to change the schedule in the future, if necessary, after periodic review and updates in methodology. Another commenter stated that the EPA needs flexibility in order to allow time for proper attention to the technical details of writing the emission standards. Several commenters asserted that the EPA must be able to modify the schedule out of administrative necessity in order to better meet the goals of the statute.

Two commenters asserted that since section 112(c) of the 1990 Amendments allows the EPA to amend the list as appropriate, the EPA should also have the flexibility to alter regulatory promulgation deadlines. One of these commenters proposed that such revisions are appropriate because section 112(b) instructs the EPA to add or delete HAP's when specific conditions are satisfied, and that the 1990 Amendments allow for the removal of source categories if the pollutants they emit have been delisted, or if the projected risk from those pollutants drops below a certain level.

Six commenters alleged that section 112(e) contains no prohibitions against the EPA changing the schedule. One of the commenters interpreted the absence of such prohibition to mean that the decision has been left to the EPA's discretion. The commenter argued that Congress would have firmly indicated that the EPA would not have the authority to adjust the regulatory schedule if Congress had so intended. Finally, the commenter asserted that if the EPA was deprived of its authority to adjust the schedule, the revision authority described in sections 112(b) and 112(c) would lose much of its value. Others added that since section 112(e) is not considered a rulemaking subject to judicial review, the EPA should not be pressured regarding revisions to the schedule by possible lawsuits or the requirements of the Administrative Procedure Act, 5 U.S.C 7551 (1992). However, one commenter stated that the schedule should not be altered unless a significant change in the ranking of source categories occurs based on the changing state of knowledge supporting the three criteria used in establishing the schedule.

In response to the above comments on flexibility, the EPA interprets section 112 of the 1990 Amendments as permitting some flexibility concerning amendment of the schedule. The comments received regarding this issue support the interpretation that the EPA has the authority to amend the schedule, and to retain some regulatory flexibility, after publication of today's schedule. The EPA considers it impractical to have a strictly rigid schedule for the reasons discussed in section I.B. of today's notice. To reiterate some of these reasons, as new data become available, the EPA may identify changes to the schedule that would facilitate greater achievement of the prioritizing criteria of section 112(e). As pointed out by some commenters, there may be situations where significant new information is obtained (e.g., data indicating that a source

category presents much less of a hazard to public health than previously thought, or the discovery that a source category is posing a significant threat to the environment) that warrants limited changes to the schedule. In addition, amendment of the schedule may also be necessary if categories on the initial source category list are delisted under the authority of section 112(c)(9). Hence, the EPA anticipates that it may, from time to time, amend the schedule for standards published in today's notice.

The EPA does not anticipate frequent amendment of the schedule for standards for important reasons. First, because of the long lead time and significant resources required to promulgate an emissions standard, the EPA will not have the technical ability or resources to reschedule many standards, particularly to move significant numbers of source categories into earlier timeframes. Second, because of the section 112(e) numerical and temporal requirements regarding scheduling of standards (e.g., regulate 25 percent of all listed source categories by November 15, 1994, and an additional 25 percent by November 15, 1997), the EPA is limited in its ability to defer categories into later timeframes without moving a commensurate number of standards to earlier timeframes.

Therefore, the schedule will not change frequently, but rather, may undergo some modifications as significant new information becomes available. Of course, any entirely newly listed categories will not affect the schedule, as they have their own schedule under section 112(c)(5). Source categories subsequently added to the section 112(c) list shall be scheduled for regulation by November 2000, or 2 years after they are listed, whichever is later.

G. Comments and Responses Concerning Efficiency of Grouping

A few commenters cautioned the EPA to refrain from arbitrarily grouping source categories for the sole purpose of making the regulatory process easier and more convenient. They were concerned that arbitrary groupings could lead to implementation bottlenecks and could complicate the residual risk determinations that will be made under section 112(f). The commenters recommended that, if the EPA determines a single standard applies to more than one source category, the standard should be promulgated separately for each source category.

One commenter stressed that it is incorrect to hasten the regulatory schedule for categories for which information is more readily available just because they are easier to regulate in a given timeframe, notwithstanding the impact of their emissions on public health.

Another commenter noted that the source category list should be reviewed for inconsistencies. Specifically, they pointed out that polyester resins production, which had a scheduled promulgation date of November 15, 1997 on the draft schedule, and polyethylene terepthalate production, which has a schedule promulgation date of November 15, 1994, are essentially the same category and, therefore, should both be scheduled under the November 15, 1997 timeframe.

One commenter reiterated concerns they had expressed in their comments on the preliminary draft list of source categories regarding the approach the EPA used to identify which sources fell under which categories and their respective schedules. The commenter questioned why butyl benzyl phthalate, a phthalate plasticizer, is included in the draft list of SOCMI processes (scheduled for MACT promulgation by November 15, 1992). This would result in butyl benzyl phthlate production being regulated before the phthalate plasticizers production source category listed under miscellaneous processes. The commenter questioned the logic of requiring regulation of one phthalate plasticizer 8 years before the others. In addition, the commenter indicated that the EPA had not specified which category the formaldehyde resins group would fall under, stating that it could fit under the acetal resins production, the amino resins production, or the phenolic resins production categories.

Another commenter alleged that little reliable quantitative data on emissions of HAP's from iron or steel foundries were presented. They stated that due to different emissions, process, and technology characteristics, iron foundries and steel foundries should not be assigned the same regulatory schedule as other sources grouped in the ferrous metal processing industry group. The commenter requested a November 15, 2000 schedule assignment.

In response to these comments, section 112(e)(2)(C) allows the EPA to prioritize regulations for source categories based on "the efficiency of grouping categories * * * according to the pollutants emitted, or the processes or technologies used." This criterion enables the EPA to more effectively utilize its technical resources for developing regulations, and helps prevent the EPA from duplicating regulatory efforts for similar categories. The EPA has considered in the past, and will consider in the future, characteristics such as end products, processing steps, raw materials, emitted pollutants, emission controls, economic factors, and efficiency of using EPA resources in grouping source categories into single regulatory projects. Of course, without extensively studying each source category, it is often difficult for the EPA to predict whether a particular emission standard will closely resemble a standard for another source category. The EPA understands that if it is later discovered that initially grouped categories may not effectively be regulated by one standard, the EPA may promulgate separate standards for the source categories as necessary. However, to follow the commenter's suggestion of continuing to have project groupings for similar categories but then to promulgate each emission standard at different times based on the SCRS ranking would defeat the purpose of the efficiency of grouping criteria and could have a substantial impact on the EPA meeting other goals of section 112.

The EPA investigated the commenter's allegation that the polyester resins production is identical to polyethylene terephthalate production. This review revealed that these categories are in fact distinct from one another, and should remain as separate source categories. In particular, polyethylene terephthalate is an ethylene glycol-based polymer which is spun into fibers for clothing, blow-molded into plastic bottles, or quenched and stretched to form specialty films. Polyester resins, on the other hand, are styrene-based resins that are used primarily in the manufacture of fiberglass. Because of these differences, there is no technical reason to schedule the two source categories in the same timeframe. The polyester resins production source category has been moved to the 10-year timeframe. And, the polyethylene terephthalate production source category remains scheduled in the 4-year timeframe. The reader is referred to section IV of today's notice for further discussion of the changes to the draft schedule.

In response to the comments regarding the formaldehyde resins group, this is merely a title that has been adopted by the EPA to refer to the NESHAP project intended to regulate the acetal, amino, and phenolic resins production source categories. By researching these individual categories, the EPA discovered that each of these resin producers used formaldehyde as a

principal reactant in the polymerization reaction. Consequently, the EPA decided to minimize its regulatory resource efforts by grouping these three source categories into one project. Although the same regulatory project focuses on all three categories, this does not necessarily suggest that the emission standards will be equivalent. However, it means that information will be gathered simultaneously, that Agency work group membership will presumably be similar (if not identical), and that the emission standard(s) will most likely be proposed and promulgated on the same schedules.

In response to a commenter's concerns regarding butyl benzyl phthalate, the production of butyl benzyl phthalate is included in the list of SOCMI processes which are proposed for regulation under the HON (57 FR 62608, December 31, 1992). It is included in the list of SOCMI processes because butyl benzyl phthalate fits the definition delineated in the proposed HON. The other phthalate plasticizers do not meet the HON definition. Therefore, the other phthalate plasticizers productions are grouped into a separate category of major sources and were ranked separately in the SCRS. They ranked relatively low in the SCRS and were scheduled in the 10-year timeframe. The list of SOCMI processes is not an item for review under this action. However, the comment has been forwarded to the EPA staff responsible for the proposed HON.

Regarding the comment on the iron foundries and steel foundries source categories, these categories were scheduled independently of the other categories within the ferrous metals processing industry group. However, after further review by the EPA, the iron foundries and steel foundries source categories have been moved to the 10-year timeframe. In consideration of regulatory efficiency, individual source categories within the ferrous metals industry group may subsequently be grouped with one or more other similar categories within or outside of the industry group.

H. Comments and Responses Related to Other Considerations

One commenter urged the EPA to avoid setting schedule dates for source categories that are clearly unattainable. The commenter mentioned the difficult challenge imposed on the EPA to meet the statutory deadlines, and stated that it is important that section 112(d) standards be of the highest quality possible. Therefore, the commenter recommended and encouraged the EPA to focus on the practical considerations of setting and meeting the source category schedule. The commenter stated that the EPA should consider data availability and resource needs when determining where to place certain source categories in the schedule, recognizing that writing standards for certain categories will be extremely resource-intensive compared to other categories.

In response, the EPA agrees with the above recommendations. The EPA considered data availability and resource needs, and the ability to meet the scheduled deadlines, when developing today's schedule. Some of the changes made to the draft schedule for standards were partly based on these considerations. The changes to the draft schedule are discussed in the following section.

IV. Changes to the Draft Schedule

The schedule published in today's notice is similar to the draft schedule published on September 24, 1992 (57 FR 44147). However, some changes have been made. After reevaluating the prioritizing considerations previously discussed in this notice, and considering public comments, limitations in EPA resources, time needed to develop standards, section 112(e)(1) requirements, the ATB rankings, and persistence of HAP's, and after further EPA review, the EPA decided to move 29 source categories from the 7-year to the 10-year timeframe, and to move nine source categories from the 10-year to the 7-year timeframe.

The draft schedule published on September 24, 1992 (57 FR 44147) had 107 source categories (61 percent of the initially listed source categories) scheduled within 7 years of enactment of the 1990 Amendments. This is 20 source categories (11 percent) more than the 87 source categories (50 percent) required by section 112(e)(1). Thus, under the conditions of the draft schedule, the EPA could have met the statutory requirement of regulating 50 percent of the listed source categories by November 15, 1997, and still triggered section 112(j) requirements if the EPA failed to promulgate emission standards on time for all 107 source categories. After further review, the EPA decided to change the schedule so that there are 87 source categories (50 percent) scheduled within 7 years of enactment of the 1990 Amendments. This percentage change more closely reflects the requirements of section 112(e)(1), and helps avoid triggering 112(j) requirements for the extra categories.

Nine source categories from the agricultural chemicals industry group were moved from the 10- to the 7-year timeframe. For a listing of these nine source categories included in the agricultural chemicals industry group that were moved to the 7-year timeframe, the readers are referred to table 1 of today's notice. This change was made after reevaluating all the prioritizing considerations previously discussed in today's notice, but especially after considering the efficiency of grouping criterion, data availability, and the time and resources needed to promulgate emission standards for the 174 source categories included in today's schedule. The EPA has attempted to optimize the resources available for developing emission standards. By grouping these source categories together under one regulatory project, and moving them to the 7-year timeframe, the EPA believes that resources are being used more efficiently for meeting the requirements of section 112(e). The EPA believes that this scheduling change should facilitate meeting the numerical and temporal requirements of section 112(e), and also, facilitate a greater achievement of the prioritizing criteria of section 112(e)(2). In addition, five of these nine source categories emit HAP's that were considered ecologically persistent in the draft Focus Chemicals report.

After reevaluating all the criteria and considerations for prioritizing that were previously discussed in today's notice, the EPA moved the following 29 source categories from the 7- to the 10-year timeframe: (1) Stationary Turbines; (2) Polyvinyl Alcohol Production; (3) Benzyl-Trimethyl-Ammonium Chloride Production; (4) Carboxy-Methyl-Cellulose Production; (5) Polyvinyl Acetate Emulsions Production; (6) Polyvinyl Butyral Production; (7) Stationary Internal Combustion Engines; (8) Photographic Chemicals Production; (9) Paper and Other Webs (Surface Coating); (10) Polymethyl Methacrylate Resins Production; (11) Sewage Sludge Incineration; (12) Semiconductors Manufacturing; (13) Aerosol Can Filling; (14) Cellophane Production; (15) Rayon Production; (16) Chromium Refactories Production; (17) Hydrochloric Acid Production; (18) Hydrogen Fluoride Production; (19) Polyester Resins Production; (20) Hydrazine Production, (21) Chelating Agents Production; (22) Rubber Chemicals Manufacturing; (23) Iron Foundries; (24) Steel Foundries; (25) Auto and Light Duty Truck (surface coating); (26) Municipal Landfills; (27) Integrated Iron and Steel; (28) Phosphoric Acid Manufacturing; and (29) Phosphate Fertilizers Production

V. Schedule for the Promulgation of Emission Standards

The schedule, in tables 1 and 2 of today's notice, establishes timeframes for the promulgation of emission standards for the categories of sources initially listed pursuant to section 112(c). The listed categories are prioritized considering the three criteria identified in section 112(e)(2) and the other considerations discussed in today's notice. Today's schedule specifies that each of the initially listed source categories are scheduled to be regulated within 2, 4, 7, or 10 years of the enactment of the 1990 Amendments, as required by section 112(e).

The schedule for the first two years (i.e., requiring promulgation of standards by November 15, 1992) includes five categories of dry cleaners and the SOCMI source category. The SOCMI category, along with equipment leaks from 20 other non-SOCMI source categories or subsets of source categories would be subject to the proposed HON (57 FR 62608, December 31, 1992). A subset of a source category, as used in today's notice, is defined as a particular process or emission point that is part of the more broadly defined source category. The proposed HON includes a negotiated standard for equipment leaks in the SOCMI and 20 non-SOCMI source categories or subsets of source categories (see table 1, footnote c). These non-SOCMI source categories, or subsets of source categories, are consistent with the seven manufacturing processes listed in the notice of agreement on negotiated regulation for equipment leaks (56 FR 9318, March 6, 1991). The negotiated standard was proposed as part of the HON. Only the equipment leak emissions in these non-SOCMI source categories or subsets of source categories are scheduled for regulation by November 15, 1992. Regulations covering other emission sources in these non-SOCMI source categories are scheduled for later years because of insufficient time and information. Although the remainder of the source categories will be regulated in a later timeframe, sources will need to comply with the equipment leaks requirements in the HON, according to the deadlines specified in the HON.

To fulfill the section 112(e)(1)(C) requirement to regulate 25 percent of listed categories within 4 years of enactment of the 1990 Amendments, 43 source categories (26 percent of the initially listed source categories) are scheduled for regulation in the 2- and 4-year timeframes. This group includes several active projects previously identified as high priority through earlier prioritization efforts; categories already under investigation as part of active CTG projects; and others selected because of efficiency of grouping, level of knowledge, and potential for completion by November 15, 1994.

The remaining 129 source categories are scheduled for regulation within either 7 or 10 years of enactment. The SCRS ranking, along with efficiency of grouping and the other considerations discussed previously in today's notice, were the primary criteria for scheduling the remaining categories in either 7- or 10-years. To fulfill the section 112(e)(1)(D) requirement to promulgate emissions standards for an additional 25 percent of the initially listed source categories by November 15, 1997, a total of 87 source categories (50 percent) are scheduled for regulation within 7 years of enactment of the 1990 Amendments.

As required in section 112(c)(5), source categories that are added to the source category list after publication of the initial source category list (57 FR 31576, July 16, 1992) shall be regulated by November 15, 2000, or within 2 years after the listing date, which ever is later.

VI. Administrative Requirements

A. Docket

The docket for this action is No. A–91–14. The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of this schedule. The principal purpose of the docket is to allow interested parties a means to access documents relevant to developing the schedule. The docket is available for public inspection at the EPA's Air Docket Section, listed in the ADDRESSES section of this notice.

B. Regulatory Requirements

1. General

Because today's schedule notice is not a rule, the EPA has not prepared an assessment of the potential costs and benefits pursuant to Executive Order 12866, nor an economic impact analysis pursuant to section 317, nor a regulatory flexibility analysis pursuant to Regulatory Flexibility Act (Pub. L. 96–354, September 19, 1980). Also, this notice is not subject to the Paperwork Reduction Act of 1990, 44 U.S.C. 3501 *et seq.*

2. Executive Order and Office of Management and Budget Review

Under Executive Order 12866 (58 FR 51735, 10/04/93), the Agency must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant" regulatory action as one that is likely to lead to a rule that may (1) Have an annual effect on the economy of $100 million or more, or adversely and materially affecting a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligation of recipients thereof; (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, the Office of Management and Budget (OMB) has notified the EPA that this schedule notice is a "significant" regulatory action within the meaning of the Executive Order. For this reason, this schedule action was submitted to the OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

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VII. Organization of the Schedule for Standards

The Schedule for Standards is presented in tabular form. In table 1, the schedule is organized by industry group. Within each industry group are related categories of sources and the scheduled deadline for promulgation of emissions standards. The source categories are scheduled for regulation within 2, 4, 7, or 10 years of enactment of the 1990 Amendments. However, as indicated in the footnotes of table 1, some source categories are subject to court-ordered deadlines in accordance with a consent decree entered in *Sierra Club* v. *Browner*, Case Number 93–0124 (and related cases) (DC District Court). It should be noted that the section 112(j) requirements, which are discussed in section I.B. of today's notice, take effect 18 months after the statutory deadlines (i.e., November 15, 1992, November 15, 1994, November 15, 1997, and November 15, 2000). The court-ordered deadlines do not affect the section 112(j) provisions. In table 1, categories of area sources have been listed separately. In table 2, the schedule is organized by the four timeframes (i.e., the 2, 4, 7 and 10 year groups).

Dated: November 15, 1993.
Michael Shapiro,
Assistant Administrator.

TABLE 1.—CATEGORIES OF SOURCES OF HAZARDOUS AIR POLLUTANTS AND REGULATION PROMULGATION SCHEDULE BY INDUSTRY GROUP

Industry group—Source category[a]	Schedule date
Fuel Combustion:	
Engine Test Facilities	11/15/00
Industrial Boilers[b]	11/15/00
Institutional/Commercial Boilers[b]	11/15/00
Process Heaters	11/15/00
Stationary Internal Combustion Engines[b]	11/15/00
Stationary Turbines[b]	11/15/00
Non-Ferrous Metals Processing:	
Primary Aluminum Production	11/15/97
Secondary Aluminum Production	11/15/97
Primary Copper Smelting	11/15/97
Primary Lead Smelting	11/15/97
Secondary Lead Smelting[c]	11/15/94
Lead Acid Battery Manufacturing	11/15/00
Primary Magnesium Refining	11/15/00
Ferrous Metals Processing:	
Coke By-Product Plants	11/15/00
Coke Ovens: Charging, Top Side, and Door Leaks	12/31/92
Coke Ovens: Pushing, Quenching, and Battery Stacks	11/15/00
Ferroalloys Production	11/15/97
Integrated Iron and Steel Manufacturing	11/15/00
Non-Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation	11/15/97
Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation	11/15/97
Iron Foundries	11/15/00
Steel Foundries	11/15/00
Steel Pickling—HCl Process	11/15/97
Mineral Products Processing:	
Alumina Processing	11/15/00
Asphalt Concrete Manufacturing	11/15/00
Asphalt Processing	11/15/00
Asphalt Roofing Manufacturing	11/15/00
Asphalt/Coal Tar Application—Metal Pipes	11/15/00
Chromium Refractories Production	11/15/00
Clay Products Manufacturing	11/15/00
Lime Manufacturing	11/15/00
Mineral Wool Production	11/15/97
Portland Cement Manufacturing	11/15/97
Taconite Iron Ore Processing	11/15/00
Wool Fiberglass Manufacturing	11/15/97
Petroleum and Natural Gas Production and Refining:	
Oil and Natural Gas Production	11/15/97
Petroleum Refineries—Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units	11/15/97
Petroleum Refineries—Other Sources Not Distinctly Listed[b]	11/15/94

TABLE 1.—CATEGORIES OF SOURCES OF HAZARDOUS AIR POLLUTANTS AND REGULATION PROMULGATION SCHEDULE BY INDUSTRY GROUP—Continued

Industry group—Source category[a]	Schedule date
Liquids Distribution:	
Gasoline Distribution (Stage 1)[a]	11/15/94
Organic Liquids Distribution (Non-Gasoline)	11/15/00
Surface Coating Processes:	
Aerospace Industries[1]	11/15/94
Auto and Light Duty Truck (Surface Coating)	11/15/00
Flat Wood Paneling (Surface Coating)	11/15/00
Large Appliance (Surface Coating)	11/15/00
Magnetic Tapes (Surface Coating)[a]	11/15/94
Manufacture of Paints, Coatings, and Adhesives	11/15/00
Metal Can (Surface Coating)	11/15/00
Metal Coil (Surface Coating)	11/15/00
Metal Furniture (Surface Coating)	11/15/00
Miscellaneous Metal Parts and Products (Surface Coating)	11/15/00
Paper and Other Webs (Surface Coating)	11/15/00
Plastic Parts and Products (Surface Coating)	11/15/00
Printing, Coating, and Dyeing of Fabrics	11/15/00
Printing/Publishing (Surface Coating)	11/15/94
Shipbuilding and Ship Repair (Surface Coating)	11/15/94
Wood Furniture (Surface Coating)	11/15/94
Waste Treatment and Disposal:	
Hazardous Waste Incineration	11/15/00
Municipal landfills	11/15/00
Publicly Owned Treatment Works (POTW) Emissions	11/15/95
Sewage Sludge Incineration	11/15/00
Site Remediation	11/15/00
Solid Waste Treatment, Storage and Disposal Facilities (TSDF)	11/15/94
Agricultural Chemicals Production:	
4-Chloro-2-Methylphenoxyacetic Acid Production	11/15/97
2, 4-D Salts and Esters Production	11/15/97
4, 6-Dinitro-o-Cresol Production	11/15/97
Captafol Production[c]	11/15/97
Captan Production[c]	11/15/97
Chloroneb Production	11/15/97
Chlorothalonil Production[c]	11/15/97
Dacthal (tm) Production[c]	11/15/97
Sodium Pentachlorophenate Production	11/15/97
Tordon (tm) Acid Production[c]	11/15/97
Fibers Production Processes:	
Acrylic Fibers/Modacrylic Fibers Production	11/15/97
Rayon Production	11/15/00
Spandex Production	11/15/00

TABLE 1.—CATEGORIES OF SOURCES OF HAZARDOUS AIR POLLUTANTS AND REGULATION PROMULGATION SCHEDULE BY INDUSTRY GROUP—Continued

Industry group—Source category[a]	Schedule date
Food and Agriculture Processes:	
Baker's Yeast Manufacturing	11/15/00
Cellulose Food Casing Manufacturing	11/15/00
Vegetable Oil Production	11/15/00
Pharmaceutical Production Processes:	
Pharmaceuticals Production[c]	11/15/97
Polymers and Resins Production:	
Acetal Resins Production	11/15/97
Acrylonitrile-Butadiene-Styrene Production	11/15/94
Alkyd Resins Production	11/15/00
Amino Resins Production	11/15/97
Boat Manufacturing	11/15/00
Butadiene-Furfural Cotrimer (R-11)[c]	11/15/00
Butyl Rubber Production	11/15/94
Carboxymethylcellulose Production	11/15/00
Cellophane Production	11/15/00
Cellulose Ethers Production	11/15/00
Epichlorohydrin Elastomers Production	11/15/94
Epoxy Resins Production[b]	11/15/94
Ethylene-Propylene Rubber Production	11/15/94
Flexible Polyurethane Foam Production	11/15/97
Hypalon (tm) Production[c]	11/15/94
Maleic Anhydride Copolymers Production	11/15/00
Methylcellulose Production	11/15/00
Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production[c]	11/15/94
Methyl Methacrylate-Butadiene-Styrene Terpolymers Production[c]	11/15/94
Neoprene Production	11/15/94
Nitrile Butadiene Rubber Production	11/15/94
Non-Nylon Polyamides Production[b]	11/15/94
Nylon 6 Production	11/15/97
Phenolic Resins Production	11/15/97
Polybutadiene Rubber Production[c]	11/15/94
Polycarbonates Production[c]	11/15/97
Polyester Resins Production	11/15/00
Polyethylene Terephthalate Production	11/15/94
Polymerized Vinylidene Chloride Production	11/15/00
Polymethyl Methacrylate Resins Production	11/15/00
Polystyrene Production	11/15/94
Polysulfide Rubber Production[c]	11/15/94
Polyvinyl Acetate Emulsions Production	11/15/00
Polyvinyl Alcohol Production	11/15/00
Polyvinyl Butyral Production	11/15/00
Polyvinyl Chloride and Copolymers Production	11/15/00
Reinforced Plastic Composites Production	11/15/97

TABLE 1.—CATEGORIES OF SOURCES OF HAZARDOUS AIR POLLUTANTS AND REGULATION PROMULGATION SCHEDULE BY INDUSTRY GROUP—Continued

Industry group—Source category [a]	Schedule date
Styrene-Acrylonitrile Production	11/15/94
Styrene-Butadiene Rubber and Latex Production [c]	11/15/94
Production of Inorganic Chemicals:	
Ammonium Sulfate Production—Caprolactam By-Product Plants	11/15/00
Antimony Oxides Manufacturing	11/15/00
Chlorine Production [c]	11/15/97
Chromium Chemicals Manufacturing	11/15/97
Cyanuric Chloride Production	11/15/97
Fume Silica Production	11/15/00
Hydrochloric Acid Production	11/15/00
Hydrogen Cyanide Production	11/15/97
Hydrogen Fluoride Production	11/15/00
Phosphate Fertilizers Production	11/15/00
Phosphoric Acid Manufacturing	11/15/00
Quaternary Ammonium Compounds Production	11/15/00
Sodium Cyanide Production	11/15/97
Uranium Hexafluoride Production	11/15/00
Production of Organic Chemicals:	
Synthetic Organic Chemical Manufacturing [c]	11/15/92
Miscellaneous Processes:	11/15/92
Aerosol Can-Filling Facilities	11/15/00
Benzyltrimethylammonium Chloride Production	11/15/00
Butadiene Dimers Production	11/15/97
Carbonyl Sulfide Production	11/15/00
Chelating Agents Production	11/15/00
Chlorinated Paraffins Production [c]	11/15/00
Chromic Acid Anodizing [a]	11/15/94
Commercial Dry Cleaning (Perchloroethylene)—Transfer Machines	11/15/92
Commercial Sterilization Facilities [a]	11/15/94
Decorative Chromium Electroplating [a]	11/15/94
Dodecanedioic Acid Production [c]	11/15/00
Dry Cleaning (Petroleum Solvent)	11/15/00
Ethylidene Norbornene Production [c]	11/15/00
Explosives Production	11/15/00
Halogenated Solvent Cleaners [a]	11/15/94
Hard Chromium Electroplating [a]	11/15/94
Hydrazine Production	11/15/00
Industrial Cleaning (Perchloroethylene)—Dry-to-dry machines	11/15/92
Industrial Dry Cleaning (Perchloroethylene) Transfer Machines	11/15/92
Industrial Process Cooling Towers [f]	11/15/94
OBPA/1,3-Diisocyanate Production [c]	11/15/00
Paint Stripper Users	11/15/00
Photographic Chemicals Production	11/15/00
Phthalate Plasticizers Production	11/15/00
Plywood/Particle Board Manufacturing	11/15/00
Polyether Polyols Production	11/15/97
Pulp and Paper Production	11/15/97
Rocket Engine Test Firing	11/15/00
Rubber Chemicals Manufacturing	11/15/00
Semiconductor Manufacturing	11/15/00
Symmetrical Tetrachloropyridine Production [c]	11/15/00
Tire Production	11/15/00
Wood Treatment	11/15/97
Categories of Area Sources: [d]	
Asbestos Processing	11/15/94
Chromic Acid Anodizing [a]	11/15/94
Commercial Dry Cleaning (Perchloroethylene)—Dry-to-Dry Machines	11/15/92
Commercial Dry Cleaning (Perchloroethylene)—Transfer Machines	11/15/92
Commercial Sterilization Facilities [a]	11/15/94
Decorative Chromium Electroplating [a]	11/15/94
Halogenated Solvent Cleaners [c]	11/15/94
Hard Chromium Electroplating [a]	11/15/94

[a] Only major sources within any category shall be subject to emission standards under section 112 unless a finding is made of a threat of adverse effects to human health or the environment for the area sources in a category. All listed categories are exclusive of any specific operations or processes included under other categories that are listed separately.

[b] Sources defined as electric utility steam generating units under section 112(a)(8) shall not be subject to emission standards pending the findings of the study required under section 112(n)(1).

[c] Equipment handling specific chemicals for these categories or subsets of these categories are subject to a negotiated standard for equipment leaks contained in the HON, which was proposed on December 31, 1992. The HON includes a negotiated standard for equipment leaks from the SOCMI category and 20 non-SOCMI categories (or subsets of these categories). The specific processes affected within the categories are listed in section XX.X0(c) of the March 6, 1991 FEDERAL REGISTER notice (56 FR 9315).

[d] A finding of threat of adverse effects to human health or the environment was made for each category of area sources listed.

The following footnotes apply to source categories that are subject to court ordered promulgation deadlines (differing from the above listed regulatory deadlines) in accordance with a consent decree entered in *Sierra Club v. Browner,* Case No. 93–0124 (and related cases) (D.C. Dist. Ct.).

[e] Judicial deadline: 02/28/94.
[f] Judicial deadline: 07/31/94.
[g] Judicial deadline: 11/23/94.
[h] Judicial deadline: 02/28/95.
[i] Judicial deadline: 04/30/95.
[j] Judicial deadline: 05/31/95.
[k] Judicial deadline: 06/30/95.
[l] Judicial deadline: 07/31/95.

Table 2.—Categories of Sources of Hazardous Air Pollutants and Regulation Promulgation Schedule by Regulatory Deadlines

Source Categories with Emission Standards Due by November 15, 1992
- Synthetic Organic Chemical Manufacturing
- Commercial Drycleaning (Perchloroethylene)—Dry-to-Dry Machines *
- Commercial Drycleaning (Perchloroethylene)—Transfer Machines *
- Commercial Drycleaning (Perchloroethylene)—Transfer Machines
- Industrial Drycleaning (Perchloroethylene)—Dry-to-Dry Machines
- Industrial Drycleaning (Perchloroethylene)—Transfer Machines

Source Categories with Emission Standards Due by November 15, 1994
- Acrylonitrile-Butadiene-Styrene Production
- Aerospace Industries
- Asbestos Processing *
- Butyl Rubber Production
- Chromic Acid Anodizing
- Chromic Acid Anodizing *
- Coke Ovens: Charging, Topside and Door Leaks (CAA Mandated Promulgation by December 31, 1992)
- Commercial Sterilization Facilities
- Commercial Sterilization Facilities *
- Decorative Chromium Electroplating
- Decorative Chromium Electroplating *
- Epichlorohydrin Elastomers Production
- Epoxy Resins Production
- Ethylene-Propylene Rubber Production
- Gasoline Distribution—Stage 1
- Halogenated Solvent Cleaners
- Halogenated Solvent Cleaners *
- Hard Chromium Electroplating
- Hard Chromium Electroplating *
- Hypalon (TM) Production
- Industrial Process Cooling Towers
- Magnetic Tapes (Surface Coating)
- Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production
- Methyl Methacrylate-Butadiene-Styrene Terpolymers Production
- Neoprene Production
- Nitrile Butadiene Rubber Production
- Non-Nylon Polyamides Production
- Petroleum Refineries—Other Sources Not Distinctly Listed
- Polyethylene Terephthalate Production
- Polybutadiene Rubber Production
- Polystyrene Production
- Polysulfide Rubber Production
- Printing/Publishing (Surface Coating)
- Secondary Lead Smelting
- Shipbuilding and Ship Repair (Surface Coatings)
- Solid Waste Treatment, Storage, & Disposal Facilities (TSDF)
- Styrene-Acrylonitrile Production
- Styrene-Butadiene Rubber and Latex Production

Wood Furniture (Surface Coating)
Source Categories with Emission Standards Due by November 15, 1997
4-Chloro-2-Methylphenoxyacetic Acid Production
2,4-D Salts and Esters Production
4,6-Dinitro-O-Cresol Production
Acetal Resins Production
Acrylic Fibers/Modacrylic Fibers Production
Amino Resins Production
Butadiene Dimers Production
Captafol Production
Captan Production
Chloroneb Production
Chlorothalonil Production
Chlorine Production
Chromium Chemicals Manufacturing
Cyanuric Chloride Production
Dacthal (TM) Production
Ferroalloys Production
Flexible Polyurethane Foam Production
Hydrogen Cyanide Production
Mineral Wool Production
Non-Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation
Nylon 6 Production
Oil and Natural Gas Production
Petroleum Refineries—Catalytic Cracking (Fluid and Other) Units, Catalytic Reforming Units, and Sulfur Plant Units
Pharmaceuticals Production
Phenolic Resins Production
Polycarbonates Production
Polyether Polyols Production
Portland Cement Manufacturing
Primary Aluminum Production
Primary Copper Smelting
Primary Lead Smelting
Publicly Owned Treatment Works (POTW) Emissions (CAA Mandated Promulgation by November 15, 1995)
Pulp & Paper Production
Reinforced Plastic Composites Production
Secondary Aluminum Production
Sodium Cyanide Production
Sodium Pentachlorophenate Production
Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation
Steel Pickling—HCl Process
Tordon (TM) Acid Production
Wood Treatment
Wool Fiberglass Manufacturing
Source Categories with Emission Standards Due by November 15, 2000
Aerosol Can-Filling Facilities
Alkyd Resins Production
Alumina Processing
Ammonium Sulfate Production—Caprolactam By-product Plants
Antimony Oxides Manufacturing
Asphalt Concrete Manufacturing
Asphalt Processing
Asphalt Roofing Manufacturing
Asphalt/Coal Tar Application—Metal Pipes
Auto and Light Duty Truck (Surface Coating)
Bakers Yeast Manufacturing
Benzyltrimethylammonium Chloride Production
Boat Manufacturing
Butadiene-Furfural Cotrimer (R-11)
Carbonyl Sulfide Production
Carboxymethylcellulose Production
Cellophane Production
Cellulose Ethers Production
Cellulose Food Casing Manufacturing
Chelating Agents Production
Chlorinated Paraffins Production
Chromium Refractories Production
Clay Products Manufacturing
Coke By-product Plants
Coke Ovens: Pushing, Quenching and Battery Stacks
Dodecanedioic Acid Production
Dry Cleaning (Petroleum Solvent)
Engine Test Facilities
Ethylidene Norbornene Production
Explosives Production
Flat Wood Paneling (Surface Coating)
Fume Silica Production
Hazardous Waste Incineration
Hydrazine Production
Hydrochloric Acid Production
Hydrogen Fluoride Production
Industrial Boilers
Institutional/Commercial Boilers
Integrated Iron & Steel Manufacturing
Iron Foundries
Large Appliance (Surface Coating)
Lead Acid Battery Manufacturing
Lime Manufacturing
Maleic Anhydride Copolymers Production
Manufacture of Paints, Coatings & Adhesives
Metal Can (Surface Coating)
Metal Coil (Surface Coating)
Metal Furniture (Surface Coating)
Methylcellulose Production
Miscellaneous Metal Parts & Products (Surface Coating)
Municipal Landfills
OBPA/1,3-Diisocyanate Production
Organic Liquids Distribution (Non-Gasoline)
Paint Stripper Users
Paper and Other Webs (Surface Coating)
Phosphate Fertilizers Production
Phosphoric Acid Manufacturing
Photographic Chemicals Production
Phthalate Plasticizers Production
Plastic Parts and Products (Surface Coating)
Plywood/Particle Board Manufacturing
Polyester Resins Production
Polymerized Vinylidene Chloride Production
Polymethyl Methacrylate Resins Production
Polyvinyl Acetate Emulsions Production
Polyvinyl Alcohol Production
Polyvinyl Butyral Production
Polyvinyl Chloride and Copolymers Production
Primary Magnesium Refining
Printing, Coating & Dyeing of Fabrics
Process Heaters
Quaternary Ammonium Compounds Production
Rayon Production
Rocket Engine Test Firing
Rubber Chemicals Manufacturing
Semiconductor Manufacturing
Sewage Sludge Incineration
Site Remediation
Spandex Production
Stationary Internal Combustion Engines
Stationary Turbines
Steel Foundries
Symmetrical Tetrachloropyridine Production
Taconite Iron Ore Processing
Tire Production
Uranium Hexafluoride Production
Vegetable Oil Production

* Denotes area source category

[FR Doc. 93-29513 Filed 12-2-93, 8:45 am]

BILLING CODE 6560-50-P

[ER-FRL-4706-1]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 260-5076 OR (202) 260-5075

Weekly receipt of Environmental Impact Statements Filed November 22, 1993 through November 26, 1993 Pursuant to 40 CFR 1506.9.

EIS No. 930420, Draft EIS, NPS, CO, Bent's Old Fort Historic Site, General Management Plan and Development Concept Plan, Implementation, Santa Fe Trail, Otero County, CO, Due: January 18, 1994, Contact: Don Hill (719) 384-2596.

EIS No. 930421, Final EIS, NPS, UT, Timpanogos Cave National Monument General Management and Development Concept Plans, Implementation, American Fork Canyon, Utah County, UT, Due: January 03, 1994, Contact: Sue McGill (801) 756-5239.

EIS No. 930422, Final EIS, BLM, NV, Newmont Gold Quarry Open-Pit Mine and Ore Processing Facility Expansion and Operation, Plan of Operation Approval, NPDES and COE Section 404 Permits, Eureka and Elko Counties, NV, Due: January 03, 1994, Contact: David Vandenberg (702) 753-0200.

EIS No. 930423, Draft EIS, AFS, NV, Jerritt Canyon Gold Mine Expansion Project, Implementation, Plan of Operation and COE Section 404 Permit, Humboldt National Forest, Mountain City Ranger District, Elko County, NV, Due: January 18, 1994, Contact: Don Carpenter (702) 763-6691.

EIS No. 930424, Draft EIS, SCS, WV, Upper Buffalo Creek Watershed, Flood Prevention and Watershed Protection, Funding, City of Mannington, Marion County, WV, Due: January 18, 1994, Contact: Rollin Swank (304) 291-4151.

EIS No. 930425, Draft EIS, AFS, WA, McCoy Timber Sales and Related Projects, Implementation, Gifford Pinchot National Forest, Randle Ranger District, Lewis and Skamania Counties, WA, Due: January 31, 1994, Contact: Harry Cody (206) 497-7565.

EIS No. 930426, Final EIS, FAA, AZ, Phoenix Sky Harbor International

Airport Master Plan Updated Improvements, Runway 8L/26R Extension, Funding, City of Phoenix, Maricopa County, AZ, Due: January 03, 1994, Contact: David B. Kessler (310) 297–1534.

EIS No. 930427, Final EIS, BLM, CA, Hollister Oil and Gas Leasing, Land and Resource Management Plan Amendment, Implementation and Applications for Permits to Drill, Bakersfield District, Monterey, San Benito, Fresno, Madera and Merced Counties, CA, Due: January 03, 1994, Contact: Robert Beehler (408) 637–8163.

EIS No. 930428, Draft EIS, BLM, WY, Newcastle Resource Management Plan, Implementation, Evaluating Alternatives for the Use of Public Lands and Resources in Portions of Wyoming, Crook, Niobrara and Weston Counties, WY, Due: March 04, 1994, Contact: Floyd Ewing (307) 746–4453.

Amended Notices

EIS No. 930394, Draft EIS, UAF, ID, Idaho Training Range, Air-to-Ground Aircraft Tactical Training Facilities within the Idaho Air National Guard at Gowen Field and the Composite Wing Mountain Home Air Force Base, ID, Due: February 09, 1994, Contact: Brenda Cook, BLM (804) 764–3328 or Butch Peugh, UAF (208) 384–3076 Published FR–11–12–93. Due Date Correction; The U.S. Department of Defense's U.S. Air Force and the U.S. Department of the Interior's Bureau of Land Management are Joint Lead Agencies for this Project.

Dated: November 30, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93–29615 Filed 12–2–93; 8:45 am]

BILLING CODE 6560–60–U

[ER–FRL–4706–2]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared November 8, 1993 through November 12, 1993 pursuant to the Environmental Review Process (ERP), under Section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 260–5076.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 10, 1993 (50 FR 18392).

Draft EISs

ERP No. D–AFS–G65057–NM Rating EO2, Angostura Diversity Unit Vegetative Management Plan, Implementation, Timber Harvesting and Regrowing, Carson National Forest, Camino Real Ranger District, Taos County, NM.

Summary: EPA had environmental objections to the USFS' preferred alternative and requested additional information in the final EIS regarding the selection of the preferred alternative, clarification of purpose, wetland identification and impacts, water quality and fishery impacts and road construction.

ERP No. D–AFS–L65201–OR Rating EC2, Eagle Creek Timber Sale and Road Construction, Implementation, Mt. Hood National Forest, Zigzag and Estacada Ranger Districts, Clackamas County, OR.

Summary: EPA expressed environmental concerns regarding the timber sale's potential impact on water quality. Additional information was requested regarding maps, monitoring, air quality, threatened and endangered species.

ERP No. D–AFS–L65209–WA Rating EC2, Pebble and Little Granite Timber Sales, Implementation, Mountain Analysis Area, Okanogan National Forest, Tonasket, Twisp and Winthrop Ranger Districts, Okanogan County, WA.

Summary: EPA expressed environmental concerns regarding the sale's potential impact on water quality. Additional information was requested on air quality, threatened and endangered species, road closures, and wetlands.

ERP No. D–FAA–C51015–NJ Rating EC2, Newark International Airport Installation and Operation of an Instrument Landing System on Runway 11, Funding and Airport Layout Plan Approval, Essex and Union Counties, NJ.

Summary: EPA continued to express environmental concerns about potential impacts to capacity. Further, the document provides insufficient information to evaluate the potential need for hazardous waste disposal of material to be excavated during construction of the proposed project. Accordingly, EPA recommended that the final EIS present additional information to address these concerns.

ERP No. D–NPS–C80023–NY Rating LO1, Hamilton Grange National Memorial, General Management Plan, Implementation, New York County, NY.

Summary: EPA had no objections to the proposed project.

ERP No. DS–FHW–C40129–NY Rating EC2, NY–9A Reconstruction Project, Battery Place to 59th Street along the western edge of Manhattan, New Information, Funding and Approval of Permits, New York County, NY.

Summary: EPA expressed environmental concerns although the scope of the supplemental draft EIS is limited to anomalies in the traffic analysis. The final EIS needs to address water quality, hazardous wastes, air quality analysis and noise concerns raised by EPA on the draft EIS.

Final EISs

ERP No. F–AFS–L65187–AK, North Revilla Project, Long-Term Timber Sale Contract, Implementation, Tongass National Forest, Ketchikan Administrative Area, Ketchikan Ranger District, Revillagigedo Island, AK.

Summary: EPA continued to have concerns with the effect of the action alternatives on water quality and fisheries. EPA believed that unresolved water quality monitoring issues will make it difficult to ensure that Alaska Water Quality Standards are met and beneficial uses protected.

ERP No. F–AFS–L65197–AK, Campbell Timber Sale, Implementation, Tongass National Forest, Stikine Area, AK.

Summary: EPA had no objection to the preferred alternative as described in the final EIS.

Dated: November 30, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93–29616 Filed 12–2–93; 8:45 am]

BILLING CODE 6560–60–U

[FRL–4806–3]

Office of Environmental Equity Grants Program; Solicitation Notice for Fiscal Year (FY) 1994 Environmental Justice Grants to Community Groups

Important Pre-Application Information

Pre-applications must be postmarked no later than February 4, 1994. Pre-applications will serve as the sole basis for evaluation and recommendation for funding. This notice contains all information and forms necessary to submit a pre-application.

Pre-applications for a Federal grant must be mailed to your Environmental Protection Agency (EPA) regional office. (A list of addresses and phone numbers for questions is included at the end of this notice.) EPA expects projects to begin by June 1, 1994. EPA will award grants in Fiscal Year 1994 subject to the amount of appropriated funds.

Purpose of Notice

This notice solicits pre-applications from any community group which is eligible under applicable statutory authorities, (for example, community-based/grassroots organization, school, education agency, college or university, and non-profit organization) and tribal government for grants to support current and new projects to design, demonstrate, or disseminate practices, methods, or techniques which address environmental justice concerns.

Background

In June of 1993, the Office of Environmental Equity of the Environmental Protection Agency (EPA) was delegated granting authority to solicit projects, select suitable projects from among those proposed, supervise such projects, evaluate the results of projects, and disseminate information on the effectiveness of the projects, and feasibility of the practices, methods, techniques and processes in environmental justice areas. Each instrument approved under the environmental equity delegation must be consistent with the Federal Grant and Cooperative Agreements Act of 1977, Public Law 95–24, as amended, 31 U.S.C. 6301; Title 40 of the Code of Federal Regulations, parts 30, 31, 33, 40, 45 and 47, as appropriate; and existing media-specific regulations pertinent to the statement of work.

In its 1992 report, Environmental Equity: Reducing Risk for All Communities, EPA found that people of color and low-income communities experience higher than average exposure to toxic pollutants than the general population. The Office of Environmental Equity is interested in helping these communities to identify and assess these pollution sources, to implement environmental awareness and training programs for affected residents and work with local stakeholders (community-based organizations, academia, industry, local governments) to devise strategies for environmental improvements.

Fiscal Year 1994 will be the first year of the grants program with the amount of awards up to $10,000 per grant. Each of EPA's 10 regions will have approximately $50,000 for grants with a Federal share of $10,000 or less. Recipients will be required to provide at least a 5% match as explained in Section H of this announcement.

FUNDING

The Office of Environmental Equity has approximately $500,000 for this grants program in Fiscal Year 1994. EPA will award grants based on the merits of the pre-application and the availability of funds.

Eligible Activities

A. What Is the Purpose of the Grants Program?

The purpose of the grants program is to provide financial assistance and stimulate a public purpose by supporting projects to any affected community group (for example, community-based/grassroots organization, school, education agency, college or university, and non-profit organization) and tribe who engage or plan to carry out projects to address environmental justice issues. Projects that focus on the design, methods, and techniques to evaluate and solve environmental justice issues of concern to affected communities will be given priority. Funds can be used to develop a new activity or to substantially improve the quality of existing ones.

B. What Specific Activities Will be Eligible to Receive Funding?

The eligible environmental justice activities shall include, but not be limited to:

1. Design and demonstration of field methods, practices, and techniques, including assessment and analysis of environmental justice conditions and problems (for example, socioeconomic impact studies, natural resource clean-up efforts);

2. Projects to understand, assess or address specific local environmental justice issues or problems (for example, reforestation efforts, monitoring of socioeconomic changes in a community as a result of an environmental abuse);

3. Demonstration or dissemination of environmental justice information, including development of equity educational tools and materials (for example, developing or supplementing existing community newsletters);

4. Provision of environmental justice training or related education for community residents, teachers, faculty, or related personnel in a specific geographic area or region (for example workshops, awareness conferences); and

5. Obtain technical expert consultation to access, analyze, and interpret public environmental data for a specific geographic area or region (for example, Geographic Information Systems (GIS), Toxic Release Inventory (TRI) and other databases).

Priority will be given to those projects which will help improve the environmental quality of affected communities by developing: (A) An environmental justice project, activity, method, or technique which may have wide application; (B) a practice, method, or technique which enhances skills in addressing environmental justice issues and problems; (C) an environmental justice education practice, method, or technique which addresses environmental justice issues; and (D) an environmental justice project or activity which establishes or expands information systems for local communities.

C. How Does EPA Define Environmental Justice Under the Environmental Justice Grants Program?

Environmental justice is the fair treatment of people of all races, cultures and income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no racial, ethnic or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from the operation of industrial, municipal, and commercial enterprises and from the execution of federal, state and local, and tribal programs and policies. Environmental justice seeks to ensure that the communities, private industry, local governments, states, tribes, federal government, grass-roots organizations, and individuals act responsibly and ensure environmental protection to all communities. Environmental justice projects or activities should enhance critical thinking, problem solving, and effective decision-making skills. Environmental justice efforts may include, but are not necessarily limited to enhancing the gathering, observing, measuring, classifying, experimenting and other data gathering techniques that assist individuals in discussing, inferring, predicting, and interpreting information about environmental justice issues and concerns. Environmental justice projects should engage and motivate individuals to weigh various issues to make informed and responsible decisions as they work to address environmental inequities.

EPA is interested in funding environmental justice activities that go beyond providing information to community groups or citizens. Dissemination of environmental justice information, by itself, is not an environmental justice project, although such information may be an essential element. Environmental justice information provides facts or opinions about environmental justice issues or problems, but does not necessarily enhance critical thinking, problem

FOR FURTHER INFORMATION CONTACT: Chris Stamos Rulemaking Section II (A–5–3), Air and Toxics Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105. Telephone: (415) 744–1187

SUPPLEMENTARY INFORMATION:

Background

On August 30, 1993 at 58 FR 45471–45476, EPA proposed to approve the following rules into the California SIP: SCAQMD's Rule 1145, Plastic, Rubber, and Glass Coating Operations; Rule 1128, Paper, Fabric, and Film Coating Operations; Rule 1141, Control of Volatile Organic Compound Emissions from Resin Manufacturing—and VCAPCD's Rule 74.18, Motor Vehicle and Mobile Equipment Coating Operations. Rule 1145 was adopted by the SCAQMD on January 10, 1992; Rule 1128 was adopted by the SCAQMD on February 7, 1992; Rule 1141 was adopted by the SCAQMD on April 3, 1992; and Rule 74.18 was adopted by the VCAPCD on January 28, 1992. Rule 1145 was submitted by the California Air Resources Board (CARB) to EPA on January 11, 1993; Rules 1128 and 1141 were submitted by CARB on September 14, 1992; and Rule 74.18 was submitted by CARB on June 19, 1992. These rules were submitted in response to EPA's 1988 SIP-Call and the CAA section 182(a)(2)(A) requirement that nonattainment areas fix their reasonably available control technology (RACT) rules for ozone in accordance with EPA guidance that interpreted the requirements of the pre-amendment Act. A detailed discussion of the background for each of the above rules and nonattainment areas is provided in the NPRs cited above.

EPA has evaluated all of the above rules for consistency with the requirements of the CAA and EPA regulations and EPA interpretation of these requirements as expressed in the various EPA policy guidance documents referenced in the NPRs cited above. EPA has found that the rules meet the applicable EPA requirements. A detailed discussion of the rule provisions and evaluations has been provided at 58 FR 45471–45476 and in technical support documents (TSDs) available at EPA's Region IX office (TSDs dated April 12, 1993, April 30, 1993, and April 26, 1993).

Response to Comments

A 30-day public comment period was provided in the Federal Register and EPA received no comments.

EPA Action

EPA is finalizing action to approve the above rules for inclusion into the California SIP. EPA is approving the submittal under section 110(k)(3) as meeting the requirements of section 110(a) and part D of the CAA. This approval action will incorporate these rules into the federally approved SIP. The intended effect of approving these rules is to regulate emissions of VOCs in accordance with the requirements of the CAA.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any state 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.

Regulatory Process

This action has been classified as a Table 3 action by the Regional Administrator under the procedures published in the Federal Register on January 19, 1989 (54 FR 2214–2225). EPA has submitted a request for a permanent waiver for Table 2 and Table 3 SIP revisions. The OMB has agreed to continue the waiver until such time as it rules on EPA's request. This request continues in effect under Executive Order 12866 which superseded Executive Order 12291 on September 30, 1993.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by February 18, 1994. 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.

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: November 24, 1993.

John Wise,

Acting Regional Administrator.

Title 40 of the Code of Federal Regulations, part 52, 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)(188)(i)(D), (189)(i)(A)(3), and (191) to read as follows:

§ 52.220 Identification of plan.

* * * * *

(c) * * *

(188) * * *

(i) * * *

(D) Ventura County Air Pollution Control District.

(1) Rule 74.18, adopted on January 28, 1992.

(189) * * *

(i) * * *

(A) * * *

(3) Rule 1128, adopted on February 7, 1992, and Rule 1141, adopted on April 3, 1992.

* * * * *

(191) New and amended regulations for the following APCDs were submitted on January 11, 1993, by the Governor's designee.

(i) Incorporation by reference.

(A) South Coast Air Quality Management District.

(1) Rule 1145, adopted on January 10, 1992.

* * * * *

[FR Doc. 93-30952 Filed 12-17-93; 8:45 am]

BILLING CODE 6560-50-F

40 CFR Part 63

[AD-FRL-4816-6]

National Emission Standards for Hazardous Air Pollutants for Source Categories: Perchloroethylene Dry Cleaning Facilities; Amendments

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action makes several amendments to the national emission standards for hazardous air pollutants (NESHAP) for perchloroethylene (PCE) dry cleaning facilities promulgated in the Federal Register on September 22, 1993 (58 FR 49354). This action:

(1) Corrects a typographical error regarding repair of PCE dry cleaning equipment leaks;

(2) Extends the time for reporting information to EPA; and

(3) Deletes the requirement of having reports submitted to EPA certified before a notary public.

EFFECTIVE DATE: December 20, 1993.

ADDRESSES: *Docket.* All information used in the development of this final action is contained in the preamble below. However, Docket No. A–88–11, containing the supporting information for the original NESHAP, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket Section, Waterside Mall, room M–1500, 1st floor, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. George Smith at (919) 541–1549 or Mr. Fred Porter at (919) 541–5251, Standards Development Branch, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The information presented in this preamble is organized as follows:

I. Background
II. Summary of and Rationale for Rule Changes
A. PCE Dry Cleaning Equipment Leaks
B. Extension for Initial Reporting Time
C. Deletion of Certification Before Notary Public
D. Effective Date
E. *Judicial Review*
III. Administrative Requirements
A. Paperwork Reduction Act
B. Executive Order 12866 Review
C. Regulatory Flexibility Act

I. Background

This action amends §§ 63.320 and 63.324 of subpart M of 40 CFR part 63. These sections deal with the applicability, definitions, and recordkeeping and reporting requirements for the NESHAP for PCE dry cleaning facilities. As published, the final regulation contains a typographical error and reporting requirements that the Administrator now considers unreasonable.

II. Summary of and Rationale for Rule Changes

A. PCE Dry Cleaning Equipment Leaks

The typographical error in the applicability section, § 63.320(c) is evident from the discussion in the preamble to the promulgated NESHAP. Without this correction, existing sources would only be required to find leaks, but would not have to repair them. The NESHAP has been revised to require that sources repair leaks they find.

B. Extension for Initial Reporting Time

The changes made to the recordkeeping and reporting requirements section reflect the Administrator's conclusion that the timeframe for reporting information to EPA are now unreasonable for the majority of PCE dry cleaning facilities. The dry cleaning industry is composed primarily of small businesses. As a consequence, dissemination of information concerning the NESHAP to the dry cleaning industry is proving to be more difficult and time-consuming than anticipated. More time is needed for the dry cleaning industry to become aware of the NESHAP and the information reporting requirements it includes.

The Administrator believes that relaxing the reporting dates will provide affected PCE dry cleaning facilities the additional time they need to respond to these requirements. Therefore, the reporting requirements are extended by 180 days.

The Administrator also believes that the affected PCE dry cleaning facilities need to be given time to become aware of the General Provisions, which will be promulgated in the next several months. The General Provisions are additional regulations that will affect PCE dry cleaning facilities, as they are general to all NESHAP's. The 180 day extension to the information reporting requirements provided in this notice should provide an adequate period for owners or operators of PCE dry cleaning facilities to become aware of those parts of the General Provisions that are applicable to them.

C. Deletion of Certification Before Notary Public

The deletion of the requirement that reports submitted to the Administrator or delegated State authority be certified before notary public reflects the Administrator's concern that this requirement is now unreasonable for the majority of PCE dry cleaning facilities. This requirement is apparently viewed by some dry cleaners as an indication that EPA does not trust them. This is not the case and to prevent any resentment or misunderstandings from arising, this requirement is deleted.

D. Effective Date

The EPA is publishing this rule as a final rule, and it is effective immediately upon publication. The Administrator believes that this action is supported by the "good cause" exception in the Administrative Procedures Act, which permits an agency for "good cause" to proceed directly to a final rule where issuing a proposed rule would be "impracticable, unnecessary, or contrary to the public interest" [5 U.S.C. 553(b)(B)] and for "good cause found" [5 U.S.C. 553(d)] to dispense with the general requirement that a rule be published 30 days before its effective date. The Administrator believes that "good cause" exists here to issue a final, immediately effective rule because of the nearness of the December 20, 1993 initial notification deadline specified in the promulgated NESHAP for PCE Dry Cleaning Facilities. If the changes in this rulemaking were only being proposed, then the December 20, 1993 initial notification deadline would still be in effect and this would negate the intent of the changes of this rulemaking. Furthermore, the Administrator views this action, which delays reporting but not compliance with the actual standards, as noncontroversial.

E. Judicial Review

Under section 307(b)(1) of the Act, judicial review of the actions taken by this final rule is available only by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of publication of this action. Under section 307(b)(2) of the Act, the requirements that are the subject of this final rule may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

III. Administrative Requirements

A. Paperwork Reduction Act

The information collection requirements of the previously promulgated NESHAP for PCE Dry Cleaning Facilities were submitted to and approved by the Office of Management and Budget. A copy of this Information Collection Request (ICR) document (OMB control number 2060–0234) may be obtained from Sandy Farmer, Information Policy Branch (PM–223Y); U.S. Environmental Protection Agency; 401 M Street, SW.; Washington, DC 20460 or by calling (202) 260–2740. Today's changes to the NESHAP for PCE Dry Cleaning Facilities do not affect the information collection burden estimates made previously, only the timing of the submittal of the information requested has been affected somewhat. Therefore, the ICR has not been revised.

B. Executive Order 12866 Review

This rule was classified "non-significant" under Executive Order 12866 and, therefore was not reviewed by the Office of Management and Budget.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 requires the identification of potentially adverse impacts of federal regulations upon small business entities. The Act specifically requires the completion of a Regulatory Flexibility Analysis in those instances where small business impacts are possible. Because this rulemaking imposes no adverse economic impacts, a Regulatory Flexibility Analysis has not been prepared.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small business entities.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: December 13, 1993.

Carol M. Browner,

Administrator.

Title 40, chapter I, part 63, of the Code of Federal Regulations is amended to read as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, 7412, 7414, 7416, and 7601.

Subpart M—National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

2. Section 63.320 is amended by revising paragraph (c) to read as follows:

§ 63.320 Applicability.

* * * * *

(c) Each dry cleaning system that commenced construction or reconstruction before December 9, 1991, shall comply with §§ 63.322 (c), (d), (i), (j), (k), (l), and (m), 63.323(d), and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) beginning on December 20, 1993, and shall comply with other provisions of this subpart by September 23, 1996.

* * * * *

3. Section 63.324 is amended by revising the introductory text of paragraphs (a), (b) and (c) to read as follows:

§ 63.324 Reporting and recordkeeping requirements.

(a) Each owner or operator of a dry cleaning facility shall notify the Administrator or delegated State authority in writing within 270 calendar days after September 23, 1993 (i.e., June 18, 1994) and provide the following information:

* * * * *

(b) Each owner or operator of a dry cleaning facility shall submit to the Administrator or delegated State authority by registered mail on or before the 30th day following the compliance dates specified in § 63.320 (b) or (c) or June 18, 1994, whichever is later, a notification of compliance status providing the following information and signed by a responsible official who shall certify its accuracy:

* * * * *

(c) Each owner or operator of an area source dry cleaning facility that exceeds the solvent consumption limit reported in paragraph (b) of this section shall submit to the Administrator or a delegated State authority by registered mail on or before the dates specified in § 63.320 (f) or (i), a notification of compliance status providing the following information and signed by a responsible official who shall certify its accuracy:

* * * * *

[FR Doc. 93-31001 Filed 12-17-93; 8:45 am]

BILLING CODE 6560-50-P

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40 CFR Part 86

[AMS-FRL-4781-3]

Certification Testing and Selective Enforcement Audit Testing Waivers for On-Highway Heavy-Duty Diesel Engine Smoke Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: This final rule establishes the availability of waivers from certain testing requirements associated with on-highway heavy-duty diesel engine (HDDE) smoke standards. For engines with particulate matter (PM) emissions certification levels at or below 0.10 grams per brake horsepower hour (g/bhp-hr), waivers will be available for certification smoke testing beginning with model year 1994 and for smoke testing during selective enforcement audit testing beginning with model year 1995. Beginning in model year 1997, smoke testing waivers will be available for both certification and selective enforcement audit testing for engines with PM certification levels at or below 0.25 g/bhp-hr. These waivers are being made available under section 206(a) and (b) of the Clean Air Act in order to avoid an unnecessary testing burden on heavy-duty diesel engine manufacturers.

DATES: This action will be effective February 18, 1994 unless notice is received by January 19, 1994 that adverse or critical comments will be submitted.

ADDRESSES: Interested parties may submit written comments (in duplicate, if possible) to Public Docket No. A-93-35, at: Air Docket Section, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

Materials relevant to this final rule have been placed in Docket No. A-93-35 by EPA. The docket is located at the above address in room M-1500, Waterside Mall (ground floor), and may be inspected between 8:30 a.m. and noon, and between 1:30 and 3:30 p.m. on weekdays. EPA may charge a reasonable fee for copying docket materials.

FOR FURTHER INFORMATION CONTACT: Mr. Christopher Lieske, Regulation Development and Support Division, U.S. Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan, 48105: phone (313) 668-4584.

SUPPLEMENTARY INFORMATION:

I. Background

EPA's Certification Program is a major component of the agency's regulatory program to ensure compliance with motor vehicle emission standards. Before a new heavy-duty engine may be introduced into commerce, the manufacturer must first obtain a certificate of conformity from EPA. EPA issues such certificates only after the manufacturer demonstrates that the engine will meet federal emission standards. EPA has detailed regulations governing what information must be submitted to support an application for a certificate, including provisions requiring the testing of engines. A manufacturer typically tests a single engine from each engine family and the test data is submitted to EPA showing that the engine meets all applicable emissions standards. EPA may perform confirmatory testing on that engine. If all the certification requirements are met, a certificate is issued and the new engines may be introduced into commerce.

The Selective Enforcement Audit (SEA) Program is another component in

EPA's program to ensure compliance with motor vehicle emissions standards. In this program, EPA requires manufacturers to emission test new engines selected from the production line. If production engines are found not to comply, EPA may suspend or revoke the certificate of conformity for that engine model. These two programs help to ensure that engines meet the applicable standards when sold and operated in use. A third major component of EPA's motor vehicle emissions control program involves in-use emissions testing by EPA of selected engine families. If an engine family is found not to comply in use, although the engines have been properly maintained and used, EPA may require that the manufacturer recall the engines and remedy the problems.

Under current EPA regulations for the Certification and SEA programs, heavy-duty engine manufacturers must typically submit test data obtained using the Federal Test Procedure (FTP) for all regulated pollutants, and thereby demonstrate compliance with the emissions standards. For certain emissions test data, however, the Administrator may waive the requirement that FTP test results be submitted, and instead may allow the manufacturer to demonstrate compliance with the standards on the basis of previous emissions tests, development tests, or other information. EPA has typically granted such waivers in cases where there is evidence that clearly indicates that the emissions levels of new engines are expected to be significantly below the standards.

Manufacturers typically submit a request for a waiver in writing with the application for engine certification, along with verification that the waivers are appropriate for the engine family or families at issue. Generally, the manufacturer is required to show (on the basis of previous emission tests, development tests or other information) that the engine is expected to pass the standard for which a measurement waiver is requested.

EPA currently has the regulatory authority to grant such a waiver for submission of FTP emission data on idle carbon monoxide (CO) emissions, CO emissions, or particulate matter (PM) emissions for methanol-fueled diesel certification engines. EPA may also grant such a waiver for submission of CO emissions data from petroleum-fueled diesel certification engines. (See 40 CFR 86.094–23(c)(2).) There is currently no corresponding regulatory authority for the Administrator to waive submissions of such data regarding HDDEs during SEA testing.

It is important to note that a testing waiver does not relieve the manufacturer of the responsibility to comply with the emissions standards during certification, selective enforcement audits, or in use. Testing waivers only allow a manufacturer to forego actual measurement of the specified emissions during certification or SEA testing. It is a waiver of the requirement to submit certain test data to EPA, not a waiver of compliance with the standard itself. In addition, the receipt of a waiver for one test program would not imply that testing will not be required in other testing programs to determine compliance with the standards.

II. Smoke and PM Emissions Data

Petroleum-fueled diesel engines are prone to the production of PM due to the nature of the diesel combustion process. Diesel PM is primarily carbonaceous material, hydrocarbons, and sulfate aerosols coming from unburned and partially-burned fuel and lubrication oil. The amount of visible PM, commonly referred to as smoke, is dependent on both the size and concentration of the particulates. An engine with little smoke may still have high PM levels if the particulate is relatively small in size. (Smaller PM, 10 microns or smaller, can penetrate the lungs where it may be deposited and cause adverse health effects. A draft EPA health assessment has classified PM as a probable human carcinogen.)[1] However, as PM is reduced to the very low levels required by new standards, smoke levels also tend to decrease to levels well below the smoke standards, as is discussed below.

EPA's first efforts to regulate particulate emissions from diesel engines were through smoke standards. The first smoke standards for HDDEs took effect with the 1973 model year (37 FR 24293, November 15, 1972). These standards established limits on exhaust percent opacity during acceleration (40 percent) and lugging (20 percent) modes. (Lugging is performed by using the engine dynamometer to reduce the engine speed while operating under wide open throttle and maximum horsepower conditions. This simulate a vehicle climbing a hill.) These standards were revised in 1975 and set at their present levels: 20 percent opacity during acceleration, 15 percent during lugging, and a 50 percent maximum peak opacity limit during either mode (40 FR 27576, June 30, 1975).

In 1985, the Agency promulgated a series of PM emission standards for HDDEs, based on the mass of exhaust PM collected on a filter over the heavy-duty engine FTP. The first PM standard applied to 1988 and later model year engines (50 FR 10606, March 15, 1985) and was further reduced for the 1991, 1993 (buses only), and 1994 model years. EPA recently established PM standards for HDDEs used in urban buses that are more stringent than the PM standards for other HDDEs (58 FR 15781, March 24, 1993). Table 1 shows the PM standards that apply to HDDEs used in urban buses and other HDDEs.

TABLE 1.—PARTICULATE STANDARDS FOR HEAVY-DUTY DIESEL ENGINES (G/BHP-HR)

Model year	1988	1991	1993	1994	1996
Urban bus	0.60	0.25	[1] 0.10	0.07	[2] 0.05
All others	.60	.25	.25	.10	.10

[1] This standard was also applied to other buses in the 1993 model year only.
[2] The in-use standard remains 0.07 g/bhp-hr.

The 1988 PM standard of 0.60 g/bhp-hr was not particularly stringent and therefore some engines were still certified with smoke levels relatively close to the smoke standards. To meet the 1991 and later model year PM standard of 0.25 g/bhp-hr, heavy-duty engine manufacturers generally implemented new particulate control strategies. The control strategies employed to reduce total PM emissions (e.g., improved fuel injection characteristics, reduced combustion chamber crevice volume, electronic controls, exhaust aftertreatment) also tended to reduce smoke. Because smoke is the portion of the total particulate that is visible, significantly reducing particulate levels would be expected to lead to lower smoke levels. Engines certified for the 1993 model year all had smoke levels well below the standard.[2] All HDDE smoke and PM certification data for the 1993 model year, including diesel-fueled and alternatively-fueled urban bus engines, are summarized in Table 2.

[1] "EPA Health Assessment Document for Diesel Emissions", Workshop Review Draft, July 1990, EPA/600/8–90/057A. Also see EPA "Motor Vehicle Air Toxics Study", April 1993, EPA/420–R–93–005.

[2] Memorandum from Christopher Lieske to the Docket, "Smoke and particulate Matter Emissions from Heavy-duty Diesel Engine Certification and Selective Enforcement Audit Testing," August 31, 1993, A–93–35, II-B–1.

1-13-94
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Thursday
January 13, 1994

Federal Register

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Sunshine Act Meetings

Federal Register
Vol. 59, No. 9
Thursday, January 13, 1994

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

"FEDERAL REGISTER" CITATION OF PREVIOUS ANNOUNCEMENT: 58 Fed. Reg. 69456, Thursday, December 30, 1993.

PREVIOUSLY ANNOUNCED TIME AND DATE OF MEETING: 2:00 p.m. (Eastern Time), Tuesday, January 11, 1994.

CHANGE IN THE MEETING: The Closed Session of the meeting has been cancelled.

CONTACT PERSON FOR MORE INFORMATION: Frances M. Hart, Executive Officer on (202) 663-4070.

Dated: January 11, 1994.

Frances M. Hart,

Executive Officer, Executive Secretariat.

[FR Doc. 94-1050 Filed 1-11-94; 2:55 pm]

BILLING CODE 6570-06-M

NATIONAL CREDIT UNION ADMINISTRATION

TIME AND DATE: 9:30 a.m., Wednesday, January 19, 1994.

PLACE: Board Room, 7th Floor, Room 7047, 1775 Duke Street, Alexandria, Virginia 22314-3428.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Approval of Minutes of Previous Closed Meeting.
2. Administrative Action under Section 206 of the Federal Credit Union Act. Closed pursuant to exemptions (5), (7), (8), and (10).
3. Administrative Action under Section 205 and 208 of the Federal Credit Union Act. Closed pursuant to exemptions (8), (9)(A)(ii), and (9)(B).
4. Requests by Corporate Federal Credit Unions for Field of Membership Amendments. Closed pursuant to exemption (8).
5. Requests by Corporate Federal Credit Unions for Waivers from Part 704, NCUA's Rules and Regulations. Closed pursuant to exemption (8).

FOR MORE INFORMATION CONTACT: Becky Baker, Secretary of the Board, Telephone (703) 518-6304.

Becky Baker,

Secretary of the Board.

[FR Doc. 94-1036 Filed 1-11-94; 2:22 pm]

BILLING CODE 7535-01-M

"FEDERAL REGISTER" CITATION OF PREVIOUS ANNOUNCEMENT: [58 FR 648 January 5, 1994].

STATUS: Closed meeting.

PLACE: 450 Fifth Street, NW., Washington, DC.

DATE PREVIOUSLY ANNOUNCED: Thursday, December 30, 1993.

CHANGE IN THE MEETING: Deletion.

The following item was not considered at a closed meeting on Friday, January 7, 1994, at 10 a.m.:

Opinion.

Commissioner Beese, as duty officer, determined that Commission business required the above change and that no earlier notice thereof was possible.

At times, changes in Commission priorities require alterations in the scheduling of meeting items. For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact: Brian Lane at (202) 272-2400.

Dated: January 7, 1994.

Jonathan G. Katz,

Secretary.

[FR Doc. 94-1009 Filed 1-11-94; 1:12 pm]

BILLING CODE 8010-01-M

SECURITIES AND EXCHANGE COMMISSION

"FEDERAL REGISTER" CITATION OF PREVIOUS ANNOUNCEMENT: [59 FR 1415, January 10, 1994].

STATUS: Open meeting.

PLACE: 450 Fifth Street, NW., Washington, DC.

DATE PREVIOUSLY ANNOUNCED: Thursday, January 6, 1994.

CHANGE IN THE MEETING: Time Change.

The open meeting scheduled for Wednesday, January 12, 1994 at 10 a.m., has been rescheduled for Wednesday, January 12, 1994 at 11 a.m.

Commissioner Beese, as duty officer, determined that Commission business required the above change and that no earlier notice thereof was possible.

At times, changes in Commission priorities require alterations in the scheduling of meeting items. For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact: Blair Thomas at (202) 272-2300.

Dated: January 11, 1994.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 94-1064 Filed 1-11-94; 3:53 pm]

BILLING CODE 8010-01-M

Corrections

Federal Register
Vol. 59, No. 9
Thursday, January 13, 1994

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.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD-FRL-4793-6]

RIN 2060-AD67

National Emission Standards for Hazardous Air Pollutants for Source Categories and for Coke Oven Batteries

Correction

In rule document 93-26162 beginning on page 57898 in the issue of Wednesday, October 27, 1993, make the following corrections:

Appendix A to Subpart L-[Corrected]

1. On page 57924, in the second column, in Appendix A to subpart L, in entry No. 13, in the column designated "Battery", remove "8".

Appendix A to part 63-[Corrected]

2. On page 57926, in the second column, in Appendix A to part 63, in 3.9, in the equation, "L" should read ". . .".

3. On page 57928, in the second column, in Appendix A to part 63, in 5.6.5.2, in (Eq. 303-10), "+ K" should read "+ . . .".

4. On page 57929, in the second column, in Appendix A to part 63, in 5.6.6.2, in (Eq. 303-12), remove "K".

BILLING CODE 1505-01-D

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 799

[OPPTS-42111C; FRL 4047-2]

RIN 2070-AB94

Office of Water Chemicals; Final Test Rule

Correction

In rule document 93-27610 beginning on page 59667 in the issue of Wednesday, November 10, 1993, make the following correction:

§ 799.5075 [Corrected]

On page 59682, in the second column, in § 799.5075(d), in the second line, "December 24, 1993" should "December 27, 1993".

BILLING CODE 1505-01-D

DEPARTMENT OF JUSTICE

Immigration and Naturalization Service

8 CFR Part 212

[INS No. 1611-93]

RIN 1115-AB72

Temporary Entry of Business Persons Under the North American Free Trade Agreement (NAFTA)

Correction

In rule document 93-32008 beginning on page 69205 in the issue of Thursday, December 30, 1993, make the following corrections:

1. On page 69210, in the second column, in amendment 5. to § 212.1, in the first line, "(1)" should read "(l)".

§ 212.1 [Corrected]

2. On the same page, in the same column, in § 212.1, in the first line "(1)" should read "(l)".

BILLING CODE 1505-01-D

DEPARTMENT OF THE TREASURY

Customs Service

19 CFR Part 175

[T.D. 94-5]

Decision Following Petition by Domestic Interested Party—Location of Country of Origin Marking for Frozen Produce Packages

Correction

In rule document 93-31855 beginning on page 68743 in the issue of Wednesday, December 29, 1993, make the following correction:

On page 68743, in the first column, in EFFECTIVE DATE:, in the sixth and seventh lines, "February 11, 1993." should read "February 11, 1994".

BILLING CODE 1505-01-D

time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

6. The authority citation for part 61 continues to read as follows:

Authority: Sections 101, 112, 114, 116, and 301 of the Clean Air Act as amended (42 U.S.C. 7401, 7412, 7414, 7416, 7601).

7. Section 61.01 is amended by adding paragraph (d) to read as follows:

§ 61.01 List of pollutants and applicability of part 61.

* * * * *

(d) In addition to complying with the provisions of this part, the owner or operator of a stationary source subject to a standard in this part may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see part 70 of this chapter.

* * * * *

8. Section 61.02 is amended by adding in alphabetical order the definitions "Approved permit program," "Issuance," "Part 70 permit," "Permit program," "Permitting authority," "State," and "Title V permit" to read as follows:

§ 61.02 Definitions.

* * * * *

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

* * * * *

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

* * * * *

Part 70 permit means any permit issued, renewed, or revised pursuant to part 70 of this chapter.

* * * * *

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

* * * * *

Permitting authority means:

(1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement:

(1) The provisions of this part; and/or

(2) The permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

* * * * *

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by

a State permitting authority is called a part 70 permit in this part.

* * * * *

9. Section 61.10 is amended by adding paragraphs (e) through (j) to read as follows:

§ 61.10 Source reporting and waiver request.

* * * * *

(e) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(f) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(g) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (j) of this section.

(h) If an owner or operator of a stationary source in a State with delegated authority is required to submit reports under this part to the State, and if the State has an established timeline for the submission of reports that is consistent with the reporting frequency(ies) specified for such source under this part, the owner or operator may change the dates by which reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the source is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (j) of this section.

(i) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 60, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the source is required to be in compliance with the applicable subpart in this part, or 1 year after the source is required to be in compliance with the applicable part 60 or part 63 standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (j) of this section.

(j)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (j)(2) and (j)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (j)(2) and (j)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

10. The authority citation for part 63 continues to read as follows:

Authority: Sections 101, 112, 114, 116, and 301 of the Clean Air Act as amended by Pub. L. 101-549 (42 U.S.C. 7401, 7412, 7414, 7416, 7601).

11. Part 63 is amended by adding subpart A to read as follows:

Subpart A—General Provisions

Sec.
- 63.1 Applicability.
- 63.2 Definitions.
- 63.3 Units and abbreviations.
- 63.4 Prohibited activities and circumvention.
- 63.5 Construction and reconstruction.
- 63.6 Compliance with standards and maintenance requirements.
- 63.7 Performance testing requirements.
- 63.8 Monitoring requirements.
- 63.9 Notification requirements.
- 63.10 Recordkeeping and reporting requirements.
- 63.11 Control device requirements.
- 63.12 State authority and delegations.
- 63.13 Addresses of State air pollution control agencies and EPA Regional Offices.
- 63.14 Incorporations by reference.
- 63.15 Availability of information and confidentiality.

Subpart A—General Provisions

§ 63.1 Applicability.

(a) *General.* (1) Terms used throughout this part are defined in § 63.2 or in the Clean Air Act (Act) as amended in 1990, except that individual subparts of this part may include specific definitions in addition to or that supersede definitions in § 63.2.

(2) This part contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more

hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR part 61. The NESHAP in part 61 promulgated by signature of the Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to this part.

(3) No emission standard or other requirement established under this part shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (including those requirements in part 60 of this chapter), or a standard issued under State authority.

(4) The provisions of this subpart (i.e., subpart A of this part) apply to owners or operators who are subject to subsequent subparts of this part, except when otherwise specified in a particular subpart or in a relevant standard. The general provisions in subpart A eliminate the repetition of requirements applicable to all owners or operators affected by this part. The general provisions in subpart A do not apply to regulations developed pursuant to section 112(r) of the amended Act, unless otherwise specified in those regulations.

(5) [Reserved]

(6) To obtain the most current list of categories of sources to be regulated under section 112 of the Act, or to obtain the most recent regulation promulgation schedule established pursuant to section 112(e) of the Act, contact the Office of the Director, Emission Standards Division, Office of Air Quality Planning and Standards, U.S. EPA (MD–13), Research Triangle Park, North Carolina 27711.

(7) Subpart D of this part contains regulations that address procedures for an owner or operator to obtain an extension of compliance with a relevant standard through an early reduction of emissions of hazardous air pollutants pursuant to section 112(i)(5) of the Act.

(8) Subpart E of this part contains regulations that provide for the establishment of procedures consistent with section 112(l) of the Act for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in § 63.9(i).

(13) Special provisions set forth under an applicable subpart of this part or in a relevant standard established under this part shall supersede any conflicting provisions of this subpart.

(14) Any standards, limitations, prohibitions, or other federally enforceable requirements established pursuant to procedural regulations in this part [including, but not limited to, equivalent emission limitations established pursuant to section 112(g) of the Act] shall have the force and effect of requirements promulgated in this part and shall be subject to the provisions of this subpart, except when explicitly specified otherwise.

(b) *Initial applicability determination for this part.* (1) The provisions of this part apply to the owner or operator of any stationary source that—

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) In addition to complying with the provisions of this part, the owner or operator of any such source may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to title V of the Act (42 U.S.C. 7661). For more information about obtaining an operating permit, see part 70 of this chapter.

(3) An owner or operator of a stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants who determines that the source is not subject to a relevant standard or other requirement established under this part, shall keep a record of the applicability determination as specified in § 63.10(b)(3) of this subpart.

(c) *Applicability of this part after a relevant standard has been set under this part.* (1) If a relevant standard has been established under this part, the owner or operator of an affected source shall comply with the provisions of this subpart and the provisions of that standard, except as specified otherwise in this subpart or that standard.

(2) If a relevant standard has been established under this part, the owner or operator of an affected source may be required to obtain a title V permit from the permitting authority in the State in which the source is located. Emission standards promulgated in this part for area sources will specify whether—

(i) States will have the option to exclude area sources affected by that standard from the requirement to obtain a title V permit (i.e., the standard will exempt the category of area sources altogether from the permitting requirement);

(ii) States will have the option to defer permitting of area sources in that category until the Administrator takes rulemaking action to determine applicability of the permitting requirements; or

(iii) Area sources affected by that emission standard are immediately subject to the requirement to apply for and obtain a title V permit in all States.

If a standard fails to specify what the permitting requirements will be for area sources affected by that standard, then area sources that are subject to the standard will be subject to the requirement to obtain a title V permit without deferral. If the owner or operator is required to obtain a title V permit, he or she shall apply for such permit in accordance with part 70 of this chapter and applicable State regulations, or in accordance with the regulations contained in this chapter to implement the Federal title V permit program (42 U.S.C. 7661), whichever regulations are applicable.

(3) [Reserved]

(4) If the owner or operator of an existing source obtains an extension of compliance for such source in accordance with the provisions of subpart D of this part, the owner or operator shall comply with all requirements of this subpart except those requirements that are specifically overridden in the extension of compliance for that source.

(5) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of this subpart.

(d) [Reserved]

(e) *Applicability of permit program before a relevant standard has been set under this part.* After the effective date of an approved permit program in the State in which a stationary source is (or would be) located, the owner or operator of such source may be required to obtain a title V permit from the permitting authority in that State (or revise such a permit if one has already been issued to the source) before a relevant standard is established under this part. If the owner or operator is required to obtain (or revise) a title V permit, he/she shall apply to obtain (or revise) such permit in accordance with the regulations contained in part 70 of this chapter and applicable State regulations, or the regulations codified in this chapter to implement the Federal title V permit program (42 U.S.C. 7661), whichever regulations are applicable.

§ 63.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Pub. L. 101–549, 104 Stat. 2399).

Actual emissions is defined in subpart D of this part for the purpose of granting a compliance extension for an early reduction of hazardous air pollutants.

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Affected source, for the purposes of this part, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to section 112 of the Act. Each relevant standard will define the "affected source" for the purposes of that standard. The term "affected source," as used in this part, is separate and distinct from any other use of that term in EPA regulations such as those implementing title IV of the Act. Sources regulated under part 60 or part 61 of this chapter are not affected sources for the purposes of part 63.

Alternative emission limitation means conditions established pursuant to sections 112(i)(5) or 112(i)(6) of the Act by the Administrator or by a State with an approved permit program.

Alternative emission standard means an alternative means of emission limitation that, after notice and opportunity for public comment, has been demonstrated by an owner or operator to the Administrator's satisfaction to achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under a relevant design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a test method in this chapter and that has been demonstrated to the Administrator's satisfaction, using Method 301 in Appendix A of this part, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this part.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to title V of the Act (42 U.S.C. 7661).

Area source means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

Commenced means, with respect to construction or reconstruction of a stationary source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Compliance date means the date by which an affected source is required to be in compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established by the Administrator (or a State with an approved permit program) pursuant to section 112 of the Act.

Compliance plan means a plan that contains all of the following:

(1) A description of the compliance status of the affected source with respect to all applicable requirements established under this part;

(2) A description as follows: (i) For applicable requirements for which the source is in compliance, a statement that the source will continue to comply with such requirements;

(ii) For applicable requirements that the source is required to comply with by a future date, a statement that the source will meet such requirements on a timely basis;

(iii) For applicable requirements for which the source is not in compliance, a narrative description of how the source will achieve compliance with such requirements on a timely basis;

(3) A compliance schedule, as defined in this section; and

(4) A schedule for the submission of certified progress reports no less frequently than every 6 months for affected sources required to have a schedule of compliance to remedy a violation.

Compliance schedule means: (1) In the case of an affected source that is in compliance with all applicable requirements established under this part, a statement that the source will continue to comply with such requirements; or

(2) In the case of an affected source that is required to comply with applicable requirements by a future date, a statement that the source will meet such requirements on a timely basis and, if required by an applicable requirement, a detailed schedule of the dates by which each step toward compliance will be reached; or

(3) In the case of an affected source not in compliance with all applicable requirements established under this part, a schedule of remedial measures, including an enforceable sequence of actions or operations with milestones and a schedule for the submission of certified progress reports, where applicable, leading to compliance with a relevant standard, limitation, prohibition, or any federally enforceable requirement established pursuant to section 112 of the Act for which the affected source is not in compliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

Construction means the on-site fabrication, erection, or installation of an affected source.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous monitoring system (CMS) is a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.

Continuous opacity monitoring system (COMS) means a continuous monitoring system that measures the opacity of emissions.

Continuous parameter monitoring system means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Effective date means: (1) With regard to an emission standard established under this part, the date of promulgation in the Federal Register of such standard; or

(2) With regard to an alternative emission limitation or equivalent emission limitation determined by the Administrator (or a State with an approved permit program), the date that the alternative emission limitation or equivalent emission limitation becomes effective according to the provisions of this part. The effective date of a permit program established under title V of the Act (42 U.S.C. 7661) is determined according to the regulations in this chapter establishing such programs.

Emission standard means a national standard, limitation, prohibition, or other regulation promulgated in a subpart of this part pursuant to sections 112(d), 112(h), or 112(f) of the Act.

Emissions averaging is a way to comply with the emission limitations specified in a relevant standard, whereby an affected source, if allowed under a subpart of this part, may create emission credits by reducing emissions from specific points to a level below that required by the relevant standard, and those credits are used to offset emissions from points that are not controlled to the level required by the relevant standard.

EPA means the United States Environmental Protection Agency.

Equivalent emission limitation means the maximum achievable control technology emission limitation (MACT emission limitation) for hazardous air pollutants that the Administrator (or a State with an approved permit program) determines on a case-by-case basis, pursuant to section 112(g) or section 112(j) of the Act, to be equivalent to the emission standard that would apply to an affected source if such standard had been promulgated by the Administrator under this part pursuant to section 112(d) or section 112(h) of the Act.

Excess emissions and continuous monitoring system performance report is a report that must be submitted periodically by an affected source in order to provide data on its compliance with relevant emission limits, operating parameters, and the performance of its continuous parameter monitoring systems.

Existing source means any affected source that is not a new source.

Federally enforceable means all limitations and conditions that are enforceable by the Administrator and citizens under the Act or that are enforceable under other statutes administered by the Administrator. Examples of federally enforceable limitations and conditions include, but are not limited to:

(1) Emission standards, alternative emission standards, alternative emission limitations, and equivalent emission limitations established pursuant to section 112 of the Act as amended in 1990;

(2) New source performance standards established pursuant to section 111 of the Act, and emission standards established pursuant to section 112 of the Act before it was amended in 1990;

(3) All terms and conditions in a title V permit, including any provisions that limit a source's potential to emit, unless expressly designated as not federally enforceable;

(4) Limitations and conditions that are part of an approved State Implementation Plan (SIP) or a Federal Implementation Plan (FIP);

(5) Limitations and conditions that are part of a Federal construction permit issued under 40 CFR 52.21 or any construction permit issued under regulations approved by the EPA in accordance with 40 CFR part 51;

(6) Limitations and conditions that are part of an operating permit issued pursuant to a program approved by the EPA into a SIP as meeting the EPA's minimum criteria for Federal enforceability, including adequate notice and opportunity for EPA and public comment prior to issuance of the final permit and practicable enforceability;

(7) Limitations and conditions in a State rule or program that has been approved by the EPA under subpart E of this part for the purposes of implementing and enforcing section 112; and

(8) Individual consent agreements that the EPA has legal authority to create.

Fixed capital cost means the capital needed to provide all the depreciable components of an existing source.

Fugitive emissions means those emissions from a stationary source that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Under section 112 of the Act, all fugitive emissions are to be considered in determining whether a stationary source is a major source.

Hazardous air pollutant means any air pollutant listed in or pursuant to section 112(b) of the Act.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a title V permit occurs immediately after the EPA takes final action on the final permit.

Lesser quantity means a quantity of a hazardous air pollutant that is or may be emitted by a stationary source that the Administrator establishes in order to define a major source under an applicable subpart of this part.

Major source means any stationary source or group of stationary sources located within a contiguous area and

under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part.

One-hour period, unless otherwise defined in an applicable subpart, means any 60-minute period commencing on the hour.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. For continuous opacity monitoring systems, opacity means the fraction of incident light that is attenuated by an optical medium.

Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source.

Part 70 permit means any permit issued, renewed, or revised pursuant to part 70 of this chapter.

Performance audit means a procedure to analyze blind samples, the content of which is known by the Administrator, simultaneously with the analysis of performance test samples in order to provide a measure of test data quality.

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Permit modification means a change to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S C. 7661).

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permit revision means any permit modification or administrative permit amendment to a title V permit as defined in regulations codified in this chapter to implement title V of the Act (42 U.S.C. 7661).

Permitting authority means: (1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or

(2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

Reconstruction means the replacement of components of an affected or a previously unaffected stationary source to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established by the Administrator (or a State) pursuant to section 112 of the Act. Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

Regulation promulgation schedule means the schedule for the promulgation of emission standards under this part, established by the Administrator pursuant to section 112(e) of the Act and published in the Federal Register.

Relevant standard means:

(1) An emission standard;

(2) An alternative emission standard;

(3) An alternative emission limitation; or

(4) An equivalent emission limitation established pursuant to section 112 of the Act that applies to the stationary source, the group of stationary sources, or the portion of a stationary source regulated by such standard or limitation.

A relevant standard may include or consist of a design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that the Administrator (or a State) establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to section 112 of the Act includes subpart A of this part and all applicable appendices of this part or of other parts of this chapter that are referenced in that standard.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Administrator.

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the EPA).

(4) For affected sources (as defined in this part) applying for or subject to a title V permit: "responsible official" shall have the same meaning as defined in part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever is applicable.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this part.

Shutdown means the cessation of operation of an affected source for any purpose.

Six-minute period means, with respect to opacity determinations, any one of the 10 equal parts of a 1-hour period.

Standard conditions means a temperature of 293 K (68° F) and a pressure of 101.3 kilopascals (29.92 in. Hg).

Startup means the setting in operation of an affected source for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement: (1) The provisions of this part and/or (2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Test method means the validated procedure for sampling, preparing, and analyzing for an air pollutant specified in a relevant standard as the performance test procedure. The test method may include methods described in an appendix of this chapter, test methods incorporated by reference in this part, or methods validated for an application through procedures in Method 301 of Appendix A of this part.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Visible emission means the observation of an emission of opacity or optical density above the threshold of vision.

§ 63.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) *System International (SI) units of measure:*

A = ampere
g = gram
Hz = hertz
J = joule
°K = degree Kelvin
kg = kilogram
l = liter
m = meter
m^3 = cubic meter
mg = milligram = 10^{-3} gram
ml = milliliter = 10^{-3} liter
mm = millimeter = 10^{-3} meter
Mg = megagram = 10^6 gram = metric ton
MJ = megajoule
mol = mole
N = newton
ng = nanogram = 10^{-9} gram
nm = nanometer = 10^{-9} meter
Pa = pascal
s = second
V = volt
W = watt
Ω = ohm
μg = microgram = 10^{-6} gram
μl = microliter = 10^{-6} liter

(b) *Other units of measure:*

Btu = British thermal unit
°C = degree Celsius (centigrade)
cal = calorie
cfm = cubic feet per minute
cc = cubic centimeter
cu ft = cubic feet
d = day
dcf = dry cubic feet
dcm = dry cubic meter
dscf = dry cubic feet at standard conditions
dscm = dry cubic meter at standard conditions
eq = equivalent
°F = degree Fahrenheit
ft = feet
ft^2 = square feet
ft^3 = cubic feet
gal = gallon
gr = grain
g-eq = gram equivalent
g-mole = gram mole
hr = hour
in. = inch
in. H_2O = inches of water
K = 1,000
kcal = kilocalorie
lb = pound
lpm = liter per minute
meq = milliequivalent
min = minute
MW = molecular weight
oz = ounces
ppb = parts per billion
ppbw = parts per billion by weight
ppbv = parts per billion by volume
ppm = parts per million
ppmw = parts per million by weight
ppmv = parts per million by volume
psia = pounds per square inch absolute
psig = pounds per square inch gage
°R = degree Rankine
scf = cubic feet at standard conditions
scfh = cubic feet at standard conditions per hour
scm = cubic meter at standard conditions
sec = second
sq ft = square feet
std = at standard conditions
v/v = volume per volume
yd^2 = square yards
yr = year

(c) *Miscellaneous:*

act = actual
avg = average
I.D. = inside diameter
M = molar
N = normal
O.D. = outside diameter
% = percent

§ 63.4 Prohibited activities and circumvention.

(a) *Prohibited activities.* (1) No owner or operator subject to the provisions of this part shall operate any affected source in violation of the requirements of this part except under—

(i) An extension of compliance granted by the Administrator under this part; or

(ii) An extension of compliance granted under this part by a State with an approved permit program; or

(iii) An exemption from compliance granted by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of this part shall fail to keep records, notify, report, or revise reports as required under this part.

(3) After the effective date of an approved permit program in a State, no owner or operator of an affected source in that State who is required under this part to obtain a title V permit shall operate such source except in compliance with the provisions of this part and the applicable requirements of the permit program in that State.

(4) [Reserved]

(5) An owner or operator of an affected source who is subject to an emission standard promulgated under this part shall comply with the requirements of that standard by the date(s) established in the applicable subpart(s) of this part (including this subpart) regardless of whether—

(i) A title V permit has been issued to that source; or

(ii) If a title V permit has been issued to that source, whether such permit has been revised or modified to incorporate the emission standard.

(b) *Circumvention.* No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to—

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(3) The fragmentation of an operation such that the operation avoids regulation by a relevant standard.

(c) *Severability.* Notwithstanding any requirement incorporated into a title V

permit obtained by an owner or operator subject to the provisions of this part, the provisions of this part are federally enforceable.

§ 63.5 Construction and reconstruction.

(a) *Applicability.* (1) This section implements the preconstruction review requirements of section 112(i)(1) for sources subject to a relevant emission standard that has been promulgated in this part. In addition, this section includes other requirements for constructed and reconstructed stationary sources that are or become subject to a relevant promulgated emission standard.

(2) After the effective date of a relevant standard promulgated under this part, the requirements in this section apply to owners or operators who construct a new source or reconstruct a source after the proposal date of that standard. New or reconstructed sources that start up before the standard's effective date are not subject to the preconstruction review requirements specified in paragraphs (b)(3), (d), and (e) of this section.

(b) *Requirements for existing, newly constructed, and reconstructed sources.* (1) Upon construction an affected source is subject to relevant standards for new sources, including compliance dates. Upon reconstruction, an affected source is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of hazardous air pollutants from that source.

(2) [Reserved]

(3) After the effective date of any relevant standard promulgated by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, no person may construct a new major affected source or reconstruct a major affected source subject to such standard, or reconstruct a major source such that the source becomes a major affected source subject to the standard, without obtaining written approval, in advance, from the Administrator in accordance with the procedures specified in paragraphs (d) and (e) of this section.

(4) After the effective date of any relevant standard promulgated by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, no person may construct a new affected source or reconstruct an affected source subject to such standard, or reconstruct a source such that the source becomes an affected source subject to the standard, without notifying the Administrator of the intended construction or reconstruction. The notification shall be submitted in accordance with the procedures in § 63.9(b) and shall include all the information required for an application for approval of construction or reconstruction as specified in paragraph (d) of this section. For major sources, the application for approval of construction or reconstruction may be used to fulfill the notification requirements of this paragraph.

(5) After the effective date of any relevant standard promulgated by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is located, no person may operate such source without complying with the provisions of this subpart and the relevant standard unless that person has received an extension of compliance or an exemption from compliance under § 63.6(i) or § 63.6(j) of this subpart.

(6) After the effective date of any relevant standard promulgated by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is located, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard shall be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source. If a new affected source is added to the facility, the new affected source shall be subject to all the provisions of the relevant standard that are established for new sources including compliance dates.

(c) [Reserved]

(d) *Application for approval of construction or reconstruction.* The provisions of this paragraph implement section 112(i)(1) of the Act.

(1) *General application requirements.* (i) An owner or operator who is subject to the requirements of paragraph (b)(3) of this section shall submit to the Administrator an application for approval of the construction of a new major affected source, the reconstruction of a major affected source, or the reconstruction of a major source such that the source becomes a major affected source subject to the standard. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date of the relevant standard) if the construction or reconstruction commences after the effective date of a relevant standard promulgated in this part. The application shall be submitted as soon as practicable before startup but no later than 60 days after the effective date of a relevant standard promulgated in this part if the construction or reconstruction had commenced and initial startup had not occurred before the standard's effective date. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements of § 63.9(b)(5) of this subpart. The owner or operator may submit the application for approval well in advance of the date construction or reconstruction is planned to commence in order to ensure a timely review by the Administrator and that the planned commencement date will not be delayed.

(ii) A separate application shall be submitted for each construction or reconstruction. Each application for approval of construction or reconstruction shall include at a minimum:

(A) The applicant's name and address;

(B) A notification of intention to construct a new major affected source or make any physical or operational change to a major affected source that may meet or has been determined to meet the criteria for a reconstruction, as defined in § 63.2;

(C) The address (i.e., physical location) or proposed address of the source;

(D) An identification of the relevant standard that is the basis of the application;

(E) The expected commencement date of the construction or reconstruction;

(F) The expected completion date of the construction or reconstruction;

(G) The anticipated date of (initial) startup of the source;

(H) The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in the relevant standard, or if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source reported in units and averaging times specified in the relevant standard. The owner or operator may submit percent reduction information if a relevant standard is established in terms of percent reduction. However, operating parameters, such as flow rate, shall be included in the submission to the extent that they demonstrate performance and compliance; and

(I) [Reserved]

(f) Other information as specified in paragraphs (d)(2) and (d)(3) of this section.

(iii) An owner or operator who submits estimates or preliminary information in place of the actual emissions data and analysis required in paragraphs (d)(1)(ii)(H) and (d)(2) of this section shall submit the actual, measured emissions data and other correct information as soon as available but no later than with the notification of compliance status required in § 63.9(h) [see § 63.9(h)(5)].

(2) *Application for approval of construction.* Each application for approval of construction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section, technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including an identification of each point of emission for each hazardous air pollutant that is emitted (or could be emitted) and a description of the planned air pollution control system (equipment or method) for each emission point. The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations. An owner or operator who submits approximations of control efficiencies under this subparagraph shall submit the actual control efficiencies as specified in paragraph (d)(1)(iii) of this section.

(3) *Application for approval of reconstruction.* Each application for approval of reconstruction shall include, in addition to the information required in paragraph (d)(1)(ii) of this section—

(i) A brief description of the affected source and the components that are to be replaced;

(ii) A description of present and proposed emission control systems (i.e., equipment or methods). The description of the equipment to be used for the control of emissions shall include each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device. The description of the method to be used for the control of emissions shall include an estimated control efficiency (percent) for that method. Such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

(iii) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source;

(iv) The estimated life of the affected source after the replacements; and

(v) A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Administrator's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

(vi) If in the application for approval of reconstruction the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements, the owner or operator need not submit the information required in subparagraphs (d)(3) (iii) through (v) of this section, above.

(4) *Additional information.* The Administrator may request additional relevant information after the submittal of an application for approval of construction or reconstruction.

(e) *Approval of construction or reconstruction.* (1)(i) If the Administrator determines that, if properly constructed, or reconstructed, and operated, a new or existing source for which an application under paragraph (d) of this section was submitted will not cause emissions in violation of the relevant standard(s) and any other federally enforceable requirements, the Administrator will approve the construction or reconstruction.

(ii) In addition, in the case of reconstruction, the Administrator's determination under this paragraph will be based on:

(A) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new source;

(B) The estimated life of the source after the replacements compared to the life of a comparable entirely new source;

(C) The extent to which the components being replaced cause or contribute to the emissions from the source; and

(D) Any economic or technical limitations on compliance with relevant standards that are inherent in the proposed replacements.

(2)(i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of construction or reconstruction within 60 calendar days after receipt of sufficient information to evaluate an application submitted under paragraph (d) of this section. The 60-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(3) Before denying any application for approval of construction or reconstruction, the Administrator will notify the applicant of the Administrator's intention to issue the denial together with—

(i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator to enable further action on the application.

(4) A final determination to deny any application for approval will be in writing and will specify the grounds on which the denial is based. The final determination will be made within 60 calendar days of presentation of additional information or arguments (if the application is complete), or within 60 calendar days after the final date specified for presentation if no presentation is made.

(5) Neither the submission of an application for approval nor the Administrator's approval of construction or reconstruction shall—

(i) Relieve an owner or operator of legal responsibility for compliance with

any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(ii) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(f) *Approval of construction or reconstruction based on prior State preconstruction review.* (1) The Administrator may approve an application for construction or reconstruction specified in paragraphs (b)(3) and (d) of this section if the owner or operator of a new or reconstructed source who is subject to such requirement demonstrates to the Administrator's satisfaction that the following conditions have been (or will be) met:

(i) The owner or operator of the new or reconstructed source has undergone a preconstruction review and approval process in the State in which the source is (or would be) located before the promulgation date of the relevant standard and has received a federally enforceable construction permit that contains a finding that the source will meet the relevant emission standard as proposed, if the source is properly built and operated;

(ii) In making its finding, the State has considered factors substantially equivalent to those specified in paragraph (e)(1) of this section; and either

(iii) The promulgated standard is no more stringent than the proposed standard in any relevant aspect that would affect the Administrator's decision to approve or disapprove an application for approval of construction or reconstruction under this section; or

(iv) The promulgated standard is more stringent than the proposed standard but the owner or operator will comply with the standard as proposed during the 3-year period immediately following the effective date of the standard as allowed for in § 63.6(b)(3) of this subpart.

(2) The owner or operator shall submit to the Administrator the request for approval of construction or reconstruction under this paragraph no later than the application deadline specified in paragraph (d)(1) of this section [see also § 63.9(b)(2) of this subpart]. The owner or operator shall include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in paragraph (e) of this section. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction under this paragraph.

§ 63.6 Compliance with standards and maintenance requirements.

(a) *Applicability.* (1) The requirements in this section apply to owners or operators of affected sources for which any relevant standard has been established pursuant to section 112 of the Act unless—

(i) The Administrator (or a State with an approved permit program) has granted an extension of compliance consistent with paragraph (i) of this section; or

(ii) The President has granted an exemption from compliance with any relevant standard in accordance with section 112(i)(4) of the Act.

(2) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source, such source shall be subject to the relevant emission standard or other requirement.

(b) *Compliance dates for new and reconstructed sources.* (1) Except as specified in paragraphs (b)(3) and (b)(4) of this section, the owner or operator of a new or reconstructed source that has an initial startup before the effective date of a relevant standard established under this part pursuant to sections 112(d), 112(f), or 112(h) of the Act shall comply with such standard not later than the standard's effective date.

(2) Except as specified in paragraphs (b)(3) and (b)(4) of this section, the owner or operator of a new or reconstructed source that has an initial startup after the effective date of a relevant standard established under this part pursuant to sections 112(d), 112(f), or 112(h) of the Act shall comply with such standard upon startup of the source.

(3) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under this part pursuant to sections 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date 3 years after the effective date if:

(i) The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; and

(ii) The owner or operator complies with the standard as proposed during the 3-year period immediately after the effective date.

(4) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of a relevant standard established pursuant to section 112(f) shall comply with the emission standard under section 112(f) not later than the date 10 years after the date construction or reconstruction is commenced, except that, if the section 112(f) standard is promulgated more than 10 years after construction or reconstruction is commenced, the owner or operator shall comply with the standard as provided in paragraphs (b)(1) and (b)(2) of this section.

(5) The owner or operator of a new source that is subject to the compliance requirements of paragraph (b)(3) or paragraph (b)(4) of this section shall notify the Administrator in accordance with § 63.9(d) of this subpart.

(6) [Reserved]

(7) After the effective date of an emission standard promulgated under this part, the owner or operator of an unaffected new area source (i.e., an area source for which construction or reconstruction was commenced after the proposal date of the standard) that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source that is subject to the emission standard, shall comply with the relevant emission standard immediately upon becoming a major source. This compliance date shall apply to new area sources that become affected major sources regardless of whether the new area source previously was affected by that standard. The new affected major source shall comply with all requirements of that standard that affect new sources.

(c) *Compliance dates for existing sources.* (1) After the effective date of a relevant standard established under this part pursuant to section 112(d) or 112(h) of the Act, the owner or operator of an existing source shall comply with such standard by the compliance date established by the Administrator in the applicable subpart(s) of this part. Except as otherwise provided for in section 112 of the Act, in no case will the compliance date established for an existing source in an applicable subpart of this part exceed 3 years after the effective date of such standard.

(2) After the effective date of a relevant standard established under this part pursuant to section 112(f) of the Act, the owner or operator of an existing source shall comply with such standard

not later than 90 days after the standard's effective date unless the Administrator has granted an extension to the source under paragraph (i)(4)(ii) of this section.

(3)–(4) [Reserved]

(5) After the effective date of an emission standard promulgated under this part, the owner or operator of an unaffected existing area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source that is subject to the emission standard shall comply by the date specified in the standard for existing area sources that become major sources. If no such compliance date is specified in the standard, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in that standard for other existing sources. This compliance period shall apply to existing area sources that become affected major sources regardless of whether the existing area source previously was affected by that standard. Notwithstanding the previous two sentences, however, if the existing area source becomes a major source by the addition of a new affected source or by reconstructing, the portion of the existing facility that is a new affected source or a reconstructed source shall comply with all requirements of that standard that affect new sources, including the compliance date for new sources.

(d) [Reserved]

(e) *Operation and maintenance requirements.* (1)(i) At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

(ii) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures [including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section], review of operation and maintenance records, and inspection of the source.

(3) *Startup, Shutdown, and Malfunction Plan.* (i) The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard. As required under § 63.8(c)(1)(i), the plan shall identify all routine or otherwise predictable CMS malfunctions. This plan shall be developed by the owner or operator by the source's compliance date for that relevant standard. The plan shall be incorporated by reference into the source's title V permit. The purpose of the startup, shutdown, and malfunction plan is to—

(A) Ensure that, at all times, owners or operators operate and maintain affected sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source shall operate and maintain such source (including associated air pollution control equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall keep records for that event that demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping, that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator shall keep records of these events as specified in § 63.10(b) (and elsewhere in this part), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall record the actions taken for that event and shall report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with § 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator [see § 63.10(d)(5)(ii)].

(v) The owner or operator shall keep the written startup, shutdown, and malfunction plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if the startup, shutdown, and malfunction plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the startup, shutdown, and malfunction plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans

meet all the requirements of this section and are made available for inspection when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(2) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator may require reasonable revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control equipment) during a startup, shutdown, or malfunction event in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards; or

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable.

(viii) If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment.

(f) *Compliance with nonopacity emission standards*—(1) *Applicability.* The nonopacity emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart.

(2) *Methods for determining compliance.* (i) The Administrator will determine compliance with nonopacity emission standards in this part based on the results of performance tests conducted according to the procedures in § 63.7, unless otherwise specified in an applicable subpart of this part.

(ii) The Administrator will determine compliance with nonopacity emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in § 63.6(e) and applicable subparts of this part.

(iii) If an affected source conducts performance testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if—

(A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

(B) The performance test was conducted under representative operating conditions for the source;

(C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(c) of this subpart; and

(D) The performance test was appropriately quality-assured, as specified in § 63.7(c) of this subpart.

(iv) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by review of records, inspection of the source, and other procedures specified in applicable subparts of this part.

(v) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in paragraph (e) of this section and applicable subparts of this part.

(3) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with a nonopacity emission standard, as specified in paragraphs (f)(1) and (f)(2) of this section, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(g) *Use of an alternative nonopacity emission standard.* (1) If, in the Administrator's judgment, an owner or operator of an affected source has established that an alternative means of emission limitation will achieve a reduction in emissions of a hazardous air pollutant from an affected source at least equivalent to the reduction in emissions of that pollutant from that source achieved under any design, equipment, work practice, or operational emission standard, or combination thereof, established under this part pursuant to section 112(h) of the Act, the Administrator will publish in the Federal Register a notice permitting the use of the alternative emission standard for purposes of compliance with the promulgated standard. Any Federal Register notice under this paragraph shall be published only after the public is notified and given the opportunity to comment. Such notice will restrict the permission to the stationary source(s) or category(ies) of sources from which the alternative emission standard will achieve equivalent emission reductions. The Administrator will condition permission in such notice on requirements to assure the proper operation and maintenance of equipment and practices required for compliance with the alternative emission standard and other requirements, including appropriate quality assurance and quality control requirements, that are deemed necessary.

(2) An owner or operator requesting permission under this paragraph shall, unless otherwise specified in an applicable subpart, submit a proposed test plan or the results of testing and monitoring in accordance with § 63.7 and § 63.8, a description of the procedures followed in testing or monitoring, and a description of pertinent conditions during testing or monitoring. Any testing or monitoring conducted to request permission to use an alternative nonopacity emission standard shall be appropriately quality assured and quality controlled, as specified in § 63.7 and § 63.8.

(3) The Administrator may establish general procedures in an applicable subpart that accomplish the requirements of paragraphs (g)(1) and (g)(2) of this section.

(h) *Compliance with opacity and visible emission standards*—(1) *Applicability.* The opacity and visible emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart.

(2) *Methods for determining compliance.* (i) The Administrator will determine compliance with opacity and visible emission standards in this part based on the results of the test method specified in an applicable subpart. Whenever a continuous opacity monitoring system (COMS) is required to be installed to determine compliance with numerical opacity emission

standards in this part, compliance with opacity emission standards in this part shall be determined by using the results from the COMS. Whenever an opacity emission test method is not specified, compliance with opacity emission standards in this part shall be determined by conducting observations in accordance with Test Method 9 in appendix A of part 60 of this chapter or the method specified in paragraph (h)(7)(ii) of this section. Whenever a visible emission test method is not specified, compliance with visible emission standards in this part shall be determined by conducting observations in accordance with Test Method 22 in appendix A of part 60 of this chapter.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if—

(A) The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

(B) The opacity or visible emission test was conducted under representative operating conditions for the source;

(C) The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in § 63.7(e) of this subpart; and

(D) The opacity or visible emission test was appropriately quality-assured, as specified in § 63.7(c) of this section.

(3) [Reserved]

(4) *Notification of opacity or visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting opacity or visible emission observations in accordance with § 63.9(f), if such observations are required for the source by a relevant standard.

(5) *Conduct of opacity or visible emission observations.* When a relevant standard under this part includes an opacity or visible emission standard, the owner or operator of an affected source shall comply with the following:

(i) For the purpose of demonstrating initial compliance, opacity or visible emission observations shall be conducted concurrently with the initial performance test required in § 63.7 unless one of the following conditions applies:

(A) If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 60 days after achieving the maximum production rate at which a new or reconstructed source will be operated, but not later than 120 days after initial startup of the source, or within 120 days after the effective date of the relevant standard in the case of new sources that start up before the standard's effective date. If no performance test under § 63.7 is required, opacity or visible emission observations shall be conducted within 120 days after the compliance date for an existing or modified source; or

(B) If visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, or within the time period specified in paragraph (h)(5)(i)(A) of this section, the source's owner or operator shall reschedule the opacity or visible emission observations as soon after the initial performance test, or time period, as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. The rescheduled opacity or visible emission observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 63.7. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity or visible emission observations from being made concurrently with the initial performance test in accordance with procedures contained in Test Method 9 or Test Method 22 in Appendix A of part 60 of this chapter.

(ii) For the purpose of demonstrating initial compliance, the minimum total time of opacity observations shall be 3 hours (30 6-minute averages) for the performance test or other required set of observations (e.g., for fugitive-type emission sources subject only to an opacity emission standard).

(iii) The owner or operator of an affected source to which an opacity or visible emission standard in this part applies shall conduct opacity or visible emission observations in accordance with the provisions of this section, record the results of the evaluation of emissions, and report to the Administrator the opacity or visible emission results in accordance with the provisions of § 63.10(d).

(iv) [Reserved]

(v) Opacity readings of portions of plumes that contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity emission standards.

(6) *Availability of records.* The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) *Use of a continuous opacity monitoring system.*

(i) The owner or operator of an affected source required to use a continuous opacity monitoring system (COMS) shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results in accordance with the provisions of § 63.10(e)(4).

(ii) Whenever an opacity emission test method has not been specified in an applicable subpart, or an owner or operator of an affected source is required to conduct Test Method 9 observations (see Appendix A of part 60 of this chapter), the owner or operator may submit, for compliance purposes, COMS data results produced during any performance test required under § 63.7 in lieu of Method 9 data. If the owner or operator elects to submit COMS data for compliance with the opacity emission standard, he or she shall notify the Administrator of that decision, in writing, simultaneously with the notification under § 63.7(b) of the date the performance test is scheduled to begin. Once the owner or operator of an affected source has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent performance tests required under § 63.7, unless the owner or operator notifies the Administrator in writing to the contrary not later than with the notification under § 63.7(b) of the date the subsequent performance test is scheduled to begin.

(iii) For the purposes of determining compliance with the opacity emission standard during a performance test required under § 63.7 using COMS data, the COMS data shall be reduced to 6-minute averages over the duration of the mass emission performance test.

(iv) The owner or operator of an affected source using a COMS for compliance purposes is responsible for demonstrating that he/she has complied with the performance evaluation requirements of § 63.8(e), that the COMS has been properly maintained, operated, and data quality-assured, as specified in § 63.8(c) and § 63.8(d), and that the resulting data have not been altered in any way.

(v) Except as provided in paragraph (h)(7)(ii) of this section, the results of continuous monitoring by a COMS that indicate that the opacity at the time visual observations were made was not in excess of the emission standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the affected source proves that, at the time of the alleged violation, the instrument used was properly maintained, as specified in § 63.8(c), and met Performance Specification 1 in Appendix B of part 60 of this chapter, and that the resulting data have not been altered in any way.

(8) *Finding of compliance.* The Administrator will make a finding concerning an affected source's compliance with an opacity or visible emission standard upon obtaining all the compliance information required by the relevant standard (including the written reports of the results of the performance tests required by § 63.7, the results of Test Method 9 or another required opacity or visible emission test method, the observer certification required by paragraph (h)(6) of this section, and the continuous opacity monitoring system results, whichever is/are applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(9) *Adjustment to an opacity emission standard.*

(i) If the Administrator finds under paragraph (h)(8) of this section that an affected source is in compliance with all relevant standards for which initial performance tests were conducted under § 63.7, but during the time such performance tests were conducted fails to meet any relevant opacity emission standard, the owner or operator of such source may petition the Administrator to make appropriate adjustment to the opacity emission standard for the affected source. Until the Administrator notifies the owner or operator of the appropriate adjustment, the relevant opacity emission standard remains applicable.

(ii) The Administrator may grant such a petition upon a demonstration by the owner or operator that—

(A) The affected source and its associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the performance tests;

(B) The performance tests were performed under the conditions established by the Administrator; and

(C) The affected source and its associated air pollution control equipment were incapable of being adjusted or operated to meet the relevant opacity emission standard.

(iii) The Administrator will establish an adjusted opacity emission standard for the affected source meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity emission standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity emission standard in the Federal Register.

(iv) After the Administrator promulgates an adjusted opacity emission standard for an affected source, the owner or operator of such source shall be subject to the new opacity emission standard, and the new opacity emission standard shall apply to such source during any subsequent performance tests.

(i) *Extension of compliance with emission standards.* (1) Until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph, the owner or operator of an affected source subject to the requirements of this section shall comply with all applicable requirements of this part.

(2) *Extension of compliance for early reductions and other reductions*—(i) *Early reductions.* Pursuant to section 112(i)(5) of the Act, if the owner or operator of an existing source demonstrates that the source has achieved a reduction in emissions of hazardous air pollutants in accordance with the provisions of subpart D of this part, the Administrator (or the State with an approved permit program) will grant the owner or operator an extension of compliance with specific requirements of this part, as specified in subpart D.

(ii) *Other reductions.* Pursuant to section 112(i)(6) of the Act, if the owner or operator of an existing source has installed best available control technology (BACT) (as defined in section 169(3) of the Act) or technology required to meet a lowest achievable emission rate (LAER) (as defined in section 171 of the Act) prior to the promulgation of an emission standard in this part applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to the BACT or LAER installation, the Administrator will grant the owner or operator an extension of compliance with such emission standard that will apply until the date 5 years after the date on which such installation was achieved, as determined by the Administrator.

(3) *Request for extension of compliance.* Paragraphs (i)(4) through (i)(7) of this section concern requests for an extension of compliance with a relevant standard under this part (except requests for an extension of compliance under paragraph (i)(2)(i) of this section will be handled through procedures specified in subpart D of this part).

(4)(i)(A) The owner or operator of an existing source who is unable to comply with a relevant standard established under this part pursuant to section 112(d) of the Act may request that the Administrator (or a State, when the State has an approved part 70 permit program and the source is required to obtain a part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) grant an extension allowing the source up to 1 additional year to comply with the standard, if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 1-year extension of compliance is insufficient to dry and cover mining waste in order to reduce emissions of any hazardous air pollutant. The owner or operator of an affected source who has requested an extension of compliance under this paragraph and who is otherwise required to obtain a title V permit shall apply for such permit or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph will be incorporated into the affected source's title V permit according to the provisions of part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) Any request under this paragraph for an extension of compliance with a relevant standard shall be submitted in writing to the appropriate authority not later than 12 months before the affected source's compliance date (as specified in paragraphs (b) and (c) of this section) for sources that are not including emission points in an emissions average, or not later than 18 months before the affected source's compliance date (as specified in paragraphs (b) and (c) of this section) for sources that are including emission points in an emissions average. Emission standards established under this part may specify alternative dates for the submittal of

requests for an extension of compliance—if alternatives are appropriate for the source categories affected by those standards, e.g., a compliance date specified by the standard is less than 12 (or 18) months after the standard's effective date.

(ii) The owner or operator of an existing source unable to comply with a relevant standard established under this part pursuant to section 112(f) of the Act may request that the Administrator grant an extension allowing the source up to 2 years after the standard's effective date to comply with the standard. The Administrator may grant such an extension if he/she finds that such additional period is necessary for the installation of controls and that steps will be taken during the period of the extension to assure that the health of persons will be protected from imminent endangerment. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 15 calendar days after the effective date of the relevant standard.

(5) The owner or operator of an existing source that has installed BACT or technology required to meet LAER [as specified in paragraph (i)(2)(ii) of this section] prior to the promulgation of a relevant emission standard in this part may request that the Administrator grant an extension allowing the source 5 years from the date on which such installation was achieved, as determined by the Administrator, to comply with the standard. Any request for an extension of compliance with a relevant standard under this paragraph shall be submitted in writing to the Administrator not later than 120 days after the promulgation date of the standard. The Administrator may grant such an extension if he or she finds that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(6)(i) The request for a compliance extension under paragraph (i)(4) of this section shall include the following information:

(A) A description of the controls to be installed to comply with the standard;

(B) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*1*) The date by which contracts for emission control systems or process changes for emission control will be awarded, or the date by which orders will be issued for the purchase of component parts to accomplish emission control or process changes;

(*2*) The date by which on-site construction, installation of emission control equipment, or a process change is to be initiated;

(*3*) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(*4*) The date by which final compliance is to be achieved;

(C) A description of interim emission control steps that will be taken during the extension period, including milestones to assure proper operation and maintenance of emission control and process equipment; and

(D) Whether the owner or operator is also requesting an extension of other applicable requirements (e.g., performance testing requirements).

(ii) The request for a compliance extension under paragraph (i)(5) of this section shall include all information needed to demonstrate to the Administrator's satisfaction that the installation of BACT or technology to meet LAER controls the same pollutant (or stream of pollutants) that would be controlled at that source by the relevant emission standard.

(7) Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(8) *Approval of request for extension of compliance.* Paragraphs (i)(9) through (i)(14) of this section concern approval of an extension of compliance requested under paragraphs (i)(4) through (i)(6) of this section.

(9) Based on the information provided in any request made under paragraphs (i)(4) through (i)(6) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with an emission standard, as specified in paragraphs (i)(4) and (i)(5) of this section.

(10) The extension will be in writing and will—

(i) Identify each affected source covered by the extension;

(ii) Specify the termination date of the extension;

(iii) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(iv) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests); and

(v)(A) Under paragraph (i)(4), specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period; or

(B) Under paragraph (i)(5), specify any additional conditions that the Administrator deems necessary to assure the proper operation and maintenance of the installed controls during the extension period.

(11) The owner or operator of an existing source that has been granted an extension of compliance under paragraph (i)(10) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached. The contents of the progress reports and the dates by which they shall be submitted will be specified in the written extension of compliance granted under paragraph (i)(10) of this section.

(12)(i) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(i) or (i)(5) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with—

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing,

within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(iv) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(13)(i) The Administrator will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (i)(4)(ii) of this section. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application, that is, whether the application contains sufficient information to make a determination, within 15 calendar days after receipt of the original application and within 15 calendar days after receipt of any supplementary information that is submitted.

(ii) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 15 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(iii) Before denying any request for an extension of compliance, the Administrator will notify the owner or operator in writing of the Administrator's intention to issue the denial, together with—

(A) Notice of the information and findings on which the intended denial is based; and

(B) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator before further action on the request.

(iv) A final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(14) The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraphs (i)(10)(iii) or (i)(10)(iv) of this section is not met.

(15) [Reserved]

(16) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the Act.

(j) *Exemption from compliance with emission standards.* The President may exempt any stationary source from compliance with any relevant standard established pursuant to section 112 of the Act for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years.

§ 63.7 Performance testing requirements.

(a) *Applicability and performance test dates.* (1) Unless otherwise specified, this section applies to the owner or operator of an affected source required to do performance testing, or another form of compliance demonstration, under a relevant standard.

(2) If required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source shall perform such tests as follows—

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial startup date before the effective date; or

(ii) Within 180 days after initial startup for a new source that has an initial startup date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in an applicable subpart of this part for an existing source subject to an emission standard established pursuant to section 112(d) of the Act, or within 180 days after startup of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance for an existing source that obtains an extension of compliance under § 63.6(i); or

(vi) Within 180 days after the compliance date for a new source, subject to an emission standard established pursuant to section 112(f) of the Act, for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of the relevant standard established pursuant to section 112(f) [see § 63.6(b)(4)]; or

(vii) [Reserved]; or

(viii) [Reserved]; or

(ix) When an emission standard promulgated under this part is more stringent than the standard proposed [see § 63.6(b)(3)], the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

(b) *Notification of performance test.* (1) The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator, upon request, to review and approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test. Observation of the

performance test by the Administrator is optional.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section, due to unforeseeable circumstances beyond his or her control, the owner or operator shall notify the Administrator within 5 days prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) *Quality assurance program.* (1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2)(i) *Submission of site-specific test plan.* Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) *Approval of site-specific test plan.* (i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with—

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard, the owner or operator shall conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator shall refrain from conducting the performance test until the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or until after the alternative method is approved [see paragraph (f) of this section]. If the Administrator does not approve the site-specific test plan (if review is requested) or the use of the alternative method within 30 days before the test is scheduled to begin, the performance test dates specified in paragraph (a) of this section may be extended such that the owner or operator shall conduct the performance test within 60 calendar days after the Administrator approves the site-specific test plan or after use of the alternative method is approved. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall—

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4)(i) *Performance test method audit program.* The owner or operator shall analyze performance audit (PA) samples during each performance test. The owner or operator shall request performance audit materials 45 days prior to the test date. Cylinder audit gases may be obtained by contacting the Cylinder Audit Coordinator, Quality Assurance Division (MD–77B), Atmospheric Research and Exposure Assessment Laboratory (AREAL), U.S. EPA, Research Triangle Park, North Carolina 27711. All other audit materials may be obtained by contacting the Source Test Audit Coordinator, Quality Assurance Division (MD–77B), AREAL, U.S. EPA, Research Triangle Park, North Carolina 27711.

(ii) The Administrator will have sole discretion to require any subsequent remedial actions of the owner or operator based on the PA results.

(iii) If the Administrator fails to provide required PA materials to an owner or operator of an affected source in time to analyze the PA samples during a performance test, the requirement to conduct a PA under this paragraph shall be waived for such source for that performance test. Waiver under this paragraph of the requirement to conduct a PA for a particular performance test does not constitute a waiver of the requirement to conduct a PA for future required performance tests.

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing

source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Conduct of performance tests.* (1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator—

(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(ii) Approves the use of an alternative test method, the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that—

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(f) *Use of an alternative test method*—(1) *General.* Until permission to use an alternative test method has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator—

(i) Notifies the Administrator of his or her intention to use an alternative test method not later than with the submittal of the site-specific test plan (if requested by the Administrator) or at least 60 days before the performance test is scheduled to begin if a site-specific test plan is not submitted;

(ii) Uses Method 301 in Appendix A of this part to validate the alternative test method; and

(iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.

(3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate when the Administrator approves or disapproves the site-specific test plan required under paragraph (c) of this section. If the Administrator finds reasonable grounds to dispute the results obtained by the Method 301 validation process, the Administrator may require the use of a test method specified in a relevant standard.

(4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.

(5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under § 63.7(f).

(6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of this part.

(g) *Data analysis, recordkeeping, and reporting.* (1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator (see § 63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has

been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the appropriate permitting authority.

(2) [Reserved]

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or results of such performance test and other data needed to determine emissions from an affected source.

(h) *Waiver of performance tests.* (1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) *Request to waive a performance test.* (i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(i), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) *Approval of request to waive performance test.* The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she—

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or *excess emissions and continuous* monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.8 Monitoring requirements.

(a) *Applicability.* (1)(i) Unless otherwise specified in a relevant standard, this section applies to the owner or operator of an affected source required to do monitoring under that standard.

(ii) Relevant standards established under this part will specify monitoring systems, methods, or procedures, monitoring frequency, and other pertinent requirements for source(s) regulated by those standards. This section specifies general monitoring requirements such as those governing the conduct of monitoring and requests to use alternative monitoring methods. In addition, this section specifies detailed requirements that apply to affected sources required to use continuous monitoring systems (CMS) under a relevant standard.

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(3) [Reserved]

(4) Additional monitoring requirements for control devices used to comply with provisions in relevant standards of this part are specified in § 63.11.

(b) *Conduct of monitoring.* (1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator—

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) Approves the use of alternatives to any monitoring requirements or procedures.

(iii) Owners or operators with flares subject to § 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2)(i) When the effluents from a single affected source, or from two or more affected sources, are combined before being released to the atmosphere, the owner or operator shall install an applicable CMS on each effluent.

(ii) If the relevant standard is a mass emission standard and the effluent from one affected source is released to the atmosphere through more than one point, the owner or operator shall install an applicable CMS at each emission point unless the installation of fewer systems is—

(A) Approved by the Administrator, or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of this part. If both such CMS are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CMS for the relevant compliance period.

(c) *Operation and maintenance of continuous monitoring systems.* (1) The owner or operator of an affected source shall maintain and operate each CMS as specified in this section, or in a relevant standard, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of an affected source shall ensure the immediate repair or replacement of CMS parts to correct "routine" or otherwise predictable CMS malfunctions as defined in the source's startup, shutdown, and malfunction

plan required by § 63.6(e)(3). The owner or operator shall keep the necessary parts for routine repairs of the affected equipment readily available. If the plan is followed and the CMS repaired immediately, this action shall be reported in the semiannual startup, shutdown, and malfunction report required under § 63.10(d)(5)(i).

(ii) For those malfunctions or other events that affect the CMS and are not addressed by the startup, shutdown, and malfunction plan, the owner or operator shall report actions that are not consistent with the startup, shutdown, and malfunction plan within 24 hours after commencing actions inconsistent with the plan. The owner or operator shall send a follow-up report within 2 weeks after commencing actions inconsistent with the plan that either certifies that corrections have been made or includes a corrective action plan and schedule. The owner or operator shall provide proof that repair parts have been ordered or any other records that would indicate that the delay in making repairs is beyond his or her control.

(iii) The Administrator's determination of whether acceptable operation and maintenance procedures are being used will be based on information that may include, but is not limited to, review of operation and maintenance procedures, operation and maintenance records, manufacturing recommendations and specifications, and inspection of the CMS. Operation and maintenance procedures written by the CMS manufacturer and other guidance also can be used to maintain and operate each CMS.

(2) All CMS shall be installed such that representative measurements of emissions or process parameters from the affected source are obtained. In addition, CEMS shall be located according to procedures contained in the applicable performance specification(s).

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under § 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS installed in accordance with the provisions of this part and the applicable CMS performance specification(s) shall check the zero (low-level) and high-level calibration drifts at least once daily in accordance with the written procedure specified in the performance evaluation plan developed under paragraphs (e)(3)(i) and (e)(3)(ii) of this section. The zero (low-level) and high-level calibration drifts shall be adjusted, at a minimum, whenever the 24-hour zero (low-level) drift exceeds two times the limits of the applicable performance specification(s) specified in the relevant standard. The system must allow the amount of excess zero (low-level) and high-level drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For COMS, all optical and instrumental surfaces exposed to the effluent gases shall be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces shall be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity.

(7)(i) A CMS is out of control if—

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

(ii) When the CMS is out of control, the owner or operator of the affected source shall take the necessary corrective action and shall repeat all necessary tests which indicate that the system is out of control. The owner or operator shall take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the CMS is out of control, recorded data shall not be used in data averages and calculations, or to meet any data availability requirement established under this part.

(8) The owner or operator of a CMS that is out of control as defined in paragraph (c)(7) of this section shall submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in § 63.10(e)(3).

(d) *Quality control program.* (1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

(2) The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(3) The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

(e) *Performance evaluation of continuous monitoring systems*—(1) *General.* When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according to the applicable specifications and procedures described in this section or in the relevant standard.

(2) *Notification of performance evaluation.* The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under § 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3)(i) *Submission of site-specific performance evaluation test plan.* Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin; or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in § 63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall—

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) *Conduct of performance evaluation and performance evaluation dates.* The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under § 63.7 in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a relevant opacity emission standard as provided under § 63.6(h)(7), he/she shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under § 63.7 is conducted in time to submit the results of the performance evaluation as specified in paragraph (e)(5)(ii) of this section. If a performance test is not required, or the requirement for a performance test has been waived under § 63.7(h), the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in § 63.7(a), or as otherwise specified in the relevant standard.

(5) *Reporting performance evaluation results.* (i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under § 63.7 or within 60 days of completion of the performance evaluation if no test is required, unless otherwise specified in a relevant standard. The Administrator may request that the owner or operator submit the raw data from a performance evaluation in the report of the performance evaluation results.

(ii) The owner or operator of an affected source using a COMS to

determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation under this paragraph. The copies shall be provided at least 15 calendar days before the performance test required under § 63.7 is conducted.

(f) *Use of an alternative monitoring method*—(1) *General.* Until permission to use an alternative monitoring method has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:

(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

(ii) Alternative monitoring requirements when the affected source is infrequently operated;

(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4)(i) *Request to use alternative monitoring method.* An owner or operator who wishes to use an alternative monitoring method shall submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section, below. The application may be submitted at any time provided that the monitoring method is not used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring method is to be used to demonstrate compliance with a relevant standard, the application shall be submitted not later than with the site-specific test plan required in § 63.7(c) (if requested) or with the site-specific performance evaluation plan (if requested) or at least 60 days before the performance evaluation is scheduled to begin.

(ii) The application shall contain a description of the proposed alternative monitoring system and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application shall include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(5) *Approval of request to use alternative monitoring method.* (i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with—

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

(6) *Alternative to the relative accuracy test.* An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) *Criteria for approval of alternative procedures.* An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in § 63.7, or other tests performed following the criteria in § 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed

to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) *Petition to use alternative to relative accuracy test.* The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) *Rescission of approval to use alternative to relative accuracy test.* The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

(g) *Reduction of monitoring data.* (1) The owner or operator of each CMS shall reduce the monitoring data as specified in this paragraph. In addition, each relevant standard may contain additional requirements for reducing monitoring data. When additional requirements are specified in a relevant standard, the standard will identify any unnecessary or duplicated requirements in this paragraph that the owner or operator need not comply with.

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. Data from CEMS for measurement other than opacity, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in § 63.2.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant).

(4) All emission data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any data average computed under this part.

§ 63.9 Notification requirements.

(a) *Applicability and general information.* (1) The requirements in this section apply to owners and operators of affected sources that are subject to the provisions of this part, unless specified otherwise in a relevant standard.

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4)(i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

(b) *Initial notifications.* (1)(i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of this section.

(iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under § 63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.

(2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant

standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the affected source;

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source, including its operating design capacity and an identification of each point of emission for each hazardous air pollutant, or if a definitive identification is not yet possible, a preliminary identification of each point of emission for each hazardous air pollutant; and

(v) A statement of whether the affected source is a major source or an area source.

(3) The owner or operator of a new or reconstructed affected source, or a source that has been reconstructed such that it is an affected source, that has an initial startup after the effective date of a relevant standard under this part and for which an application for approval of construction or reconstruction is not required under § 63.5(d), shall notify the Administrator in writing that the source is subject to the relevant standard no later than 120 days after initial startup. The notification shall provide all the information required in paragraphs (b)(2)(i) through (b)(2)(v) of this section, delivered or postmarked with the notification required in paragraph (b)(5).

(4) The owner or operator of a new or reconstructed major affected source that has an initial startup after the effective date of a relevant standard under this part and for which an application for approval of construction or reconstruction is required under § 63.5(d) shall provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major affected source, reconstruct a major affected source, or reconstruct a major source such that the source becomes a major affected source with the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i).

(ii) A notification of the date when construction or reconstruction was commenced, submitted simultaneously with the application for approval of construction or reconstruction, if construction or reconstruction was commenced before the effective date of the relevant standard;

(iii) A notification of the date when construction or reconstruction was commenced, delivered or postmarked not later than 30 days after such date, if construction or reconstruction was commenced after the effective date of the relevant standard;

(iv) A notification of the anticipated date of startup of the source, delivered or postmarked not more than 60 days nor less than 30 days before such date; and

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) After the effective date of any relevant standard established by the Administrator under this part, whether or not an approved permit program is effective in the State in which an affected source is (or would be) located, an owner or operator who intends to construct a new affected source or reconstruct an affected source subject to such standard, or reconstruct a source such that it becomes an affected source subject to such standard, shall notify the Administrator, in writing, of the intended construction or reconstruction. The notification shall be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date of the relevant standard) if the construction or reconstruction commences after the effective date of a relevant standard promulgated in this part. The notification shall be submitted as soon as practicable before startup but no later than 60 days after the effective date of a relevant standard promulgated in this part if the construction or reconstruction had commenced and initial startup had not occurred before the standard's effective date. The notification shall include all the information required for an application for approval of construction or reconstruction as specified in § 63.5(d). For major sources, the application for approval of construction or reconstruction may be used to fulfill the requirements of this paragraph.

(c) *Request for extension of compliance.* If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with § 63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in § 63.6(i)(4) through § 63.6(i)(6).

(d) *Notification that source is subject to special compliance requirements.* An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

(e) *Notification of performance test.* The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

(f) *Notification of opacity and visible emission observations.* The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in § 63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under § 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.

(g) *Additional notification requirements for sources with continuous monitoring systems.* The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:

(1) A notification of the date the CMS performance evaluation under § 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under § 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under § 63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation

at least 60 calendar days before the evaluation is scheduled to begin;

(2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by § 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by § 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by § 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) *Notification of compliance status.* (1) The requirements of paragraphs (h)(2) through (h)(4) of this section apply when an affected source becomes subject to a relevant standard.

(2)(i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list—

(A) The methods that were used to determine compliance;

(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

(E) An analysis demonstrating whether the affected source is a major source or an area source (using the emissions data generated for this notification);

(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

(ii) The notification shall be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in a relevant standard, in which case the letter shall be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations.

(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) [Reserved]

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in § 63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of § 63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

(i) *Adjustment to time periods or postmark deadlines for submittal and review of required communications.* (1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

(j) *Change in information already provided.* Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

§ 63.10 Recordkeeping and reporting requirements.

(a) *Applicability and general information.* (1) The requirements of this section apply to owners or operators of affected sources who are subject to the provisions of this part, unless specified otherwise in a relevant standard.

(2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(4)(i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.

(5) If an owner or operator of an affected source in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such source under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. For each relevant standard established pursuant to section 112 of the Act, the allowance in the previous sentence applies in each State beginning 1 year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in § 63.9(i).

(6) If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to section 112 of the Act, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the latest compliance date for any relevant standard established pursuant to section 112 of the Act for any such affected source(s). Procedures governing the implementation of this provision are specified in § 63.9(i).

(7) If an owner or operator supervises one or more stationary sources affected by standards established pursuant to section 112 of the Act (as amended November 15, 1990) and standards set under part 60, part 61, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the relevant section 112 standard, or 1 year after the stationary source is required to be in compliance with the applicable part 60 or part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in § 63.9(i).

(b) *General recordkeeping requirements.* (1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of—

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the air pollution control equipment;

(iii) All maintenance performed on the air pollution control equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan [see § 63.6(e)(3)];

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan [see § 63.6(e)(3)] when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of

recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) Recordkeeping requirement for applicability determinations. If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants is not subject to a relevant standard or other requirement established under this part, the owner or operator shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with requirements established in subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any.

(c) *Additional recordkeeping requirements for sources with continuous monitoring systems.* In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of—

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)–(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in § 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(9) [Reserved]

(10) The nature and cause of any malfunction (if known);

(11) The corrective action taken or preventive measures adopted;

(12) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;

(13) The total process operating time during the reporting period; and

(14) All procedures that are part of a quality control program developed and implemented for CMS under § 63.8(d).

(15) In order to satisfy the requirements of paragraphs (c)(10) through (c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

(d) *General reporting requirements.* (1) Notwithstanding the requirements in this paragraph or paragraph (e) of this section, the owner or operator of an affected source subject to reporting requirements under this part shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) *Reporting results of performance tests.* Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) *Reporting results of opacity or visible emission observations.* The owner or operator of an affected source required to conduct opacity or visible emission observations by a relevant standard shall report the opacity or visible emission results (produced using Test Method 9 or Test Method 22, or an alternative to these test methods) along with the results of the performance test required under § 63.7. If no performance test is required, or if visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the performance test required under § 63.7, the owner or operator shall report the opacity or visible emission results before the close of business on the 30th day following the completion of the opacity or visible emission observations.

(4) *Progress reports.* The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5)(i) *Periodic startup, shutdown, and malfunction reports.* If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan [see § 63.6(e)(3)], the owner or operator shall state such information in a startup, shutdown, and malfunction report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report shall consist of a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day

following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under this part, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under paragraph (e) of this section, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Administrator does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in paragraph (e)(3) of this section.

(ii) *Immediate startup, shutdown, and malfunction reports.* Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of this section, any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan followed by a letter within 7 working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call (or facsimile [FAX] transmission) to the Administrator within 2 working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within 7 working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the owner or operator may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under this paragraph are specified in § 63.9(i).

(e) *Additional reporting requirements for sources with continuous monitoring systems*—(1) *General.* When more than one CEMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CEMS.

(2) *Reporting results of continuous monitoring system performance evaluations.* (i) The owner or operator of an affected source required to install a CMS by a relevant standard shall furnish the Administrator a copy of a written report of the results of the CMS performance evaluation, as required under § 63.8(e), simultaneously with the results of the performance test required under § 63.7, unless otherwise specified in the relevant standard.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation conducted under § 63.8(e). The copies shall be furnished at least 15 calendar days before the performance test required under § 63.7 is conducted.

(3) *Excess emissions and continuous monitoring system performance report and summary report.* (i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when—

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) The CMS data are to be used directly for compliance determination and the source experienced excess emissions, in which case quarterly reports shall be submitted. Once a source reports excess emissions, the source shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (e)(3)(ii) of this section is approved.

(ii) *Request to reduce frequency of excess emissions and continuous monitoring system performance reports.* Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the

absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in § 63.8(c)(7) and § 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) *Summary report.* As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report—Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

(A) The company name and address of the affected source;

(B) An identification of each hazardous air pollutant monitored at the affected source;

(C) The beginning and ending dates of the reporting period;

(D) A brief description of the process units;

(E) The emission and operating parameter limitations specified in the relevant standard(s);

(F) The monitoring equipment manufacturer(s) and model number(s);

(G) The date of the latest CMS certification or audit;

(H) The total operating time of the affected source during the reporting period;

(I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

(J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

(K) A description of any changes in CMS, processes, or controls since the last reporting period;

(L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

(M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

(4) *Reporting continuous opacity monitoring system data produced during a performance test.* The owner or operator of an affected source required to use a COMS shall record the monitoring data produced during a performance test required under § 63.7 and shall furnish the Administrator a written report of the monitoring results. The report of COMS data shall be submitted simultaneously with the report of the performance test results required in paragraph (d)(2) of this section.

(f) *Waiver of recordkeeping or reporting requirements.* (1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of recordkeeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under this part (such as under § 63.6(i) and § 63.9(h)) or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she—

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

§ 63.11 Control device requirements.

(a) *Applicability.* This section contains requirements for control devices used to comply with provisions in relevant standards. These requirements apply only to affected sources covered by relevant standards referring directly or indirectly to this section.

(b) *Flares.* (1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. *Applicable subparts will provide* provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in Appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(6) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K=Constant =

$$1.740 \times 10^{-7}\left(\frac{1}{\text{ppmv}}\right)\left(\frac{\text{g-mole}}{\text{scm}}\right)\left(\frac{\text{MJ}}{\text{kcal}}\right)$$

where the standard temperature for (g-mole/scm) is 20 °C.

C_i=Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77 (incorporated by reference as specified in § 63.14).

H_i=Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 (incorporated by reference as specified in § 63.14) if published values are not available or cannot be calculated.

n=Number of sample components.

(7)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$\text{Log}_{10}(V_{max})=(H_T+28.8)/31.7$

Where:

V_{max}=Maximum permitted velocity, m/sec.

28.8=Constant.

31.7=Constant.

H_T=The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$V_{max}=8.706+0.7084(H_T)$

Where:

V_{max}=Maximum permitted velocity, m/sec.

8.706=Constant.

0.7084=Constant.

H_T=The net heating value as determined in paragraph (b)(6) of this section.

§ 63.12 State authority and delegations.

(a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from—

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

(b)(1) Section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and

other requirements pursuant to section 112 for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

(2) Subpart E of this part establishes procedures consistent with section 112(l) for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

(c) All information required to be submitted to the EPA under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act, provided that each specific delegation may exempt sources from a certain Federal or State reporting requirement. The Administrator may permit all or some of the information to be submitted to the appropriate State agency only, instead of to the EPA and the State agency.

§ 63.13 Addresses of State air pollution control agencies and EPA Regional Offices.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated in the following list of EPA Regional Offices.

EPA Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont), Director, Air, Pesticides and Toxics Division, J.F.K. Federal Building, Boston, MA 02203–2211.

EPA Region II (New Jersey, New York, Puerto Rico, Virgin Islands), Director, Air and Waste Management Division, 26 Federal Plaza, New York, NY 10278.

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air, Radiation and Toxics Division, 841 Chestnut Street, Philadelphia, PA 19107.

EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), Director, Air, Pesticides and Toxics, Management Division, 345 Courtland Street, NE., Atlanta, GA 30365.

EPA Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin), Director, Air and Radiation Division, 77 West Jackson Blvd., Chicago, IL 60604–3507.

EPA Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas), Director, Air, Pesticides and Toxics, 1445 Ross Avenue, Dallas, TX 75202–2733.

EPA Region VII (Iowa, Kansas, Missouri, Nebraska), Director, Air and Toxics Division, 726 Minnesota Avenue, Kansas City, KS 66101.

EPA Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming), Director, Air and Toxics Division, 999 18th Street, 1 Denver Place, Suite 500, Denver, CO 80202–2405.

EPA Region IX (Arizona, California, Hawaii, Nevada, American Samoa, Guam), Director, Air and Toxics Division, 75 Hawthorne Street, San Francisco, CA 94105.

EPA Region X (Alaska, Idaho, Oregon, Washington), Director, Air and Toxics Division, 1200 Sixth Avenue, Seattle, WA 98101.

(b) All information required to be submitted to the Administrator under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

(c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in this part, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of this part for that communication.

§ 63.14 Incorporations by reference.

(a) The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding addresses noted below, and all are available for inspection at the Office of the Federal Register, 800 North Capital Street, NW, suite 700, Washington, DC, at the Air and Radiation Docket and Information Center, U.S. EPA, 401 M Street, SW., Washington, DC, and at the EPA Library (MD–35), U.S. EPA, Research Triangle Park, North Carolina.

(b) The materials listed below are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, Michigan 48106.

(1) ASTM D1946–77, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for § 63.11(b)(6).

(2) ASTM D2382–76, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter [High-Precision Method], IBR approved for § 63.11(b)(6).

§ 63.15 Availability of information and confidentiality.

(a) *Availability of information.* (1) With the exception of information protected through part 2 of this chapter, all reports, records, and other information collected by the Administrator under this part are available to the public. In addition, a copy of each permit application, compliance plan (including the schedule of compliance), notification of compliance status, excess emissions and continuous monitoring systems performance report, and title V permit is available to the public, consistent with protections recognized in section 503(e) of the Act.

(2) The availability to the public of information provided to or otherwise obtained by the Administrator under this part shall be governed by part 2 of this chapter.

(b) *Confidentiality.* (1) If an owner or operator is required to submit information entitled to protection from disclosure under section 114(c) of the Act, the owner or operator may submit such information separately. The requirements of section 114(c) shall apply to such information.

(2) The contents of a title V permit shall not be entitled to protection under section 114(c) of the Act; however, information submitted as part of an application for a title V permit may be entitled to protection from disclosure.

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[a] Large denotes storage vessels with capacity greater than or equal to 151 m^3 (40,000 gal). Option 1 is 0.75 psia; option 2 is 0.10 psia; and option 2 is control of all storage vessels.
[b] These totals do not include control impacts for equipment leaks. The floor is represented by option 1 for each emission point.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: February 28, 1994.

Carol M. Browner,

The Administrator.

For the reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: Sections 101, 112, 114, 116, and 301 of the Clean Air Act (42 U.S.C. 7401, *et seq.*, as amended by Pub. L. 101–549, 104 Stat. 2399).

2. Section 63.14 is amended by adding paragraphs (b)(3) and (c) to read as follows:

§ 63.14 Incorporation by reference.

* * * * *

(b) * * *

(3) ASTM D2879–83, Standard Test Method for Vapor Pressure—Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for § 63.111 of subpart G of this part.

(c) The materials listed below are available for purchase from the American Petroleum Institute (API), 1220 L Street, NW., Washington, DC 20005.

(1) API Publication 2517, Evaporative Loss from External Floating-Roof Tanks, Third Edition, February 1989, IBR approved for § 63.111 of subpart G of this part.

(2) API Publication 2518, Evaporative Loss from Fixed-roof Tanks, Second Edition, October 1991, IBR approved for § 63.150(g)(3)(i)(C) of subpart G of this part.

3. Part 63 is amended by adding subparts F, G, H, and I, and adding and reserving subparts J and K to read as follows:

Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

Secs.

63.100 Applicability and designation of source.
63.101 Definitions.
63.102 General standards.
63.103 General compliance, reporting, and recordkeeping provisions.
63.104 Heat exchange system requirements.
63.105 Maintenance wastewater requirements.
63.106 Delegation of authority.

Table 1 to Subpart F—Synthetic Organic Chemical Manufacturing Industry Chemicals

Table 2 to Subpart F—Organic Hazardous Air Pollutants

Table 3 to Subpart F—General Provisions Applicable to Supbarts F, G, and H

Subpart G—National Emission Standards for Organic Hazardous Air Pollutants From Synthetic Organic Chemical Manufacturing Industry Process Vents, Storage Vessels, Transfer Operations, and Wastewater

Secs.

63.110 Applicability.
63.111 Definitions.
63.112 Emission standard.
63.113 Process vent provisions—reference control technology.
63.114 Process vent provisions—monitoring requirements.
63.115 Process vent provisions—methods and procedures for process vent group determination.
63.116 Process vent provisions—performance test methods and procedures to determine compliance.
63.117 Process vent provisions—reporting and recordkeeping requirements for group and TRE determinations and performance tests.
63.118 Process vent provisions—periodic reporting and recordkeeping requirements.
63.119 Storage vessel provisions—reference control technology.
63.120 Storage vessel provisions—procedures to determine compliance.
63.121 Storage vessel provisions—alternative means of emission limitation.
63.122 Storage vessel provisions—reporting.
63.123 Storage vessel provisions—recordkeeping.
63.124 [Reserved]
63.125 [Reserved]
63.126 Transfer operations provisions—reference control technology.
63.127 Transfer operations provisions—monitoring requirements.
63.128 Transfer operations provisions—test methods and procedures.
63.129 Transfer operations provisions—reporting and recordkeeping for performance tests and notification of compliance status.
63.130 Transfer operations provisions—periodic reporting and recordkeeping.
63.131 Process wastewater provisions—flow diagrams and tables.
63.132 Process wastewater provisions—general.
63.133 Process wastewater provisions—wastewater tanks.
63.134 Process wastewater provisions—surface impoundments.
63.135 Process wastewater provisions—containers.
63.136 Process wastewater provisions—individual drain systems.
63.137 Process wastewater provisions—oil-water separators.
63.138 Process wastewater provisions—treatment processes.
63.139 Process wastewater provisions—control devices.
63.140 Process wastewater provisions—delay of repair.
63.141 [Reserved]
63.142 [Reserved]
63.143 Process wastewater provisions—inspections and monitoring of operations.
63.144 Process wastewater provisions—test methods and procedures for applicability and Group 1/Group 2 determination.
63.145 Process wastewater provisions—test methods and procedures to determine compliance.
63.146 Process wastewater provisions—reporting.
63.147 Process wastewater provisions—recordkeeping.
63.148 Leak inspection provisions.
63.149 [Reserved]
63.150 Emissions averaging provisions.
63.151 Initial notification and implementation plan.
63.152 General reporting and continuous records.

Appendix to Subpart G—Tables and Figures

Subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Secs.

63.160 Applicability and designation of source.
63.161 Definitions.
63.162 Standards: General.
63.163 Standards: Pumps in light liquid service.
63.164 Standards: Compressors.
63.165 Standards: Pressure relief devices in gas/vapor service.
63.166 Standards: Sampling connection systems.
63.167 Standards: Open-ended valves or lines.
63.168 Standards: Valves in gas/vapor service and in light liquid service.

63.159 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.
63.170 Standards: Surge control vessels and bottoms receivers.
63.171 Standards: Delay of repair.
63.172 Standards: Closed-vent systems and control devices.
63.173 Standards: Agitators in gas/vapor service and in light liquid service.
63.174 Standards: Connectors in gas/vapor service and in light liquid service.
63.175 Quality improvement program for valves.
63.176 Quality improvement program for pumps.
63.177 Alternative means of emission limitation: General.
63.178 Alternative means of emission limitation: Batch processes.
63.179 Alternative means of emission limitation: Enclosed-vented process units.
63.180 Test methods and procedures.
63.181 Recordkeeping requirements.
63.182 Reporting requirements.

Table 1 to Subpart H—Batch Processes

Subpart I—National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks

63.190 Applicability and designation of source.
63.191 Definitions.
63.192 Standard.
63.193 Delegation of authority.

Subpart J—[Reserved]

Subpart K—[Reserved]

Subpart F—National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry.

§ 63.100 Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to subparts G and H of this part.

(b) Except as provided in paragraph (c) of this section, the provisions of subparts F, G, and H of this part apply to chemical manufacturing process units that meet all the criteria specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section:

(1) Manufacture as a primary product one or more of the chemicals listed in table 1 of this subpart;

(2) Use as a reactant or manufacture as a product, by-product, or co-product, one or more of the organic hazardous air pollutants listed in table 2 of this subpart; and

(3) Are located at a plant site that is a major source as defined in section 112(a) of the Act.

(c) The owner or operator of a chemical manufacturing process unit that meets the criteria specified in paragraphs (b)(1) and (b)(3) of this section but does not use as a reactant or manufacture as a product, by-product, or co-product any organic hazardous air pollutant listed in table 2 of this subpart shall comply only with the requirements of § 63.103(e) of this subpart. To comply with this subpart, such chemical manufacturing process units shall not be required to comply with the provisions of subpart A of this part.

(d) The primary product of a chemical manufacturing process unit shall be determined according to the procedures specified in paragraphs (d)(1), (d)(2), and (d)(3) of this section:

(1) If a chemical manufacturing process unit produces more than one intended chemical product, the product with the greatest annual design capacity on a mass basis determines the primary product of the process.

(2) If a chemical manufacturing process unit has two or more products that have the same maximum annual design capacity on a mass basis and if one of those chemicals is listed in table 1 of this subpart, then the listed chemical is considered the primary product and the chemical manufacturing process unit is subject to this subpart. If more than one of the products is listed in table 1 of this subpart, then the owner or operator may designate as the primary product any of the listed chemicals and the chemical manufacturing process unit is subject to this subpart.

(3) For chemical manufacturing process units that are designed and operated as flexible operation units, the primary product shall be determined for existing sources based on the expected utilization for the five years following April 22, 1994 and for new sources based on the expected utilization for the first five years after initial start-up.

(i) If the predominant use of the flexible operation unit, as described in paragraphs (d)(3)(i)(A) and (d)(3)(i)(B) of this section, is to produce one or more chemicals listed in table 1 of this subpart, then the flexible operation unit shall be subject to the provisions of subparts F, G, and H of this part.

(A) If the flexible operation unit produces one product for the greatest annual operating time, then that product shall represent the primary product of the flexible operation unit.

(B) If the flexible operation unit produces multiple chemicals equally based on operating time, then the product with the greatest annual production on a mass basis shall represent the primary product of the flexible operation unit.

(ii) The determination of applicability of this subpart to chemical manufacturing process units that are designed and operated as flexible operation units shall be reported in the Implementation Plan required by § 63.151 (c), (d), and (e) of subpart G of this part or as part of an operating permit application.

(e) The source to which this subpart applies is the collection of the process vents; storage vessels; transfer racks; wastewater and the associated treatment residuals; and pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers that are associated with the chemical manufacturing process units that meet the criteria specified in paragraphs (b)(1) through (b)(3) of this section.

(1) Subparts F and G of this part apply to emissions from process vents, storage vessels, transfer racks, and wastewater streams and associated treatment residuals within a source that is subject to this subpart.

(2) Subparts F and H of this part apply to emissions from pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, surge control vessels, and bottoms receivers, within a source that is subject to this subpart.

(f) The source does not include the emission points listed in paragraphs (f)(1) through (f)(9) of this section. This subpart does not require emission points that are not included in the source to comply with the provisions of subpart A of this part.

(1) Vents from chemical manufacturing process units that are designed and operated as batch operations;

(2) Stormwater from segregated sewers;

(3) Water from fire-fighting and deluge systems in segregated sewers;

(4) Spills;

(5) Water from safety showers;

(6) Vessels storing organic liquids that contain organic hazardous air pollutants only as impurities;

(7) Loading racks, loading arms, or loading hoses that only transfer liquids containing organic hazardous air pollutants as impurities;

(8) Loading racks, loading arms, or loading hoses that vapor balance during all loading operations; and

(9) Equipment that is intended to operate in organic hazardous air pollutant service, as defined in § 63.161

of subpart H of this part, for less than 300 hours during the calendar year.

(g) The owner or operator shall follow the procedures specified in paragraphs (g)(1) and (g)(2) of this section to determine whether a storage vessel is part of the source to which this subpart applies.

(1) Where a storage vessel is used exclusively by a chemical manufacturing process unit, the storage vessel shall be considered part of that chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the storage vessel is not part of the source to which this subpart applies.

(2) If a storage vessel is not dedicated to a single chemical manufacturing process unit, then the applicability of subparts F and G of this part shall be determined according to the provisions in paragraphs (g)(2)(i) through (g)(2)(iv) of this section.

(i) If a storage vessel is shared among chemical manufacturing process units and one of the process units has the predominant use, as determined by paragraph (g)(2)(i)(A) and (g)(2)(i)(B) of this section, then the storage vessel is part of that chemical manufacturing process unit.

(A) If the greatest input into the storage vessel is from a chemical manufacturing process unit that is located on the same plant site, then that chemical manufacturing process unit has the predominant use.

(B) If the greatest input into the storage vessel is provided from a chemical manufacturing process unit that is not located on the same plant site, then the predominant use is the chemical manufacturing process unit on the same plant site that receives the greatest amount of material from the storage vessel.

(ii) If a storage vessel is shared among chemical manufacturing process units so that there is no single predominant use, and at least one of those chemical manufacturing process units is subject to this subpart, the storage vessel shall be considered to be part of the chemical manufacturing process unit that is subject to this subpart. If more than one chemical manufacturing process unit is subject to this subpart, the owner or operator may assign the storage vessel to any of the chemical manufacturing process units subject to this subpart.

(iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined based on the utilization that occurred during the year preceding April 22, 1994. This determination shall be reported in the Implementation Plan required by § 63.151(c), (d), and (e) of subpart G of this part or as part of an operating permit application.

(iv) If there is a change in the material stored in the storage vessel, the owner or operator shall reevaluate the applicability of this subpart to the vessel.

(h) The owner or operator shall follow the procedures specified in paragraphs (h)(1) and (h)(2) of this section to determine whether the arms and hoses in a loading rack are part of the source to which this subpart applies.

(1) Where a loading rack is used exclusively by a chemical manufacturing process unit, the loading rack shall be considered part of that specific chemical manufacturing process unit.

(i) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section and the loading rack does not meet the criteria specified in paragraphs (f)(7) and (f)(8) of this section, then the loading rack is considered a transfer rack (as defined in § 63.101 of this subpart) and is part of the source to which this subpart applies.

(ii) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading rack is not considered a transfer rack (as defined in § 63.101 of this subpart) and is not a part of the source to which this subpart applies.

(2) If a loading rack is shared among chemical manufacturing process units, then the applicability of subparts F and G of this part shall be determined at each loading arm or loading hose according to the provisions in paragraphs (h)(2)(i) through (h)(2)(v) of this section.

(i) Each loading arm or loading hose that is dedicated to the transfer of liquid organic hazardous air pollutants listed in table 2 of this subpart from a chemical manufacturing process unit to which this subpart applies is part of that chemical manufacturing process unit and is part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraph (f)(7) or (f)(8) of this section.

(ii) If a loading arm or loading hose is shared among chemical manufacturing process units, and one of the chemical manufacturing process units provides the greatest amount of the material that is loaded by the loading arm or loading hose, then the loading arm or loading hose is part of that chemical manufacturing process unit.

(A) If the chemical manufacturing process unit is subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is part of the source to which this subpart applies unless the loading arm or loading hose meets the criteria specified in paragraph (f)(7) or (f)(8) of this section.

(B) If the chemical manufacturing process unit is not subject to this subpart according to the criteria specified in paragraph (b) of this section, then the loading arm or loading hose is not part of the source to which this subpart applies.

(iii) If a loading arm or loading hose is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraph (h)(2)(ii) of this section and at least one of those chemical manufacturing process units is subject to this subpart, then the loading arm or hose is part of the chemical manufacturing process unit that is subject to this subpart. If more than one of the chemical manufacturing process units is subject to this subpart, the owner or operator may assign the loading arm or loading hose to any of the chemical manufacturing process units subject to this subpart.

(iv) If the predominant use of a loading arm or loading hose varies from year to year, then the applicability of this subpart shall be determined based on the utilization that occurred during the year preceding April 22, 1994. This determination shall be reported in the Implementation Plan required by § 63.151 (c), (d), and (e) of subpart G or as part of an operating permit application.

(v) If there is a change in the material loaded at the loading arm or loading hose, the owner or operator shall reevaluate the applicability of this subpart to the loading arm or loading hose.

(i) Except as provided in paragraph (i)(6) of this section, the owner or operator shall follow the procedures specified in paragraphs (i)(1) through (i)(5) of this section to determine whether the vent(s) from a distillation unit is part of the source to which this subpart applies.

(1) If the greatest input to the distillation unit is from a chemical

manufacturing process unit located on the same plant site, then the distillation unit shall be assigned to that chemical manufacturing process unit.

(2) If the greatest input to the distillation unit is provided from a chemical manufacturing process unit that is not located on the same plant site, then the distillation unit shall be assigned to the chemical manufacturing process unit located at the same plant site that receives the greatest amount of material from the distillation unit.

(3) If a distillation unit is shared among chemical manufacturing process units so that there is no single predominant use, as described in paragraphs (i)(1) and (i)(2) of this section, and at least one of those chemical manufacturing process units is subject to this subpart, the distillation unit shall be assigned to the chemical manufacturing process unit that is subject to this subpart. If more than one chemical manufacturing process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the chemical manufacturing process units subject to this rule.

(4) If the chemical manufacturing process unit to which the distillation unit is assigned is subject to this subpart and the vent stream contains greater than 0.005 weight percent total organic hazardous air pollutants, then the vent(s) from the distillation unit is considered a process vent (as defined in § 63.101 of this subpart) and is part of the source to which this subpart applies.

(5) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined based on the utilization that occurred during the year preceding April 22, 1994. This determination shall be included in the Implementation Plan required by § 63.151 (c), (d), and (e) of subpart G of this part or as part of an operating permit application.

(6) If the distillation unit is part of one of the chemical manufacturing process units listed in paragraphs (i)(6)(i) through (i)(6)(iii) of this section and the vent stream contains greater than 0.005 weight percent total organic hazardous air pollutants, then the vents from the distillation unit are considered process vents (as defined in § 63.101 of this subpart) and are part of the source to which this subpart applies.

(i) The Aromex unit that produces benzene, toluene, and xylene;

(ii) The unit that produces hexane; or

(iii) The unit that produces cyclohexane.

(j) The provisions of subparts F, G, and H of this part do not apply to the processes specified in paragraphs (j)(1) through (j)(6) of this section. Subparts F, G, and H do not require processes specified in paragraphs (j)(1) through (j)(6) to comply with the provisions of subpart A of this part.

(1) Research and development facilities, regardless of whether the facilities are located at the same plant site as a chemical manufacturing process unit that is subject to the provisions of subparts F, G, or H of this part.

(2) Petroleum refining process units, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subparts F, G, or H of this part.

(3) Ethylene process units, regardless of whether the units supply feedstocks that include chemicals listed in table 1 of this subpart to chemical manufacturing process units that are subject to the provisions of subparts F, G, or H of this part.

(4) Equipment that is located within a chemical manufacturing process unit that is subject to this subpart but does not contain organic hazardous air pollutants.

(5) Chemical manufacturing process units that are located in coke by-product recovery plants.

(6) Solvent reclamation, recovery, or recycling operations at hazardous waste TSDF facilities requiring a permit under 40 CFR part 270 that are separate entities and not part of a SOCMI chemical manufacturing process unit.

(k) Except as provided in paragraphs (l) and (m) of this section, sources subject to subparts F, G, or H of this part are required to achieve compliance on or before the dates specified in paragraphs (k)(1), (k)(2), and (k)(3) of this section.

(1) New sources that commence construction or reconstruction after December 31, 1992 shall be in compliance with subparts F, G, and H of this part upon initial start-up or April 22, 1994, whichever is later, as provided in § 63.6(b) of subpart A of this part.

(2) Existing sources shall be in compliance with subparts F and G of this part no later than 3 years after April 22, 1994, as provided in § 63.6(c) of subpart A of this part, unless an extension has been granted by the Administrator as provided in § 63.151(a)(6) of subpart G of this part or granted by the operating permit authority as provided in § 63.6(i) of subpart A of this part.

(3) Existing sources shall be in compliance with subpart H of this part no later than the dates specified in paragraphs (k)(3)(i) through (k)(3)(v) of this section. The group designation for each process unit is indicated in table 1 of this subpart.

(i) Group I: October 24, 1994.

(ii) Group II: January 23, 1995.

(iii) Group III: April 24, 1995.

(iv) Group IV: July 24, 1995.

(v) Group V: October 23, 1995.

(l)(1) If an additional chemical manufacturing process unit meeting the criteria specified in paragraph (b) of this section is added to a plant site that is a major source as defined in section 112(a) of the Act, the addition shall be subject to the requirements for a new source in subparts F, G, and H of this part if:

(i) It is an addition that meets the definition of construction in § 63.2 of subpart A of this part;

(ii) Such construction commenced after December 31, 1992; and

(iii) The addition has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP's, unless the Administrator establishes a lesser quantity.

(2) If any change is made to a chemical manufacturing process unit subject to this subpart, the change shall be subject to the requirements of a new source in subparts F, G, and H of this part if:

(i) It is a change that meets the definition of reconstruction in § 63.2 of subpart A of this part; and

(ii) Such reconstruction commenced after December 31, 1992.

(3) If an additional chemical manufacturing process unit is added to a plant site or a change is made to a chemical manufacturing process unit and the addition or change is determined to be subject to the new source requirements according to paragraph (l)(1) or (l)(2) of this section:

(i) The new or reconstructed source shall be in compliance with the new source requirements of subparts F, G, and H of this part upon initial start-up of the new or reconstructed source or by April 22, 1994, whichever is later; and

(ii) The owner or operator of the new or reconstructed source shall comply with the reporting and recordkeeping requirements in subparts F, G, and H of this part that are applicable to new sources. The applicable reports include, but are not limited to:

(A) The application for approval of construction or reconstruction which shall be submitted by the date specified in § 63.151(b)(2)(ii) of subpart G of this part, or an Initial Notification as specified in § 63.151(b)(2)(iii) of subpart G of this part;

(B) The Implementation Plan and Implementation Plan Updates required

by § 63.151(c) and (j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(C) The Notification of Compliance Status as required by § 63.152(b) of subpart G of this part for the new or reconstructed source;

(D) Periodic Reports and Other Reports as required by § 63.152(c) and (d) of subpart G of this part;

(E) Reports required by § 63.182 of subpart H of this part; and

(F) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(4) If an additional chemical manufacturing process unit is added to a plant site or if an emission point is added to an existing chemical manufacturing process unit or if another deliberate operational process change creating an additional Group 1 emission point(s) is made to an existing chemical manufacturing process unit, and if the addition or change is not subject to the new source requirements as determined according to paragraph (l)(1) or (l)(2) of this section, the requirements in paragraphs (l)(4)(i) through (l)(4)(iii) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status required by § 63.152(b) of subpart G of this part.

(i) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit are subject to the requirements of subparts F, G, and H of this part for an existing source;

(ii) The added emission point(s) and any emission point(s) within the added or changed chemical manufacturing process unit shall be in compliance with subparts F, G, and H of this part by the dates specified in paragraph (l)(4)(ii) (A) or (B) of this section, as applicable.

(A) If a chemical manufacturing process unit is added to a plant site or an emission point(s) is added to an existing chemical manufacturing process unit, the added emission point(s) shall be in compliance upon initial start-up of the added chemical manufacturing process unit or emission point(s) or by 3 years after April 22, 1994, whichever is later.

(B) If a deliberate operational process change to an existing chemical manufacturing process unit causes a Group 2 emission point to become a Group 1 emission point, the owner or operator shall be in compliance upon initial start-up or by 3 years after April 22, 1994 unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (m)(1) through (m)(3) of this section to establish a compliance date.

(iii) The owner or operator of a chemical manufacturing process unit or emission point that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements of subparts F, G, and H of this part that are applicable to existing sources, including, but not limited to, the reports listed in paragraphs (l)(4)(iii) (A) through (E) of this section. A change to an existing chemical manufacturing process unit shall be subject to the reporting requirements for existing sources including, but not limited to, the reports listed in paragraphs (l)(4)(iii) (A) through (E) of this section if the change meets the criteria specified in § 63.118 (g), (h), (i), or (j) of subpart G of this part for process vents or the criteria in § 63.151 (i) or (j) of subpart G of this part for Implementation Plan Updates. The applicable reports include, but are not limited to:

(A) The Implementation Plan Updates specified in § 63.151 (i) and (j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

(B) The Notification of Compliance Status as required by § 63.152(b) of subpart G of this part for the emission points that were added or changed;

(C) Periodic Reports and other reports as required by § 63.152 (c) and (d) of subpart G of this part;

(D) Reports required by § 63.182 of subpart H of this part; and

(E) Reports and notifications required by sections of subpart A of this part that are applicable to subparts F, G, and H of this part, as identified in table 3 of this subpart.

(m) If a change that does not meet the criteria in paragraph (l)(4) of this section is made to a chemical manufacturing process unit subject to subparts F and G of this part, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in § 63.111 of subpart G of this part), then the owner or operator shall comply with the requirements of subpart G of this part for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(2) The compliance schedule shall be submitted with the Implementation Plan update required in § 63.151(i)(2) of subpart G of this part for emission points included in an emissions average or § 63.151(j)(1) of subpart G of this part for emission points not in an emissions average, unless the compliance schedule has been submitted in an operating permit application or amendment.

(3) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

§ 63.101 Definitions.

(a) The following terms as used in subparts F, G, and H of this part shall have the meaning given them in subpart A of this part: Act, actual emissions, Administrator, affected source, approved permit program, commenced, compliance date, construction, continuous monitoring system, continuous parameter monitoring system, effective date, emission standard, emissions averaging, EPA, equivalent emission limitation, existing source, Federally enforceable, fixed capital cost, hazardous air pollutant, lesser quantity, major source, malfunction, new source, owner or operator, performance evaluation, performance test, permit program, permitting authority, reconstruction, relevant standard, responsible official, run, standard conditions, State, and stationary source.

(b) All other terms used in this subpart and subparts G and H of this part shall have the meaning given them in the Act and in this section. If the same term is defined in subpart A of this part and in this section, it shall have the meaning given in this section for purposes of subparts F, G, and H of this part.

Air oxidation reactor means a device or vessel in which air, or a combination of air and oxygen, is used as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds. Air oxidation reactor includes the product separator and any associated vacuum pump or steam jet.

Batch operation means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a chemical manufacturing process unit and distilled or reacted at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh batch is started.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

By-product means a chemical that is produced coincidentally during the production of another chemical.

Chemical manufacturing process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. For the purpose of this subpart, chemical manufacturing process unit includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations (as defined in this section); and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product.

Control device means any equipment used for recovering or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents (as defined in this section), recovery devices are not considered control devices.

Co-product means a chemical that is produced during the production of another chemical.

Distillate receiver means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.

Distillation unit means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.

Emission point means an individual process vent, storage vessel, transfer rack, wastewater stream, or equipment leak.

Equipment leak means emissions of organic hazardous air pollutants from a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, surge control vessel, bottoms receiver, or instrumentation system in organic hazardous air pollutant service as defined in § 63.161 of subpart H of this part.

Ethylene process or *ethylene process unit* means a chemical manufacturing process unit in which ethylene and/or propylene are produced by separation from petroleum refining process streams or by subjecting hydrocarbons to high temperatures in the presence of steam. The ethylene process unit includes the separation of ethylene and/or propylene from associated streams such as a C_4 product, pyrolysis gasoline, and pyrolysis fuel oil. The ethylene process does not include the manufacture of SOCMI chemicals such as the production of butadiene from the C_4 stream and aromatics from pyrolysis gasoline.

Flexible operation unit means a chemical manufacturing process unit that manufactures different chemical products periodically by alternating raw materials or operating conditions. These units are also referred to as campaign plants or blocked operations.

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system.

Impurity means a substance that is produced coincidentally with the primary product, or is present in a raw material. An impurity does not serve a useful purpose in the production or use of the primary product and is not isolated.

Initial start-up means the first time a new or reconstructed source begins production, or, for equipment added or changed as described in § 63.100 (l) or (m) of this subpart, the first time the equipment is put into operation. Initial start-up does not include operation solely for testing equipment. For purposes of subpart G of this part, initial start-up does not include subsequent start-ups (as defined in this section) of chemical manufacturing process units following malfunctions or shutdowns or following changes in product for flexible operation units or following recharging of equipment in batch operation. For purposes of subpart H of this part, initial start-up does not include subsequent start-ups (as defined in § 63.161 of subpart H of this part) of process units (as defined in § 63.161 of subpart H of this part) following malfunctions or process unit shutdowns.

Loading rack means a single system used to fill tank trucks and railcars at a single geographic site. Loading equipment and operations that are physically separate (i.e, do not share common piping, valves, and other equipment) are considered to be separate loading racks.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the chemical manufacturing process unit into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewaters include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, and draining of portions of the chemical manufacturing process unit for repair.

Operating permit means a permit required by 40 CFR part 70 or 71.

Organic hazardous air pollutant or *organic HAP* means one of the chemicals listed in table 2 of this subpart.

Petroleum refining process, also referred to as a *petroleum refining process unit*, means a process that for the purpose of producing transportation fuels (such as gasoline and diesel fuels), heating fuels (such as fuel gas, distillate, and residual fuel oils), or lubricants separates petroleum or separates, cracks, or reforms unfinished derivatives. Examples of such units include, but are not limited to, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, and thermal processes.

Plant site means all contiguous or adjoining property that is under common control, including properties

that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Process vent means a gas stream containing greater than 0.005 weight percent total organic hazardous air pollutants that is continuously discharged during operation of the unit from an air oxidation reactor, other reactor, or distillation unit (as defined in this section) within a chemical manufacturing process unit that meets all applicability criteria specified in § 63.100(b)(1) through (b)(3) of this subpart. Process vents include vents from distillate receivers, product separators, and ejector-condensers. Process vents include gas streams that are either discharged directly to the atmosphere or are discharged to the atmosphere after diversion through a product recovery device. Process vents exclude relief valve discharges and leaks from equipment regulated under subpart H of this part.

Process wastewater means wastewater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. Examples are product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

Product means a compound or chemical which is manufactured as the intended product of the chemical manufacturing process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Product separator means phase separators, flash drums, knock-out drums, decanters, degassers, and condenser(s) including ejector-condenser(s) associated with a reactor or an air oxidation reactor.

Reactor means a device or vessel in which one or more chemicals or reactants, other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed. Reactor includes the product separator and any associated vacuum pump or steam jet.

Recovery device means an individual unit of equipment capable of and used for the purpose of recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

Shutdown means the cessation of operation of a chemical manufacturing process unit or a reactor, air oxidation reactor, distillation unit, or the emptying and degassing of a storage vessel for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair. Shutdown does not include the routine rinsing or washing of equipment in batch operation between batches.

Source means the collection of emission points to which this subpart applies as determined by the criteria in § 63.100 of this subpart. For purposes of subparts F, G, and H of this part, the term *affected source* as used in subpart A of this part has the same meaning as the term *source* defined here.

Start-up means the setting into operation of a chemical manufacturing process unit for the purpose of production. Start-up does not include operation solely for testing equipment. Start-up does not include the recharging of equipment in batch operation. Start-up does not include changes in product for flexible operation units.

Start-up, shutdown, and malfunction plan means the plan required under § 63.6(e)(3) of subpart A of this part. This plan details the procedures for operation and maintenance of the source during periods of start-up, shutdown, and malfunction.

Storage vessel means a tank or other vessel that is used to store organic liquids that contain one or more of the organic HAP's listed in table 2 of this subpart and that has been assigned, according to the procedures in § 63.100(g) of this subpart, to a chemical manufacturing process unit that is subject to this subpart. Storage vessel does not include:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Vessels with capacities smaller than 38 cubic meters;

(4) Vessels storing organic liquids that contain organic hazardous air pollutants only as impurities;

(5) Bottoms receiver tanks;

(6) Surge control vessels; or

(7) Wastewater storage tanks. Wastewater storage tanks are covered under the wastewater provisions.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels serve several purposes including equalization of load, mixing, recycle, and emergency supply.

Transfer operation means the loading, into a tank truck or railcar, of organic liquids that contain one or more of the organic hazardous air pollutants listed in table 2 of this subpart from a transfer rack (as defined in this section). Transfer operations do not include loading at an operating pressure greater than 204.9 kilopascals.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to a chemical manufacturing process unit subject to this subpart according to the procedures specified in § 63.100(h) of this subpart and are used to fill tank trucks and railcars with organic liquids that contain one or more of the organic hazardous air pollutants listed in table 2 of this subpart. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves. Transfer rack does not include:

(1) Racks, arms, or hoses that only transfer liquids containing organic hazardous air pollutants as impurities;

(2) Racks, arms, or hoses that vapor balance during all loading operations; or

(3) Racks transferring organic liquids that contain organic hazardous air pollutants only as impurities.

Unit operation means one or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one or more process streams. Unit operations include, but are not limited to, reactors, distillation columns, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Vapor balancing system means a piping system that is designed to collect organic HAP vapors displaced from tank trucks or railcars during loading; and to route the collected organic HAP vapors to the storage vessel from which the liquid being loaded originated, or to compress collected organic HAP vapors and commingle with the raw feed of a chemical manufacturing process unit.

Wastewater means organic hazardous air pollutant-containing water, raw material, intermediate, product, by-product, co-product, or waste material

that exits equipment in a chemical manufacturing process unit that meets all of the criteria specified in § 63.100(b)(1) through (b)(3) of this subpart; and either:

(1) Contains a total volatile organic hazardous air pollutant concentration of at least 5 parts per million by weight and has a flow rate of 0.02 liter per minute or greater; or

(2) Contains a total volatile organic hazardous air pollutant concentration of at least 10,000 parts per million by weight at any flow rate.

Wastewater includes process wastewater and maintenance wastewater.

§ 63.102 General standards.

(a) Owners and operators of sources subject to this subpart shall comply with the requirements of subparts G and H of this part.

(1) The provisions set forth in subparts F and G of this part shall apply at all times except during periods of start-up, malfunction, and shutdown (as defined in § 63.101 of this subpart). However, if a start-up, shutdown, or malfunction of one portion of a chemical manufacturing process unit does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of subparts F and G during the start-up, shutdown, or malfunction. For example, if there is an overpressure in the reactor area, a storage vessel in the chemical manufacturing process unit would still be required to be controlled in accordance with § 63.119 of subpart G of this part. Similarly, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of § 63.113 of subpart G of this part.

(2) The provisions set forth in subpart H of this part shall apply at all times except during periods of start-up, malfunction, and process unit shutdown (as defined in § 63.161 of subpart H of this part).

(b) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in organic HAP emissions at least equivalent to the reduction in organic HAP emissions from that source achieved under any design, equipment, work practice, or operational standards in subpart G or H of this part, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(1) The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(2) Any notice under paragraph (b) of this section shall be published only after public notice and an opportunity for a hearing.

(3) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

(c) Each owner or operator of a source subject to this subpart shall obtain a permit under 40 CFR part 70 or part 71 from the appropriate permitting authority.

(1) If EPA has approved a State operating permit program under 40 CFR part 71, the permit shall be obtained from the State authority. If the State operating permit program has not been approved, the source shall apply to the EPA regional office pursuant to 40 CFR part 70.

(2) If an operating permit application has not been submitted by the dates specified in § 63.151(c) of subpart G of this part, the owner or operator shall submit an Implementation Plan as specified in § 63.151 (c), (d), and (e) of subpart G of this part.

(d) The requirements in subparts F, G, and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in § 63.100(k) of this subpart.

§ 63.103 General compliance, reporting, and recordkeeping provisions.

(a) Table 3 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of sources subject to subparts F, G, and H of this part.

(b) Initial performance tests and initial compliance determinations shall be required only as specified in subparts G and H of this part.

(1) Performance tests and compliance determinations shall be conducted according to the schedule and procedures in § 63.7(a) of subpart A of this part and the applicable sections of subparts G and H of this part.

(2) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present during the test.

(3) Performance tests shall be conducted according to the provisions of § 63.7(e) of subpart A of this part, except that performance tests shall be conducted at maximum representative operating conditions for the process. During the performance test, an owner or operator may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(4) Data shall be reduced in accordance with the EPA-approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

(5) Performance tests may be waived with approval of the Administrator as specified in § 63.7(h)(2) of subpart A of this part. Owners or operators of sources subject to subparts F, G, and H of this part who apply for a waiver of a performance test shall submit the application by the dates specified in paragraph (b)(5)(i) of this section rather than the dates specified in § 63.7(h)(3) of subpart A of this part.

(i) If a request is made for an extension of compliance under § 63.151(a)(6) of subpart G or § 63.6(i) of subpart A of this part, the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested, the application for a waiver of an initial performance test shall be submitted no later than 90 calendar days before the Notification of Compliance Status required in § 63.152(b) of subpart G of this part is due to be submitted.

(ii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the required test.

(c) Each owner or operator of a source subject to subparts F, G, and H of this part shall keep copies of all applicable reports and records required by subparts F, G, and H of this part for at least 5 years; except that, if subparts G or H require records to be maintained for a time period different than 5 years, those records shall be maintained for the time specified in subpart G or H of this part.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 2 years of records shall be retained on site at the source or shall be accessible from a central location by computer. The remaining 3 years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited

to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) The owner or operator subject to subparts F, G, and H of this part shall keep the records specified in this paragraph, as well as records specified in subparts G and H.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of a chemical manufacturing process unit subject to subparts F, G, or H of this part.

(ii) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with subpart F, G, or H of this part.

(iii) For each start-up, shutdown, and malfunction, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed.

(iv) For continuous monitoring systems used to comply with subpart G, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions.

(3) Records of start-up, shutdown and malfunction and continuous monitoring system calibration and maintenance are not required if they pertain solely to Group 2 emission points, as defined in § 63.111 of subpart G of this part, that are not included in an emissions average.

(d) All reports required under subparts F, G, and H of this part shall be sent to the Administrator at the addresses listed in § 63.13 of subpart A of this part, except that requests for permission to use an alternative means of compliance as provided for in § 63.102(b) of this subpart and application for approval of a nominal efficiency as provided for in § 63.150 (i)(1) through (i)(8) of subpart G of this part shall be submitted to the Director of the EPA Office of Air Quality Planning and Standards rather than to the Administrator or delegated authority.

(1) Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier).

(i) Submittals sent by U.S. Mail shall be postmarked on or before the specified date.

(ii) Submittals sent by other methods shall be received by the Administrator on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(e) Information, data, and analyses used to determine that a chemical manufacturing process unit does not use as a reactant or manufacture as a product any organic hazardous air pollutant shall be recorded. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

§ 63.104 Heat exchange system requirements.

(a) Owners and operators of sources subject to subpart G of this part shall comply with the requirements specified in paragraphs (b) and (c) of this section.

(b) For each heat exchange system that cools process equipment or a process fluid and that is part of a chemical manufacturing process unit that is subject to the provisions of this subpart, the owner or operator shall comply with the requirements of paragraphs (b)(1) through (b)(4) of this section, except as provided in paragraph (c) of this section.

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(i) The cooling water shall be monitored for total HAP, total VOC, or speciated HAP's.

(A) For recirculating heat exchange systems (cooling tower systems), speciated HAP's or total HAP's includes all HAP's listed in table 2 of this subpart, except for benzotrichloride (98077), bis(chloromethyl)ether (542881), maleic anhydride (108316), and methyl isocyanate (624839).

(B) For once-through heat exchange systems, speciated HAP's or total HAP's includes all HAP's listed in table 9 of subpart G of this part.

(C) If monitoring for speciated HAP's, only HAP's that are present in the process fluid in concentrations greater than 5 percent by weight are required to be measured in the cooling water.

(ii) The concentration in the cooling water shall be determined using any EPA-approved method listed in 40 CFR part 136 as long as the method is sensitive to concentrations as low as 1 ppm and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(iii) The samples shall be taken at the entrance and exit of each heat exchange system.

(A) For recirculating heat exchange systems, the entrance and exit are the points at which the cooling water enters the cooling tower after cooling the process fluid and exits the cooling tower prior to cooling the process fluid.

(B) For once-through heat exchange systems, the entrance and exit are the points where the cooling water enters and exits the plant site.

(iv) A minimum of three sets of samples shall be taken of the cooling water at the entrance and exit of the system, for a total of six samples. The average inlet and outlet concentrations shall then be calculated.

(v) A leak is detected if a statistically significant difference in concentration of at least 1 part per million at the 95 percent confidence level is observed.

(2) If a leak is detected, the owner or operator shall comply with the requirements in paragraphs (b)(2)(i) and (b)(2)(ii) of this section, except as provided in paragraph (b)(3) of this section.

(i) The leak shall be repaired as soon as practicable but not later than 45 calendar days after the owner or operator receives results of monitoring tests that indicate that a leak is present. Repair of a leak can include such activities as repairing a leaking heat exchanger or rerouting the waste from a steam jet ejector.

(ii) Once the leak has been repaired, the owner or operator must test the heat exchange system using the procedures described in paragraph (b)(1) of this section to ensure that the leak has been repaired.

(3) Delay of repair of heat exchange systems for which leaks have been detected is allowed if either of the conditions in paragraph (b)(3)(i) or (b)(3)(ii) of this section are met.

(i) If the owner or operator can demonstrate that a shutdown would cause greater emissions than the emissions from the leaking heat exchange system until the next planned shutdown, a shutdown is not required. Repair of this equipment shall occur before the end of the next shutdown.

(ii) If the equipment is isolated from the process and does not remain in HAP service.

(4) If an owner or operator invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the

next semi-annual Periodic Report required by § 63.152(c) of subpart G of this part. If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported.

(i) The owner or operator shall report the presence of the leak and the date that the leak was detected.

(ii) The owner or operator shall report whether or not the leak has been repaired.

(iii) The owner or operator shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in paragraph (b)(3)(i) of this section, documentation of emissions estimates must also be submitted.

(iv) If the leak remains unrepaired, the owner or operator shall report the expected date of repair.

(v) If the leak is repaired, the owner or operator shall report the date of successful repair of the leak.

(c) An owner or operator is not required to meet the requirements in paragraphs (b)(1) and (b)(2) of this section if either of the conditions in paragraph (c)(1) or (c)(2) of this section are met.

(1) The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(2) The once-through heat exchange system currently has an NPDES permit with an allowable discharge limit of less than 1 ppm.

§ 63.105 Maintenance wastewater requirements.

(a) Each owner or operator of a source subject to this subpart shall comply with the requirements of paragraphs (b) through (e) of this section for maintenance wastewaters containing those organic HAP's listed in table 2 of this subpart.

(b) The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:

(1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.

(2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and

(3) Specify the procedures to be followed when clearing materials from process equipment.

(c) The owner or operator shall modify and update the information required by paragraph (b) of this section as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

(d) The owner or operator shall implement the procedures described in paragraphs (b) and (c) of this section as part of the start-up, shutdown, and malfunction plan required under § 63.6(e)(3) of subpart A of this part.

(e) The owner or operator shall maintain a record of the information required by paragraphs (b) and (c) of this section as part of the start-up, shutdown, and malfunction plan required under § 63.6(e)(3) of subpart A of this part.

§ 63.106 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: § 63.102(b) of this subpart, § 63.150(i)(1) through (i)(4) of subpart G of this part, and § 63.177 of subpart H of this part.

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS

Chemical name[a]	CAS No.[b]	Group
Acenaphthene	83329	V
Acetal	105577	V
Acetaldehyde	75070	II
Acetaldol	107891	II
Acetamide	60355	II
Acetanilide	103844	II
Acetic acid	64197	II
Acetic anhydride	108247	II
Acetoacetanilide	102012	III
Acetone	67641	I
Acetone cyanohydrin	75865	V
Acetonitrile	75058	I
Acetophenone	98862	I
Acrolein	107028	IV
Acrylamide	79061	I
Acrylic acid	79107	IV
Acrylonitrile	107131	I
Adiponitrile	111693	I
Alizarin	72480	V
Alkyl anthraquinones	008	V
Allyl alcohol	107186	I
Allyl chloride	107051	IV
Allyl cyanide	109751	IV
Aminophenol sulfonic acid.	0010	V
Aminophenol (p-)	123308	I
Aniline	62533	I
Aniline hydrochloride	142041	III
Anisidine (o-)	90040	II
Anthracene	120127	V
Anthraquinone	84651	III
Azobenzene	103333	I
Benzaldehyde	100527	III
Benzene	71432	I
Benzenedisulfonic acid	98486	I
Benzenesulfonic acid	98113	I
Benzil	134816	III
Benzilic acid	76937	III
Benzoic acid	65850	III
Benzoin	119539	III
Benzonitrile	100470	III
Benzophenone	119619	I
Benzotrichloride	98077	III
Benzoyl chloride	98884	III
Benzyl acetate	140114	III
Benzyl alcohol	100516	III
Benzyl benzoate	120514	III
Benzyl chloride	100447	III
Benzyl dichloride	98873	III
Biphenyl	92524	I
Bisphenol A	80057	III
Bis(Chloromethyl) Ether.	542881	I
Bromobenzene	108861	I
Bromoform	75252	V
Bromonaphthalene	27497514	IV
Butadiene (1,3-)	106990	II
Butanediol (1,4-)	110634	I
Butyl acrylate (n-)	141322	V
Butylene glycol (1,3-)	107880	II
Butyrolacetone	96480	I
Caprolactam	105602	II
Carbaryl	63252	V
Carbazole	86748	V
Carbon disulfide	75150	IV
Carbon tetrabromide	558134	II
Carbon tetrachloride	56235	I
Carbon tetrafluoride	75730	II
Chloral	75876	II
Chloroacetic acid	79118	II
Chloroacetophenone (2-).	532274	I
Chloroaniline (p-)	106478	II
Chlorobenzene	108907	I
2-Chloro-1,3-butadiene (Chloroprene).	126998	II
Chlorodifluoroethane	25497294	V
Chlorodifluoromethane	75456	I
Chloroform	67663	I
Chloronaphthalene	25586430	IV
Chloronitrobenzene (m-).	121733	I
Chloronitrobenzene (o-).	88733	I
Chloronitrobenzene (p-).	100005	I
Chlorophenol (m-)	108430	II
Chlorophenol (o-)	95578	II
Chlorophenol (p-)	106489	II
Chlorotoluene (m-)	108418	III
Chlorotoluene (o-)	95498	III
Chlorotoluene (p-)	106434	III
Chlorotrifluoromethane	75729	II
Chrysene	218019	V
Cresol and cresylic acid (m-).	108394	III

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS—Continued

Chemical name[a]	CAS No.[b]	Group
Cresol and cresylic acid (o-).	95487	III
Cresol and cresylic acid (p-).	106445	III
Cresols and cresylic acids (mixed).	1319773	III
Cumene	98828	I
Cumene hydroperoxide.	80159	I
Cyanoacetic acid	372098	II
Cyclohexane	110827	I
Cyclohexanol	108930	I
Cyclohexanone	108941	I
Cyclohexylamine	108918	III
Cyclooctadienes	29965977	II
Decahydronaphthalene.	91178	IV
Diacetoxy-2-Butene (1,4-).	0012	V
Diaminophenol hydrochloride.	137097	V
Dibromomethane	74953	V
Dichloroaniline (mixed isomers).	27134276	I
Dichlorobenzene (p-)	106467	I
Dichlorobenzene (m-)	541731	I
Dichlorobenzene (o-)	95501	I
Dichlorobenzidine (3,3'-).	91941	I
Dichlorodifluoromethane.	75718	I
Dichloroethane (1,2-) (Ethylenedichloride) (EDC).	107062	I
Dichloroethyl ether (bis(2-chloroethyl)ether).	111444	I
Dichloroethylene (1,2-)	540590	II
Dichlorophenol (2,4-)	120832	III
Dichloropropene (1,3-)	542756	II
Dichlorotetrafluoroethane.	1320372	V
Dichloro-1-butene (3,4-).	760236	II
Dichloro-2-butene (1,4-).	764410	V
Diethanolamine (2,2'-Iminodiethanol).	111422	I
Diethyl sulfate	64675	II
Diethylamine	109897	IV
Diethylaniline (2,6-)	579668	V
Diethylene glycol	111466	I
Diethylene glycol dibutyl ether.	112732	I
Diethylene glycol diethyl ether.	112367	I
Diethylene glycol dimethyl ether.	111966	I
Diethylene glycol monobutyl ether acetate.	124174	I
Diethylene glycol monobutyl ether.	112345	I
Diethylene glycol monoethyl ether acetate.	112152	I
Diethylene glycol monoethyl ether.	111900	I
Diethylene glycol monohexyl ether.	112594	V
Diethylene glycol monomethyl ether acetate.	629389	V
Diethylene glycol monomethyl ether.	111773	I
Dihydroxybenzoic acid (Resorcylic acid)	27138574	V
Dimethylbenzidine (3,3'-).	119937	II
Dimethyl ether	115106	IV
Dimethylformamide (N,N-).	68122	II
Dimethylhydrazine (1,1-).	57147	II
Dimethyl sulfate	77781	I
Dimethyl terephthalate	120616	II
Dimethylamine	124403	IV
Dimethylaminoethanol (2-).	108010	I
Dimethylaniline (N,N)	121697	III
Dinitrobenzenes (NOS)[c].	25154545	I
Dinitrophenol (2,4-)	51285	III
Dinitrotoluene (2,4-)	121142	III
Dioxane (1,4-) (1,4-Diethyleneoxide).	1239	III
Dioxolane (1,3-)	646060	I
Diphenyl methane	101815	I
Diphenyl oxide	101848	I
Diphenyl thiourea	102089	III
Diphenylamine	122394	III
Dipropylene glycol	110985	I
Di-o-tolyguanidine	97392	III
Dodecandedioic acid	693232	I
Dodecyl benzene (branched).	123013	V
Dodecyl phenol (branched).	121158585	V
Dodecylaniline	28675174	V
Dodecylbenzene (n-)	121013	I
Dodecylphenol	27193868	III
Epichlorohydrin (1-chloro-2,3-epoxypropane).	106898	I
Ethanolamine	141435	I
Ethyl acrylate	140885	II
Ethylbenzene	100414	I
Ethyl chloride (Chloroethane).	75003	IV
Ethyl chloroacetate	105395	II
Ethylamine	75047	V
Ethylaniline (N-)	103695	III
Ethylaniline (o-)	578541	III
Ethylcellulose	9004573	V
Ethylcyanoacetate	105566	V
Ethylene carbonate	96491	I
Ethylene dibromide (Dibromoethane).	106934	I
Ethylene glycol	107211	I
Ethylene glycol diacetate.	111557	I
Ethylene glycol dibutyl ether.	112481	V
Ethylene glycol diethyl ether (1,2-diethoxyethane).	629141	I
Ethylene glycol dimethyl ether.	110714	I
Ethylene glycol monoacetate.	542596	V
Ethylene glycol monobutyl ether acetate.	112072	I
Ethylene glycol monobutyl ether.	111762	I
Ethylene glycol monoethyl ether acetate.	111159	I
Ethylene glycol monoethyl ether.	110805	I
Ethylene glycol monohexyl ether.	112254	V
Ethylene glycol monomethyl ether acetate.	110496	I
Ethylene glycol monomethyl ether.	109864	I
Ethylene glycol monooctyl ether.	002	V
Ethylene glycol monophenyl ether.	122996	I
Ethylene glycol monopropyl ether.	2807309	I
Ethylene oxide	75218	I
Ethylenediamine	107153	II
Ethylenediamine tetraacetic acid.	60004	V
Ethylenimine (Aziridine).	151564	II
Ethylhexyl acrylate (2-isomer).	103117	II
Fluoranthene	206440	V
Formaldehyde	50000	I
Formamide	75127	II
Formic acid	64186	II
Fumaric acid	110178	I
Glutaraldehyde	111308	IV
Glyceraldehyde	367475	V
Glycerol	56815	II
Glycerol tri-(polyoxypropylene)ether.	25791962	II
Glycine	56406	II
Glyoxal	107222	II
Hexachlorobenzene	118741	II
Hexachlorobutadiene	87683	II
Hexachloroethane	67721	II
Hexadiene (1,4-)	592450	II
Hexamethylenetetramine.	100970	I
Hexane	110543	V
Hexanetriol (1,2,6-)	106694	IV
Hydroquinone	123319	I
Hydroxyadipaldehyde	141311	V
Isobutyl acrylate	106638	V
Isobutylene	115117	V
Isophorone	78591	IV
Isophorone nitrile	0017	V
Isophthalic acid	121915	III
Isopropylphenol	25168063	III
Linear alkylbenzene	___d	I
Maleic anhydride	108316	I
Maleic hydrazide	123331	I
Malic acid	6915157	I

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS—Continued

Chemical name [a]	CAS No. [b]	Group
Metanilic acid	121471	I
Methacrylic acid	79414	V
Methanol	67561	IV
Methionine	63683	I
Methyl acetate	79209	IV
Methyl acrylate	96333	V
Methyl bromide (Bromomethane).	74839	IV
Methyl chloride (Chloromethane)	74873	IV
Methyl ethyl ketone (2-butanone).	78933	V
Methyl formate	107313	II
Methyl hydrazine	60344	IV
Methyl isobutyl carbinol.	108112	IV
Methyl isobutyl ketone (Hexone).	108101	IV
Methyl isocyanate	624839	IV
Methyl mercaptan	74931	IV
Methyl methacrylate	80626	IV
Methyl phenyl carbinol	98851	II
Methyl tert-butyl ether	1634044	V
Methylamine	74895	IV
Methylaniline (N-)	100618	III
Methylcyclohexane	108872	III
Methylcyclohexanol	25639423	V
Methylcyclohexanone	1331222	III
Methylene chloride (Dichloromethane)	75092	I
Methylene dianiline (4,4'-isomer).	101779	I
Methylene diphenyl diisocyanate (4,4'-) (MDI).	101688	III
Methylionones (a-)	79696	V
Methylpentynol	77758	V
Methylstyrene (a-)	98839	I
Naphthalene	91203	IV
Naphthalene sulfonic acid (a-).	85472	IV
Naphthalene sulfonic acid (b-).	120183	IV
Naphthol (a-)	90153	IV
Naphthol (b-)	135193	IV
Naphtholsulfonic acid (1-).	567180	V
Naphthylamine sulfonic acid (1,4-).	84866	V
Naphthylamine sulfonic acid (2,1-).	81163	V
Naphthylamine (1-)	134327	V
Naphthylamine (2-)	91598	V
Nitroaniline (m-)	99092	II
Nitroaniline (o-)	88744	I
Nitroanisole (o-)	91236	III
Nitroanisole (p-)	100174	III
Nitrobenzene	98953	I
Nitronaphthalene (1-)	86577	IV
Nitrophenol (p-)	100027	III
Nitrophenol (o-)	88755	III
Nitropropane (2-)	79469	II
Nitrotoluene (all isomers).	1321126	III
Nitrotoluene (o-)	88722	III
Nitrotoluene (m-)	99081	III
Nitrotoluene (p-)	99990	III
Nitroxylene	25168041	V

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS—Continued

Chemical name [a]	CAS No. [b]	Group
Nonylbenzene (branched).	1081772	V
Nonylphenol	25154523	V
Octene-1	111660	I
Octylphenol	27193288	III
Paraformaldehyde	30525894	I
Paraldehyde	123637	II
Pentachlorophenol	87865	III
Pentaerythritol	115775	I
Peracetic acid	79210	II
Perchloromethyl mercaptan.	594423	IV
Phenanthrene	85018	V
Phenetidine (p-)	156434	III
Phenol	108952	III
Phenolphthalein	77098	III
Phenolsulfonic acids (all isomers).	1333397	III
Phenyl anthranilic acid (all isomers).	91407	III
Phenylenediamine (p-)	106503	I
Phloroglucinol	108736	III
Phosgene	75445	IV
Phthalic acid	88993	III
Phthalic anhydride	85449	III
Phthalimide	85416	III
Phthalonitrile	91156	III
Picoline (b-)	108996	II
Piperazine	110850	I
Polyethylene glycol	25322683	V
Polypropylene glycol	25322694	V
Propiolactone (beta-)	57578	I
Propionaldehyde	123386	IV
Propionic acid	79094	I
Propylene carbonate	108327	V
Propylene dichloride (1,2-dichloropropane).	78875	IV
Propylene glycol	57556	I
Propylene glycol monomethyl ether.	107982	I
Propylene oxide	75569	I
Pyrene	129000	V
Pyridine	110861	II
p-tert-Butyl toluene	98511	III
Quinone	106514	III
Resorcinol	108463	I
Salicylic acid	69727	III
Sodium methoxide	124414	IV
Sodium phenate	139026	III
Stilbene	588590	III
Styrene	100425	I
Succinic acid	110156	I
Succinonitrile	110612	I
Sulfanilic acid	121573	III
Sulfolane	126330	II
Tartaric acid	526830	I
Terephthalic acid	100210	II
Tetrabromophthalic anhydride.	632791	III
Tetrachlorobenzene (1,2,4,5-).	95943	I
Tetrachloroethane (1,1,2,2-).	79345	II
Tetrachloroethylene (Perchloroethylene).	127184	I
Tetrachlorophthalic anhydride.	117088	III

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS—Continued

Chemical name [a]	CAS No. [b]	Group
Tetraethyl lead	78002	IV
Tetraethylene glycol	112607	I
Tetraethylene-pentamine.	112572	V
Tetrahydrofuran	109999	I
Tetrahydronaphthalene	119642	IV
Tetrahydrophthalic anhydride.	85438	II
Tetramethylene-diamine.	110601	II
Tetramethylethylenediamine.	110189	V
Tetramethyllead	75741	V
Thiocarbanilide	102089	V
Toluene	108883	I
Toluene 2,4 diamine	95807	II
Toluene 2,4 diisocyanate.	584849	II
Toluene diisocyanates (mixture).	26471625	II
Toluene sulfonic acids	104154	III
Toluenesulfonyl chloride.	98599	III
Toluidine (o-)	95534	II
Trichloroaniline (2,4,6-).	634935	III
Trichlorobenzene (1,2,3-).	87616	V
Trichlorobenzene (1,2,4-).	120821	I
Trichloroethane (1,1,1-).	71556	II
Trichloroethane (1,1,2-) (Vinyl trichloride).	79005	II
Trichloroethylene	79016	I
Trichlorofluoromethane	75694	I
Trichlorophenol (2,4,5-).	95954	I
(1,1,2-) Trichloro (1,2,2-) trifluoroethane.	76131	I
Triethanolamine	102716	I
Triethylamine	121448	IV
Triethylene glycol	112276	I
Triethylene glycol dimethyl ether.	112492	I
Triethylene glycol monoethyl ether.	112505	V
Triethylene glycol monomethyl ether.	112356	I
Trimethylamine	75503	IV
Trimethylcyclohexanol	933482	IV
Trimethylcyclohexanone.	2408379	IV
Trimethylcyclohexylamine.	34216347	V
Trimethylolpropane	77996	I
Trimethylpentane (2,2,4-).	540841	V
Tripropylene glycol	24800440	V
Vinyl acetate	108054	II
Vinyl chloride (Chloroethylene).	75014	I
Vinyl toluene	25013154	III
Vinylcyclohexene (4-)	100403	II
Vinylidene chloride (1,1-dichloroethylene).	75354	II

TABLE 1 TO SUBPART F—SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY CHEMICALS—Continued

Chemical name [a]	CAS No. [b]	Group
Vinyl(N-)-pyrrolidone(2-).	88120	V
Xanthates	140898	V
Xylene sulfonic acid	25321419	III
Xylenes (NOS) [c]	1330207	I
Xylene (m-)	108383	I
Xylene (o-)	95476	I
Xylene (p-)	106423	I
Xylenols (Mixed)	1300716	V
Xylidene	1300738	III

[a] Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.
[b] CAS Number = Chemical Abstract Service number.
[c] NOS = not otherwise specified.
[d] No CAS number assigned.

TABLE 2. TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS

Chemical name [a] [d]	CAS No. [b]
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Allyl chloride	107051
Aniline	62533
Anisidine (o-)	90040
Benzene	71432
Benzotrichloride	98077
Benzyl chloride	100447
Biphenyl	92524
Bis(chloromethyl)ether	542881
Bromoform	75252
Butadiene (1,3-)	106990
Caprolactam	105602
Carbon disulfide	75150
Carbon tetrachloride	56235
Chloroacetic acid	79118
Chloroacetophenone (2-)	532274
Chlorobenzene	108907
2-Chloro-1,3-butadiene (Chloroprene).	126998
Chloroform	67663
Cresols and cresylic acids (mixed).	1319773
Cresol and cresylic acid (o-)	95487
Cresol and cresylic acid (m-)	108394
Cresol and cresylic acid (p-)	106445
Cumene	98828
Dichlorobenzene (p-)	106467

TABLE 2. TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS—Continued

Chemical name [a] [d]	CAS No. [b]
Dichlorobenzidine (3,3'-)	91941
Dichloroethane (1,2-) (Ethylene dichloride) (EDC).	107062
Dichloroethylether (Bis(2-chloroethyl)ether).	111444
Dichloropropene (1,3-)	542756
Diethanolamine (2,2'-Iminodiethanol).	111422
Dimethylaniline (N,N-)	121697
Diethyl sulfate	64675
Dimethylbenzidine (3,3'-)	119937
Dimethylformamide (N,N-)	68122
Dimethylhydrazine (1,1-)	57147
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dinitrophenol (2,4-)	51285
Dinitrotoluene (2,4-)	121142
Dioxane (1,4-) (1,4-Diethyleneoxide).	123911
1,2-Diphenylhydrazine	122667
Epichlorohydrin (1-Chloro-2,3-epoxypropane).	106898
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane).	106934
Ethylene glycol	107211
Ethylene oxide	75218
Ethylidene dichloride (1,1-Dichloroethane).	75343
Formaldehyde	50000
Glycol ethers [e]	
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	110543
Hydroquinone	123319
Isophorone	78591
Maleic anhydride	108316
Methanol	67561
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Methyl ethyl ketone (2-Butanone).	78933
Methyl hydrazine	60344
Methyl isobutyl ketone (Hexone)	108101
Methyl isocyanate	624839
Methyl methacrylate	80626
Methyl tert-butyl ether	1634044
Methylene chloride (Dichloromethane).	75092
Methylene diphenyl diisocyanate (4,4'-) (MDI).	101688
Methylenedianiline (4,4'-)	101779
Naphthalene	91203
Nitrobenzene	98953
Nitrophenol (p-)	100027
Nitropropane (2-)	79469
Phenol	108952

TABLE 2. TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS—Continued

Chemical name [a] [d]	CAS No. [b]
Phenylenediamine (p-)	106503
Phosgene	75445
Phthalic anhydride	85449
Polycyclic organic matter [f]	
Propiolactone (beta-)	57578
Propionaldehyde	123386
Propylene dichloride (1,2-Dichloropropane).	78875
Propylene oxide	75569
Quinone	106514
Styrene	100425
Tetrachloroethane (1,1,2,2-)	79345
Tetrachloroethylene (Perchloroethylene).	127184
Toluene	108883
Toluene diamine (2,4-)	95807
Toluene diisocyanate (2,4-)	584849
Toluidine (o-)	95534
Trichlorobenzene (1,2,4-)	120821
Trichloroethane (1,1,1-) (Methyl chloroform).	71556
Trichloroethane (1,1,2-) (Vinyl trichloride).	79005
Trichloroethylene	79016
Trichlorophenol (2,4,5-)	95954
Triethylamine	121448
Trimethylpentane (2,2,4-)	540841
Vinyl acetate	108054
Vinyl chloride (chloroethylene)	75014
Vinylidene chloride (1,1-Dichloroethylene).	75354
Xylenes (NOS)	1330207
Xylene (m-)	108383
Xylene (o-)	95476
Xylene (p-)	106423

[a] For all listings above containing the word "Compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic) as part of that chemical's infrastructure.
[b] Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.
[c] CAS Number=Chemical Abstract Service number.
[d] Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R-(OCH_2CH_2)_n-OR'$ where:
n=1, 2, or 3;
R=alkyl or aryl groups; and
R'=R, H, or groups which, when removed, yield glycol ethers with the structure: $R-(OCH_2CH_2)_n-OH$
Polymers are excluded from the glycol category.
[e] Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 °C.

TABLE 3 TO SUBPART F—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H [a]

Reference	Applies to Subparts F, G, and H	Comment
63.1(a)(1)	Yes	Overlap clarified in §63.101, §63.111, §63.161.
63.1(a)(2)	Yes.	

TABLE 3 TO SUBPART F—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H—Continued

Reference	Applies to Subparts F, G, and H	Comment
63.1(a)(3)	Yes	§63.110 and §63.160(b) of subparts G and H identify which standards are overridden.
63.1(a)(4)	No	Subpart F specifies applicability of each paragraph in subpart A to subparts F, G, and H.
63.1(a)(5)–(a)(9)	No.	
63.1(a)(10)	No	Subparts F, G, and H specify calendar or operating day.
63.1(a)(11)	No	Subpart F §63.103(d) specifies acceptable methods for submitting reports.
63.1(a)(12)–(a)(14)	Yes.	
63.1(b)(1)	No	Subpart F specifies applicability.
63.1(b)(2)	Yes.	
63.1(b)(3)	No.	
63.1(c)(1)	No	Subpart F specifies applicability.
63.1(c)(2)	No	Area sources are not subject to subparts F, G, and H.
63.1(c)(3)	No.	
63.1(c)(4)	Yes.	
63.1(c)(5)	No	Subparts G and H specify applicable notification requirements.
63.1(d)	No.	
63.1(e)	No	Subparts F, G, and H established before permit program.
63.2	Yes	Subpart F §63.103 specifies those subpart A definitions that apply to the HON. Subpart F definition of "source" is equivalent to subpart A definition of "affected source".
63.3	No	Units of measure are spelled out in subparts F, G, and H.
63.4(a)(1)–(a)(3)	Yes.	
63.4(a)(4)	No.	
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)(1)	Yes	Except replace term "source" and "stationary source" in §63.5(a)(1) of subpart A with "affected source".
63.5(a)(2)	Yes.	
63.5(b)(1)	Yes.	
63.5(b)(2)	No.	
63.5(b)(3)	Yes.	
63.5(b)(4)	Yes	Except the cross reference to §63.9(b) is changed to §63.9(b) (4) and (5). Subpart F overrides §63.9 (b)(2) and (b)(3).
63.5(b)(5)	Yes.	
63.5(b)(6)	Yes.	
63.5(c)	No.	
63.5(d)(1)(i)	No	Subpart G §63.151(b) (2)(ii) and (2)(iii) specify the applicability and timing of this submittal for sources subject to subpart G.
63.5(d)(1)(ii)	Yes	Except that for affected sources subject to subpart G instead of the information in §63.5(d)(1)(ii)(H), submit the implementation plan information specified in §63.151(e).
63.5(d)(1)(iii)	No.	Subpart G requires submittal of the notification of compliance status in §63.152(b)
63.5(d)(2)	No.	
63.5(d)(3)	Yes	Except §63.5(d)(3)(ii) does not apply to subpart G.
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes.	
63.5(f)(3)	Yes	Except the cross-reference to §63.5(d)(1) is changed to §63.151(b)(ii) of subpart G, and the cross-reference to (b)(2) does not apply
63.5(f)(4)	Yes.	
63.6(a)	Yes.	
63.6(b)(1)	No	Subparts F and H specify compliance dates for sources subject to subparts F, G, and H.
63.6(b)(2)	No.	
63.6(b)(3)	Yes.	
63.6(b)(4)	No	May apply when standards are proposed under section 112(f) of the Act.
63.6(b)(5)	No	Subparts G and H include notification requirements.
63.6(b)(6)	No.	
63.6(b)(7)	No.	
63.6(c)(1)	No	Subpart F specifies the compliance date.
63.6(c)(2)	No.	
63.6(c)(3)	No.	
63.6(c)(4)	No.	
63.6(c)(5)	Yes.	
63.6(d)	No.	
63.6(e)	Yes	Does not apply to Group 2 emission points unless they are included in an emissions average.

TABLE 3 TO SUBPART F—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H[a]—Continued

Reference	Applies to Subparts F, G, and H	Comment
63.6(f)(1)	No	§63.102(a) of subpart F specifies when the standards apply.
63.6(f)(2)(i)	Yes.	
63.6(f)(2)(ii)	Yes	§63.151(c)(2) of subpart G specifies the use of monitoring data in determining compliance with subpart G.
63.6(f)(2)(iii) (A), (B), and (C)	Yes.	
63.6(f)(2)(iii)(D)	No.	
63.6(f)(2)(iv)	Yes.	
63.6(f)(2)(v)	Yes.	
63.6(f)(3)	Yes.	
63.6(g)	No	Procedures specified in §63.102(b) of subpart F
63.6(h)	No.	
63.6(i)(1)	Yes.	
63.6(i)(2)	Yes.	
63.6(i)(3)	No	§63.151(a)(6) of subpart G specifies procedures
63.6(i)(4)(i)(A)	Yes.	
63.6(i)(4)(i)(B)	No	Dates are specified in §63.151(a)(6) of subpart G.
63.6(i)(4)(ii)	No.	
63.6(i)(5)–(14)	Yes.	
63.6(i)(15)	No.	
63.6(i)(16)	Yes.	
63.6(j)	Yes.	
63.7(a)(1)	No	Subparts F, G, and H specify required testing and compliance demonstration procedures.
63.7(a)(2)	No	Test results must be submitted in the notification of compliance status due 150 days after compliance date, as specified in §63.152(b) of subparts G and H.
63.7(a)(3)	Yes.	
63.7(b)	No.	
63.7(c)	No.	
63.7(d)	Yes.	
63.7(e)(1)	Yes.	
63.7(e)(2)	Yes.	
63.7(e)(3)	No	Subparts F, G, and H specify test methods and procedures.
63.7(e)(4)	Yes.	
63.7(f)	No	Subparts F, G, and H specify applicable methods and provide alternatives.
63.7(g)	No	Performance test reporting specified in §63.152(b) of subparts G and H.
63.7(h)(1)	Yes.	
63.7(h)(2)	Yes.	
63.7(h)(3)	No	§63.103(b)(5) of subpart F specifies provisions for requests to waive performance tests.
63.7(h)(4)	No.	
63.7(h)(5)	Yes.	
63.8(a)(1)	Yes.	
63.8(a)(2)	No.	
63.8(a)(3)	No.	
63.8(a)(4)	Yes.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subparts G and H specify locations to conduct monitoring.
63.8(b)(3)	Yes.	
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	No	Addressed by periodic reports in §63.152(c) of subpart G.
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	HON specifies monitoring frequency in §63.111 and §63.152(f) of subpart G.
63.8(c)(5)–(c)(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)–(f)(3)	Yes.	
63.8(f)(4)(i)	No	Timeframe for submitting request specified in §63.152(g)(1) of subpart G.
63.8(f)(4)(ii)	Yes.	
63.8(f)(4)(iii)	No.	
63.8(f)(5)(i)	Yes.	
63.8(f)(5)(ii)	No.	
63.8(f)(5)(iii)	Yes.	
63.8(f)(6)	No	Subparts G and H do not require CEM's.
63.8(g)	No	Data reduction procedures specified in §63.152(f) of subpart G.
63.9(a)	Yes.	
63.9(b)(1)(i)	No	Specified in §63.151(b)(2)(ii) of subpart G.
63.9(b)(1)(ii)	No.	
63.9(b)(2)	No	Initial notification provisions are specified in §63.151(b) of subpart G.

TABLE 3 TO SUBPART F—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H—Continued

Reference	Applies to Subparts F, G, and H	Comment
63.9(b)(3)	No.	
63.9(b)(4)	Yes	Except that the notification in § 63.9(b)(4)(i) shall be submitted at the time specified in § 63.151(b)(2)(ii) of subpart G.
63.9(b)(5)	Yes	Except that the notification in § 63.9(b)(5) shall be submitted at the time specified in § 63.151(b)(2)(ii) of subpart G.
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No.	
63.9(f)	No.	
63.9(g)	No.	
63.9(h)	No	§ 63.152(b) of subpart G specifies notification of compliance status requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	No	§ 63.103(c) of subpart F specifies record retention requirements.
63.10(b)(2)	No	§ 63.103(c) of subpart F specifies required records.
63.10(b)(3)	No.	
63.10(c)	No.	
63.10(d)(1)	No.	
63.10(d)(2)	No	§ 63.152(b) of subpart F specifies performance test reporting.
63.10(d)(3)	No.	
63.10(d)(4)	Yes.	
63.10(d)(5)(i)	Yes	Except that reports required by § 63.10(d)(5)(i) shall be submitted at the time specified in § 63.152(c) of subpart G.
63.10(d)(5)(ii)	Yes.	
63.10(e)	No.	
63.10(f)	Yes.	
63.11–63.15	Yes.	

[a] Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not necessarily required.

[b] The plan, and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.

Subpart G—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater

§ 63.110 Applicability.

(a) This subpart applies to all process vents, storage vessels, transfer racks, and wastewater streams within a source subject to subpart F of this part.

(b) Overlap with other regulations for storage vessels.

(1) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60 subpart Kb is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 storage vessel that is also subject to the provisions of 40 CFR part 61 subpart Y is required to comply only with the provisions of this subpart.

(3) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 2 storage vessel that is also subject to the provisions of 40 CFR part 61 subpart Y is required to comply only with the provisions of 40 CFR part 61 subpart Y. The recordkeeping and reporting requirements of 40 CFR part 61 subpart Y will be accepted as compliance with the recordkeeping and reporting requirements of this subpart.

(c) Overlap with other regulations for transfer racks.

(1) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 transfer rack that is also subject to the provisions of 40 CFR part 61 subpart BB is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 2 transfer rack that is also subject to the provisions of 40 CFR part 61 subpart BB is required to comply with the provisions of either paragraph (c)(2)(i) or (c)(2)(ii) of this subpart.

(i) If the transfer rack is subject to the control requirements specified in § 61.302 of 40 CFR part 61 subpart BB, then the transfer rack is required to comply with the control requirements of § 61.302 of 40 CFR part 61 subpart BB. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 61 subpart BB or with the testing, monitoring, recordkeeping, and reporting requirements specified in this subpart for Group 1 transfer racks. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in § 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61 subpart BB, then the transfer rack is required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks and is exempt from the reporting and recordkeeping requirements in 40 CFR part 61 subpart BB.

(d) Overlap with other regulations for process vents.

(1) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60 subpart III is required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the

provisions of 40 CFR part 60 subpart III shall determine requirements according to paragraphs (d)(2)(i) and (d)(2)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60 subpart III, the process vent is required to comply with the provisions in paragraphs (d)(2)(i)(A) through (d)(2)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in § 60.612 of 40 CFR part 60 subpart III. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60 subpart III or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in § 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60 subpart III, the process vent is required to comply only with the provisions specified in paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart III for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart III for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60 subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60 subpart III require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60 subpart III for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(3) After the compliance dates specified in 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60 subpart III elects to control the process vent to the levels required in § 63.113 (a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in § 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60 subpart III.

(4) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60 subpart NNN is required to comply only with the provisions of this subpart.

(5) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60 subpart NNN shall determine requirements according to paragraphs (d)(5)(i) and (d)(5)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60 subpart NNN, the process vent is required to comply with the provisions in paragraphs (d)(5)(i)(A) through (d)(5)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in § 60.662 of 40 CFR part 60 subpart NNN. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60 subpart NNN or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in § 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60 subpart NNN, the process vent is required to comply only with the provisions specified in paragraphs (d)(5)(ii)(A) through (d)(5)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart NNN for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart NNN for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60 subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60 subpart NNN require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60 subpart NNN for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(6) After the compliance dates specified in § 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60 subpart NNN elects to control the process vent to the levels required in § 63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in § 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60 subpart NNN.

(7) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 process vent that is also subject to the provisions of 40 CFR part 60 subpart RRR is required to comply only with the provisions of this subpart.

(8) After the compliance dates specified in § 63.100 of subpart F of this

part, the owner or operator of a Group 2 process vent that is also subject to the provisions of 40 CFR part 60 subpart RRR shall determine requirements according to paragraphs (d)(8)(i) and (d)(8)(ii) of this section.

(i) If the Group 2 process vent has a TRE value less than 1 as determined by the procedures in 40 CFR part 60 subpart RRR, the process vent is required to comply with the provisions in paragraphs (d)(8)(i)(A) through (d)(8)(i)(C) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting; and

(C) The control requirements in § 60.702 of 40 CFR part 60 subpart RRR. The owner or operator may elect to comply with either the associated testing, monitoring, reporting, and recordkeeping requirements of 40 CFR part 60 subpart RRR or with the testing, monitoring, reporting, and recordkeeping requirements specified in this subpart for Group 1 process vents. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in § 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the Group 2 process vent has a TRE value greater than or equal to 1 as determined by the procedures in 40 CFR part 60 subpart RRR, the process vent is required to comply only with the provisions specified in paragraphs (d)(8)(ii)(A) through (d)(8)(ii)(D) of this section.

(A) The provisions in both this subpart and in 40 CFR part 60 subpart RRR for applicability determination and the associated recordkeeping and reporting;

(B) The provisions in both this subpart and in 40 CFR part 60 subpart RRR for process changes and recalculation of the TRE index value and the associated recordkeeping and reporting;

(C) If the provisions of both this subpart and 40 CFR part 60 subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in this subpart for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(D) If only the provisions of 40 CFR part 60 subpart RRR require continuous monitoring of recovery device operating parameters, the process vent is required to comply only with the provisions that are specified in 40 CFR part 60 subpart RRR for continuous monitoring of recovery device operating parameters and the associated testing, reporting, and recordkeeping.

(9) After the compliance dates specified in § 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 60 subpart RRR elects to control the process vent to the levels required in § 63.113(a)(1) or (a)(2) of this subpart without calculating the TRE index value for the vent according to the procedures specified in § 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 60 subpart RRR.

(e) Overlap with other regulations for wastewater.

(1) After the compliance dates specified in § 63.100 of subpart F of this part, a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR part 61 subpart FF is required to comply with the provisions of both this subpart and 40 CFR part 61 subpart FF.

(2) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of any Group 1 or Group 2 wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272 shall comply with the requirements of either paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) For each Group 1 or Group 2 wastewater stream, the owner or operator shall comply with the more stringent control requirements (e.g., waste management units, numerical treatment standards, etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272. The owner or operator shall keep a record of the information used to determine which requirements were the most stringent and shall submit this information if requested by the Administrator; or

(ii) The owner or operator shall submit as part of the implementation Plan required by § 63.151(c) of this subpart or as part of an operating permit application a request for a case-by-case determination of requirements. The request shall include the information specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) Identification of the wastewater streams that are subject to this subpart and to provisions in 40 CFR parts 260 through 272, determination of the Group 1/Group 2 status of those streams, determination of whether or not those streams are listed or exhibit a characteristic as specified in 40 CFR part 261, and determination of whether the waste management unit is subject to permitting under 40 CFR part 270.

(B) Identification of the specific control requirements (e.g., waste management units, numerical treatment standards, etc.) and testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272.

(f) Overlap with the Vinyl Chloride NESHAP.

(1) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of any Group 1 process vent that is also subject to the provisions of 40 CFR part 61 subpart F shall comply only with the provisions of this subpart.

(2) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of any Group 2 process vent that is also subject to the provisions of 40 CFR part 61 subpart F shall comply with the provisions specified in either paragraph (f)(2)(i) or (f)(2)(ii) of this subpart.

(i) If the process vent is already controlled by a combustion device meeting the requirements of 40 CFR part 61 subpart F, then the owner or operator shall comply with either the associated testing, monitoring, reporting, and recordkeeping provisions for Group 1 process vents in this subpart or the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61 subpart F. The owner or operator shall indicate this decision in either the Notification of Compliance Status specified in § 63.152(b) of this subpart or in an operating permit application or amendment.

(ii) If the process vent is not already controlled by a combustion device, then the owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61 subpart F.

(3) After the compliance dates specified in § 63.100 of subpart F of this part, if an owner or operator of a process vent subject to this subpart that is also subject to the provisions of 40 CFR part 61 subpart F elects to control the process vent to the levels required in § 63.113(a)(1) or (a)(2) of this subpart

without calculating the TRE index value for the vent according to the procedures specified in § 63.115(d) of this subpart then the owner or operator shall comply with the testing, monitoring, reporting, and recordkeeping provisions of this subpart and shall be exempt from the testing, monitoring, reporting, and recordkeeping provisions of 40 CFR part 61 subpart F.

(4) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR part 61 subpart F shall comply with the provisions of either paragraph (f)(4)(i) or (f)(4)(ii) of this section.

(i) The owner or operator shall comply with the provisions of both this subpart and 40 CFR part 61 subpart F or

(ii) The owner or operator may submit, as part of the Implementation Plan required by § 63.151(c) of this subpart or as part of an operating permit application, information demonstrating how compliance with 40 CFR part 61 subpart F will also ensure compliance with this subpart. The information shall include a description of the testing, monitoring, reporting, and recordkeeping that will be performed.

§ 63.111 Definitions.

All terms used in this subpart shall have the meaning given them in the Act, in subpart F of this part, and in this section, as follows.

Air oxidation reactor means a device or vessel in which air, or a combination of air and oxygen, is used as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds. Air oxidation reactor includes the product separator and any associated vacuum pump or steam jet.

Automated monitoring and recording system means any means of measuring values of monitored parameters and creating a hard copy or computer record of the measured values that does not require manual reading of monitoring instruments and manual transcription of data values. Automated monitoring and recording systems include, but are not limited to, computerized systems and strip charts.

Average concentration, as used in the wastewater provisions, means the flow-weighted annual average concentration, as determined according to the procedures specified in § 63.144(b) of this subpart.

Average flow rate, as used in the wastewater provisions, means the annual average flow rate, as determined according to the procedures specified in § 63.144(e) of this subpart.

Batch operation means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a chemical manufacturing process unit and distilled or reacted at one time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh batch is started.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator.

By compound means by individual stream components, not carbon equivalents.

Car-seal means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device or back into the process.

Combustion device means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of organic hazardous air pollutant vapors.

Container, as used in the wastewater provisions, means any portable waste management unit that has a capacity greater than or equal to 0.1 m^3 in which a material is stored, transported, treated, or otherwise handled. Examples of containers are drums, barrels, tank trucks, barges, dumpsters, tank cars, dump trucks, and ships.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.152(f) of this subpart.

Continuous recorder means a data recording device that either records an instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values.

Continuous seal means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

Continuous vapor processing system means a vapor processing system that treats total organic compound vapors collected from tank trucks or railcars on a demand basis without intermediate accumulation in a vapor holder.

Control device means any equipment used for recovering or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents, recovery devices are not considered control devices and for a steam stripper, a primary condenser is not considered a control device.

Cover, as used in the wastewater provisions, means a device or system which is placed on or over a waste management unit containing wastewater or residuals so that the entire surface area is enclosed and sealed to minimize air emissions. A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit such as access hatches, sampling ports, and gauge wells provided that each opening is closed and sealed when not in use. Examples of covers include a fixed roof installed on a wastewater tank, a lid installed on a container, and an air-supported enclosure installed over a waste management unit.

Distillate receiver means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.

Distillation unit means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.

Duct work means a conveyance system that does not meet the definition of hard-piping.

External floating roof means a pontoon-type or double-deck-type cover that rests on the liquid surface in a storage vessel or waste management unit with no fixed roof.

Fill or *filling* means the introduction of organic hazardous air pollutant into a storage vessel or the introduction of a wastewater stream or residual into a waste management unit, but not necessarily to complete capacity.

First attempt at repair means to take action for the purpose of stopping or

reducing leakage of organic material to the atmosphere.

Fixed roof means a cover that is mounted on a waste management unit or storage vessel in a stationary manner and that does not move with fluctuations in liquid level.

Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

Floating roof means a cover consisting of a double deck, pontoon single deck, internal floating cover or covered floating roof, which rests upon and is supported by the liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and waste management unit or storage vessel wall.

Flow indicator means a device which indicates whether gas flow is present in a line.

Group 1 process vent means a process vent for which the flow rate is greater than or equal to 0.005 standard cubic meter per minute, the total organic HAP concentration is greater than or equal to 50 parts per million by volume, and the total resource effectiveness index value, calculated according to § 63.115 of this subpart, is less than or equal to 1.0.

Group 2 process vent means a process vent for which the flow rate is less than 0.005 standard cubic meter per minute, the total organic HAP concentration is less than 50 parts per million by volume or the total resource effectiveness index value, calculated according to § 63.115 of this subpart, is greater than 1.0.

Group 1 storage vessel means a storage vessel that meets the criteria for design storage capacity and stored-liquid maximum true vapor pressure specified in table 5 of this subpart for storage vessels at existing sources, and in table 6 of this subpart for storage vessels at new sources.

Group 2 storage vessel means a storage vessel that does not meet the definition of a Group 1 storage vessel.

Group 1 transfer rack means a transfer rack that annually loads greater than or equal to 0.65 million liter of liquid products that contain organic hazardous air pollutants with a rack weighted average vapor pressure greater than or equal to 10.3 kilopascals.

Group 2 transfer rack means a transfer rack that does not meet the definition of Group 1 transfer rack.

Group 1 wastewater stream means a process wastewater stream from a process unit at an existing or new source with a total volatile organic hazardous air pollutant average concentration greater than or equal to 10,000 parts per million by weight of compounds listed in table 9 of this subpart at any flowrate; or a process wastewater stream from a process unit at an existing or new source that has an average flow rate greater than or equal to 10 liters per minute and a total volatile organic hazardous air pollutant average concentration greater than or equal to 1,000 parts per million by weight. A process wastewater stream from a process unit at a new source that has an average flow rate greater than or equal to 0.02 liter per minute and an average concentration of 10 parts per million by weight or greater of any one of the compounds listed in table 9 of this subpart is also considered a Group 1 wastewater stream. Average flow rate and total volatile organic hazardous air pollutant average concentration are determined for the point of generation of each process wastewater stream.

Group 2 wastewater stream means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

Halogenated vent stream or *halogenated stream* means a vent stream from a process vent or transfer operation determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in § 63.115(d)(2)(v) of this subpart.

Halogens and *hydrogen halides* means hydrogen chloride (HCl), chlorine (Cl_2), hydrogen bromide (HBr), bromine (Br_2), and hydrogen fluoride (HF).

Hard-piping means tubing that is manufactured and properly installed using good engineering judgement and standards, such as ANSI B31-3.

Incinerator means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to permit the incoming vent stream or combustion air.

Individual drain system means the system used to convey wastewater streams from a process unit, product storage tank, feed storage tank, or waste management unit to a waste management unit. The term includes all process drains and junction boxes, together with their associated sewer lines and other junction boxes, manholes, sumps, and lift stations, down to the receiving waste management unit. A segregated stormwater sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and which is segregated from all other individual drain systems, is excluded from this definition.

Intermittent vapor processing system means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compound vapors collected from tank trucks or railcars, and treats the accumulated vapors only during automatically controlled cycles.

Internal floating roof means a cover that rests or floats on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel or waste management unit that has a permanently affixed roof.

Junction box means a manhole or access point to a wastewater sewer system line or a lift station.

Liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel or waste management unit and the floating roof. The seal is mounted continuously around the circumference of the vessel or unit.

Loading cycle means the time period from the beginning of filling a tank truck or railcar until flow to the control device ceases, as measured by the flow indicator.

Loading rack means a single system used to fill tank trucks and railcars at a single geographic site. Loading equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate loading racks.

Mass flow rate, as used in the wastewater provisions, means the mass of a constituent in a wastewater stream, determined by multiplying the average concentration of that constituent in the wastewater stream by the annual volumetric flow rate and density of the wastewater stream.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the total organic HAP's in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum

Institute Publication 2517, Evaporative Loss From External Floating-Roof Tanks (incorporated by reference as specified in § 63.14 of subpart A of this part); or

(2) As obtained from standard reference texts; or

(3) As determined by the American Society for Testing and Materials Method D2879–83 (incorporated by reference as specified in § 63.14 of subpart A of this part); or

(4) Any other method approved by the Administrator.

Metallic shoe seal or *mechanical shoe seal* means a metal sheet that is held vertically against the wall of the storage vessel by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

Non-automated monitoring and recording system means manual reading of values measured by monitoring instruments and manual transcription of those values to create a record. Non-automated systems do not include strip charts.

Oil-water separator or *organic-water separator* means a waste management unit, generally a tank used to separate oil or organics from water. An oil-water or organic-water separator consists of not only the separation unit but also the *forebay and other separator basins*, skimmers, weirs, grit chambers, sludge hoppers, and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit, clarifier, or biological treatment unit. Examples of an oil-water or organic-water separator include, but are not limited to, an American Petroleum Institute separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

Operating permit means a permit required by 40 CFR part 70 or part 71.

Organic hazardous air pollutant or *organic HAP* means any of the chemicals listed in table 2 of subpart F of this part.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds exiting a recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity.

Point of generation means the location where process wastewater exits the process unit equipment.

[Note: The regulation allows determination of the characteristics of a wastewater stream (1) at the point of generation or (2) downstream of the point of generation if corrections are made for changes in flow rate and VOHAP concentration. Such changes include losses by air emissions; reduction of VOHAP concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or VOHAP concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP's.]

Primary fuel means the fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process heater means a device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.

Process unit has the same meaning as *chemical manufacturing process unit* as defined in § 63.101 of subpart F of this part and means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. For the purpose of this subpart, process unit or chemical manufacturing process unit includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations (as defined in this section); and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product.

Process wastewater stream means a stream that contains process wastewater as defined in § 63.101 of subpart F of this part.

Product separator means phase separators, flash drums, knock-out drums, decanters, degassers, and condenser(s) including ejector-condenser(s) associated with a reactor or an air oxidation reactor.

Product tank, as used in the wastewater provisions, means a stationary unit that is designed to contain an accumulation of materials that are fed to or produced by a process unit, and is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. This term has the same meaning as a product storage vessel.

Product tank drawdown means any material or mixture of materials discharged from a product tank for the purpose of removing water or other contaminants from the product tank.

Rack-weighted average partial pressure means the throughput weighted average of the average maximum true vapor pressure of liquids containing organic HAP's transferred at a transfer rack. The rack-weighted average partial pressure shall be calculated using the equation below:

$$P = \frac{\sum P_i G_i}{\sum G_i}$$

where:

P=Rack-weighted average partial pressure, kilopascals.

P_i=Individual HAP maximum true vapor pressure, kilopascals.

G_i=Yearly volume of individual organic HAP transferred at the rack, liters.

Reactor means a device or vessel in which one or more chemicals or reactants, other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed. Reactor includes the product separator and any associated vacuum pump or steam jet.

Recovery device means an individual unit of equipment capable of and used for the purpose of recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Relief valve means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

Reference control technology for process vents means a combustion device used to reduce organic HAP emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.

Reference control technology for storage vessels means an internal floating roof meeting the specifications of § 63.119(b) of this subpart, an external floating roof meeting the specifications of § 63.119(c) of this subpart, an external floating roof converted to an internal floating roof meeting the specifications of § 63.119(d) of this subpart, or a closed-vent system to a control device achieving 95-percent reduction in organic HAP emissions.

For purposes of emissions averaging, these four technologies are considered equivalent.

Reference control technology for transfer racks means a combustion device or recovery device used to reduce organic HAP emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume; or a vapor balancing system.

Reference control technology for wastewater means the use of: (1) Controls specified in § 63.133 through § 63.137.

(2) A steam stripper meeting the specifications of § 63.138(g) of this subpart or any of the other alternative control measures specified in § 63.138 (b), (c), (d), and (e) of this subpart; and

(3) A control device to reduce by 95 percent (or to an outlet concentration of 20 parts per million by volume for combustion devices) the organic HAP emissions in the vapor streams vented from wastewater tanks, oil-water separators, containers, surface impoundments, individual drain systems, and treatment processes (including the design steam stripper) managing wastewater.

Residual means any HAP-containing water or organic that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organics (nondestructive unit). Examples of residuals from nondestructive wastewater management units are: The organic layer and bottom residue removed by a decanter or organic-water separator and the overheads from a steam stripper or air stripper. Examples of materials which are not residuals are: Silt; mud; leaves; bottoms from a steam stripper or air stripper; and sludges, ash, or other materials removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.

Secondary fuel means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.

Sewer line means a lateral, trunk line, branch line, or other conduit including, but not limited to, grates, trenches, etc., used to convey wastewater streams or residuals to a downstream waste management unit.

Simultaneous loading means, for a shared control device, loading of organic HAP materials from more than one transfer arm at the same time such that the beginning and ending times of loading cycles coincide or overlap and there is no interruption in vapor flow to the shared control device.

Single-seal system means a floating roof having one continuous seal that completely covers the space between the wall of the storage vessel and the edge of the floating roof. This seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

Specific gravity monitoring device means a unit of equipment used to monitor specific gravity and having an accuracy of ±0.02 specific gravity units.

Steam jet ejector means a steam nozzle which discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.

Surface impoundment means a waste management unit which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or waste containing free liquids. A surface impoundment is used for the purpose of treating, storing, or disposing of wastewater or residuals, and is not an injection well. Examples of surface impoundments are equalization, settling, and aeration pits, ponds, and lagoons.

Temperature monitoring device means a unit of equipment used to monitor temperature and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 degrees Celsius (°C), whichever is greater.

The 33/50 program means a voluntary pollution prevention initiative established and administered by the EPA to encourage emissions reductions of 17 chemicals emitted in large volumes by industrial facilities. The EPA Document Number 741–K–92–001 provides more information about the 33/50 program.

Total organic compounds or *TOC*, as used in the process vents provisions, means those compounds measured according to the procedures of Method 18 of 40 CFR part 60, appendix A.

Total volatile organic hazardous air pollutant concentration means the sum of the concentrations of all individually-speciated organic HAP's, as measured by Method 305 in appendix A of this part.

Total resource effectiveness index value or *TRE index value* means a measure of the supplemental total resource requirement per unit reduction of organic HAP associated with a process vent stream, based on vent stream flow rate, emission rate of organic HAP, net heating value, and corrosion properties (whether or not the vent stream contains halogenated compounds), as quantified by the equations given under § 63.115 of this subpart.

Treatment process means a specific technique that removes or destroys the organics in a wastewater or residual stream such as a steam stripping unit, thin-film evaporation unit, waste incinerator, biological treatment unit, or any other process applied to wastewater streams or residuals to comply with § 63.138 of this subpart. Most treatment processes are conducted in tanks. Treatment processes are a subset of waste management units.

Vapor collection system, as used in the transfer provisions, means the equipment used to collect and transport organic HAP vapors displaced during the loading of tank trucks or railcars. This does not include the vapor collection system that is part of any tank truck or railcar vapor collection manifold system.

Vapor-mounted seal means a continuous seal that completely covers the annular space between the wall of the storage vessel or waste management unit and the edge of the floating roof and is mounted such that there is a vapor space between the stored liquid and the bottom of the seal.

Vent stream, as used in the process vent provisions, means a process vent as defined in § 63.101 of subpart F of this part.

Volatile organic concentration or *VO concentration* refers to the concentration of organic compounds (including both HAP and non-HAP organic compounds) in a wastewater stream that is measured by Method 25D, as found in 40 CFR part 60, appendix A.

Volatile organic hazardous air pollutant concentration or *VOHAP concentration* means the concentration of an individually-speciated organic HAP in a wastewater stream or a residual that is measured by Method 305 in appendix A of this part.

Waste management unit means any component, piece of equipment, structure, or transport mechanism used in conveying, storing, treating, or disposing of wastewater streams or residuals. Examples of waste management units include wastewater tanks, air flotation units, surface impoundments, containers, oil-water or organic-water separators, individual drain systems, biological treatment units, waste incinerators, and organic removal devices such as decanters, steam and air stripper units, and thin-film evaporation units.

Wastewater stream means a stream that contains only wastewater as defined in § 63.101 of subpart F of this part.

Wastewater tank means a stationary waste management unit that is designed to contain an accumulation of wastewater or residuals and is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support. Wastewater tanks used for flow equalization are included in this definition.

Water seal controls means a seal pot, p-leg trap, or other type of trap filled with water (e.g. flooded sewers that maintain water levels adequate to prevent air flow through the system) that creates a water barrier between the sewer line and the atmosphere. The water level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

§ 63.112 Emission standard.

(a) The owner or operator of an existing source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the following equation:

$$E_A = 0.02\Sigma EPV_1 + \Sigma EPV_2 + 0.05\Sigma ES_1 + \Sigma ES_2 + 0.02\Sigma ETR_1 + \Sigma ETR_2 + \Sigma EWW_{1C} + \Sigma EWW_2$$

where:

E_A = Emission rate, megagrams per year, allowed for the source.

$0.02\Sigma EPV_1$ = Sum of the residual emissions, megagrams per year, from all Group 1 process vents, as defined in § 63.111 of this subpart.

ΣEPV_2 = Sum of the emissions, megagrams per year, from all Group 2 process vents as defined in § 63.111 of this subpart.

$0.05\Sigma ES_1$ = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in § 63.111 of this subpart.

ΣES_2 = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in § 63.111 of this subpart.

$0.02\Sigma ETR_1$ = Sum of the residual emissions, megagrams per year, from all Group 1 transfer racks, as defined in § 63.111 of this subpart.

ΣETR_2 = Sum of the emissions, megagrams per year, from all Group 2 transfer racks, as defined in § 63.111 of this subpart.

ΣEWW_{1C} = Sum of the residual emissions from all Group 1 wastewater streams, as defined in § 63.111 of this subpart. This term is calculated for each Group 1 stream according to the equation for EWW_{1C} in § 63.150(g)(5)(i) of this subpart.

ΣEWW_2 = Sum of emissions from all Group 2 wastewater streams, as defined in § 63.111 of this subpart.

The emissions level represented by this equation is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(b) The owner or operator of a new source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the equation in paragraph (a) of this section.

(c) The owner or operator of an existing source shall demonstrate compliance with the emission standard in paragraph (a) of this section by following the procedures specified in paragraph (e) of this section for all emission points, or by following the emissions averaging compliance approach specified in paragraph (f) of this section for some emission points and the procedures specified in paragraph (e) of this section for all other emission points within the source.

(d) The owner or operator of a new source shall demonstrate compliance with the emission standard in paragraph (b) of this section only by following the procedures in paragraph (e) of this section. The owner or operator of a new source may not use the emissions averaging compliance approach.

(e) The owner or operator of an existing or new source may comply with the process vent provisions in §§ 63.113 through 63.118 of this subpart, the storage vessel provisions in §§ 63.119 through 63.123 of this subpart, the transfer operation provisions in §§ 63.126 through 63.130 of this subpart, the wastewater provisions in §§ 63.131 through 63.147 of this subpart, and the leak inspection provisions in § 63.148 of this subpart.

(1) The owner or operator using this compliance approach shall also comply with the requirements of § 63.151 and § 63.152 of this subpart, as applicable.

(2) The owner or operator using this compliance approach is not required to calculate the annual emission rate specified in paragraph (a) of this section.

(f) The owner or operator of an existing source may elect to control some of the emission points within the source to different levels than specified under §§ 63.113 through 63.148 of this subpart by using an emissions averaging compliance approach as long as the overall emissions for the source do not exceed the emission level specified in paragraph (a) of this section. The owner or operator using emissions averaging must meet the requirements in paragraphs (f)(1) and (f)(2) of this section.

(1) Calculate emission debits and credits for those emission points involved in the emissions average as specified in § 63.150 of this subpart; and

(2) Comply with the requirements of § 63.151 and § 63.152 of this subpart, as applicable.

(g) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (e) of this section to comply with the emission standard in paragraph (a) of this section.

§ 63.113 Process vent provisions—reference control technology.

(a) The owner or operator of a Group 1 process vent as defined in subpart F of this part and in this subpart shall comply with the requirements of paragraph (a)(1), (a)(2), or (a)(3) of this section.

(1) Reduce emissions of organic HAP using a flare.

(i) The flare shall comply with the requirements of § 63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in § 63.111 of this subpart, shall not be vented to a flare.

(2) Reduce emissions of total organic HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent. Compliance can be determined by measuring either organic HAP or TOC using the procedures in § 63.116 of this subpart.

(3) Achieve and maintain a TPE index value greater than 1.0 at the outlet of the final recovery device, or prior to release of the vent stream to the atmosphere if no recovery device is present. In this case, the vent shall comply with the provisions for a Group 2 process vent specified in either paragraph (d) or (e) of this section, whichever is applicable.

(b) If a boiler or process heater is used to comply with the percent reduction requirement or concentration limit specified in paragraph (a)(2) of this section, then the vent stream shall be introduced into the flame zone of such a device.

(c) Halogenated Group 1 process vent streams that are combusted shall be controlled according to paragraph (c)(1) or (c)(2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2) of this section for a halogenated vent stream, then the vent stream shall be ducted from the combustion device to an additional control device, including but not limited to a scrubber, before it is discharged to the atmosphere.

(i) Except as provided in paragraph (c)(1)(ii) of this section, the additional control device shall reduce overall

emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 99 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilogram per hour, whichever is less stringent.

(ii) If a scrubber or other halogen control device was installed prior to December 31, 1992, the control device shall reduce overall emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A control device, such as a scrubber, or other technique may be used to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to any combustion control device, and thus make the vent stream nonhalogenated; the vent stream must comply with the requirements of paragraph (a)(1) or (a)(2) of this section.

(d) The owner or operator of a Group 2 process vent having a flow rate greater than or equal to 0.005 standard cubic meter per minute, a HAP concentration greater than or equal to 50 parts per million by volume, and a TRE index value greater than 1.0 but less than or equal to 4.0 shall maintain a TRE index value greater than 1.0 and shall comply with the monitoring of recovery device parameters in § 63.114(b) or (c) of this subpart, the TRE index calculations of § 63.115 of this subpart, and the applicable reporting and recordkeeping provisions of §§ 63.117 and 63.118 of this subpart. Such owner or operator is not subject to any other provisions of §§ 63.114 through 63.118 of this subpart.

(e) The owner or operator of a Group 2 process vent with a TRE index greater than 4.0 shall maintain a TRE index value greater than 4.0, comply with the provisions for calculation of TRE index in § 63.115 of this subpart and the reporting and recordkeeping provisions in § 63.117(b) of this subpart, § 63.118(c) of this subpart, and § 63.118(h) of this subpart, and is not subject to monitoring or any other provisions of §§ 63.114 through 63.118 of this subpart.

(f) The owner or operator of a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute shall maintain a flow rate less than 0.005 standard cubic meter per minute; comply with the Group determination procedures in § 63.115 (a), (b), and (e) of this subpart; and the reporting and recordkeeping requirements in § 63.117(c) of this subpart, § 63.118(d) of this subpart, and § 63.118(i) of this subpart; and is not subject to monitoring or any other provisions of §§ 63.114 through 63.118 of this subpart.

(g) The owner or operator of a Group 2 process vent with a concentration less than 50 parts per million by volume shall maintain a concentration less than 50 parts per million by volume; comply with the Group determination procedures in § 63.115 (a), (c), and (e) of this subpart; the reporting and recordkeeping requirements in § 63.117(d) of this subpart, § 63.118(e) of this subpart, and § 63.118(j) of this subpart; and is not subject to monitoring or any other provisions of §§ 63.114 through 63.118 of this subpart.

(h) The owner or operator of a process vent complying with paragraph (a)(1) or (a)(2) of this section is not required to perform the group determination described in § 63.115 of this subpart.

§ 63.114 Process vent provisions—monitoring requirements.

(a) Each owner or operator of a process vent that uses a combustion device to comply with the requirements in § 63.113 (a)(1) or (a)(2) of this subpart shall install monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, depending on the type of combustion device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, the following monitoring equipment is required: A device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, the following monitoring equipment is required: A temperature monitoring device in the firebox equipped with a continuous recorder. Any boiler or process heater in which all vent streams are introduced with primary fuel or are used as the primary fuel is exempt from this requirement.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in the case of halogenated vent streams, the following monitoring equipment is required for the scrubber.

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) Flow meters equipped with continuous recorders shall be located at the scrubber influent for liquid flow and the scrubber inlet for gas stream flow.

(b) Each owner or operator of a process vent with a TRE index value greater than 1.0 as specified under § 63.113(a)(3) or § 63.113(d) of this subpart, that uses one or more product recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturers specifications. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in § 63.113(e) of this subpart.

(1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used;

(2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used;

(3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used.

(c) An owner or operator of a process vent may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in § 63.151(f) or § 63.152(e) of this subpart. Approval shall be requested if the owner or operator:

(1) Uses a control device other than an incinerator, boiler, process heater, or flare; or

(2) Maintains a TRE greater than 1.0 but less than or equal to 4.0 without a recovery device or with a recovery device other than the recovery devices listed in paragraphs (a) and (b) of this section; or

(3) Uses one of the control or recovery devices listed in paragraphs (a) and (b) of this section, but seeks to monitor a parameter other than those specified in paragraphs (a) and (b) of this section.

(d) The owner or operator of a process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with § 63.113 (a)(1) or (a)(2) of this subpart shall comply with paragraph (d)(1) or (d)(2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in § 63.118(a)(3) of this subpart. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(e) The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in § 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§ 63.115 Process vent provisions—methods and procedures for process vent group determination.

(a) For purposes of determining process vent stream flow rate, total organic HAP or TOC concentration or TRE index value, as specified under paragraph (b), (c), or (d) of this section, the sampling site shall be after the last product recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling site.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(b) To demonstrate that a process vent stream flow rate is less than 0.005 standard cubic meter per minute in accordance with the Group 2 process vent definition of this subpart, the owner or operator shall measure flow rate by the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

(2) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(c) Each owner or operator seeking to demonstrate that a process vent stream has an organic HAP concentration below 50 parts per million by volume in accordance with the Group 2 process vent definition of this subpart shall measure either total organic HAP or TOC concentration using the following procedures:

(1) The sampling site shall be selected as specified in paragraph (a) of this section.

(2) Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.

(3) Where Method 18 of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume concentration:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(ii) The concentration of either TOC (minus methane and ethane) or organic HAP shall be calculated according to paragraph (c)(3)(ii)(A) or (c)(3)(ii)(B) of this section as applicable.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \frac{\sum_{i=1}^{x}\left(\sum_{j=1}^{n} C_{ji}\right)}{X}$$

where:

C_{TOC}=Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

C_{ji}=Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(4) Where Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume TOC concentration:

(i) Method 25A of 40 CFR part 60, appendix A shall be used only if a single organic HAP compound is greater than 50 percent of total organic HAP, by volume, in the process vent stream.

(ii) The process vent stream composition may be determined by either process knowledge, test data collected using an appropriate EPA method or a method or data validated according to the protocol in Method 301 of appendix A of this part. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current process vent stream conditions.

(iii) The organic HAP used as the calibration gas for Method 25A of 40 CFR part 60, appendix A shall be the single organic HAP compound present at greater than 50 percent of the total organic HAP by volume.

(iv) The span value for Method 25A of 40 CFR part 60, appendix A shall be 50 parts per million by volume.

(v) Use of Method 25A of 40 CFR part 60, appendix A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(vi) The owner or operator shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A of 40 CFR

part 60, appendix A is below 25 parts per million by volume to be considered a Group 2 vent with an organic HAP concentration below 50 parts per million by volume and to qualify for the low concentration exclusion in § 63.113(g) of this subpart.

(d) To determine the TRE index value, the owner or operator shall conduct a TRE determination and calculate the TRE index value according to the procedures in paragraph (d)(1) or (d)(2) of this section and the TRE equation in paragraph (d)(3) of this section.

(1) Engineering assessment may be used to determine process vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value.

(i) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is greater than 4.0, then the owner or operator is not required to perform the measurements specified in paragraph (d)(2) of this section.

(ii) If the TRE value calculated using such engineering assessment and the TRE equation in paragraph (d)(3) of this section is less than or equal to 4.0, then the owner or operator is required to perform the measurements specified in paragraph (d)(2) of this section for group determination or consider the process vent a Group 2 vent and comply with the emission reduction specified in § 63.113(a) of this subpart.

(iii) Engineering assessment includes, but is not limited to, the following:

(A) Previous test results provided the tests are representative of current operating practices at the process unit.

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent.

(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(*1*) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations.

(*2*) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities.

(*3*) Estimation of TOC or organic HAP concentrations based on saturation conditions.

(*4*) Estimation of maximum expected net heating value based on the stream concentration of each organic compound or, alternatively, as if all TOC in the stream were the compound with the highest heating value.

(E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(2) Except as provided in paragraph (d)(1) of this section, process vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures in paragraphs (d)(2)(i) through (d)(2)(v) of this section and used as input to the TRE index value calculation in paragraph (d)(3) of this section.

(i) The vent stream volumetric flow rate (Q_s), in standard cubic meters per minute at 20 °C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the stream volumetric flow shall be corrected to 2.3 percent moisture.

(ii) The molar composition of the process vent stream, which is used to calculate net heating value, shall be determined using the following methods:

(A) Method 18 of 40 CFR part 60, appendix A to measure the concentration of each organic compound.

(B) American Society for Testing and Materials D1946–77 to measure the concentration of carbon monoxide and hydrogen.

(C) Method 4 of 40 CFR part 60, appendix A to measure the moisture content of the stack gas.

(iii) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1\left(\sum_{j=1}^{n} C_j H_j\right)(1 - B_{ws})$$

where:

H_T=Net heating value of the sample, megajoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20 °C, as in the definition of Q_s (vent stream flow rate).

K_1=Constant, 1.740×10^{-7} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (megajoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

B_{ws}=Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that B_{ws}=0.023 in order to correct to 2.3 percent moisture.

C_j=Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946–77 as indicated in paragraph (d)(2)(ii) of this section.

H_j=Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 °C and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382–76 if published values are not available or cannot be calculated.

(iv) The emission rate of TOC (minus methane and ethane) (E_{TOC}) and the emission rate of total organic HAP (E_{HAP}) in the vent stream shall both be calculated using the following equation:

$$E = K_2\left[\sum_{j=1}^{n} C_j M_j\right] Q_s$$

where:

E=Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.

K_2=Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

C_j=Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A as indicated in paragraph (d)(2)(ii) of this section. If the TOC emission rate is being calculated, C_j includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in table 2 in subpart F of this part are included.

M_j=Molecular weight of organic compound j, gram/gram-mole.

Q_s=Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20 °C.

(v) In order to determine whether a vent stream is halogenated, the mass

emission rate of halogen atoms contained in organic compounds shall be calculated.

(A) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume, by compound) shall be determined based on the following procedures:

(1) Process knowledge that no halogen or hydrogen halides are present in the process, or

(2) Applicable engineering assessment as discussed in paragraph (d)(1)(iii) of this section, or

(3) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

(4) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(B) The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{j,i} * M_{j,i} \right)$$

where:

E=mass of halogen atoms, dry basis, kilogram per hour.

K_2=Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 °C.

C_j=Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

$M_{j,i}$=Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

$L_{j,i}$=Number of atoms of halogen i in compound j of the gas stream.

Q=Flow rate of gas stream, dry standard cubic meters per minute, determined according to paragraph (d)(1) or (d)(2)(i) of this section.

j=Halogenated compound j in the gas stream.

i=Halogen atom i in compound j of the gas stream.

n=Number of halogenated compounds j in the gas stream.

m=Number of different halogens i in each compound j of the gas stream.

(3) The owner or operator shall calculate the TRE index value of the vent stream using the equations and procedures in this paragraph.

(i) The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

$$TRE = \frac{1}{E_{HAP}} \left[a + b(Q_s) + c(H_T) + d(E_{TOC}) \right]$$

where:

TRE=TRE index value.

E_{HAP}=Hourly emission rate of total organic HAP, kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.

Q_s=Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20 °C, as calculated in paragraph (d)(1) or (d)(2)(i) of this section.

H_T=Vent stream net heating value, megajoules per standard cubic meter, as calculated in paragraph (d)(1) or (d)(2)(iii) of this section.

E_{TOC}=Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in paragraph (d)(1) or (d)(2)(iv) of this section.

a,b,c,d=Coefficients presented in table 1 of this subpart, selected in accordance with paragraphs (d)(3)(ii) and (iii) of this section.

(ii) The owner or operator of a nonhalogenated vent stream shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery and shall select the lowest TRE index value. The owner or operator shall use the applicable coefficients in table 1 of this subpart for nonhalogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for nonhalogenated vent streams located within new sources.

(iii) The owner or operator of a halogenated vent stream shall calculate the TRE index value based on the use of a thermal incinerator with 0 percent heat recovery, and a scrubber. The owner or operator shall use the applicable coefficients in table 1 of this subpart for halogenated vent streams located within existing sources and the applicable coefficients in table 2 of this subpart for halogenated vent streams located within new sources.

(e) The owner or operator of a Group 2 process vent shall recalculate the TRE index value, flow, or organic HAP concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

(1) The TRE index value, flow rate, or organic HAP concentration shall be recalculated based on measurements of vent stream flow rate, TOC, and organic HAP concentrations, and heating values as specified in § 63.115 (a), (b), (c), and (d) of this subpart, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph (d)(1) of this section.

(2) Where the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the recalculated flow rate is greater than or equal to 0.005 standard cubic meter per minute, or the recalculated concentration is greater than or equal to 50 parts per million by volume, the owner or operator shall submit a report as specified in § 63.118 (g), (h), (i), or (j) of this subpart and shall comply with the appropriate provisions in § 63.113 of this subpart by the dates specified in § 63.100 of subpart F of this part.

§ 63.116 Process vent provisions—performance test methods and procedures to determine compliance.

(a) When a flare is used to comply with § 63.113(a)(1) of this subpart, the owner or operator shall comply with the flare provisions in § 63.11(b) of subpart A of this part.

(1) The compliance determination required by § 63.6(h) of subpart A of this part shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions.

(2) An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration when a flare is used.

(b) An owner or operator is not required to conduct a performance test when any control device specified in

paragraphs (b)(1) through (b)(4) of this section is used.

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater into which the process vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A control device for which a performance test was conducted for determining compliance with an NSPS and the test was conducted using the same procedures specified in this section and no process changes have been made since the test.

(4) A boiler or process heater burning hazardous waste for which the owner or operator:

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H, or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(c) Except as provided in paragraphs (a) and (b) of this section, an owner or operator using a control device to comply with the organic HAP concentration limit or percent reduction efficiency requirements in § 63.113(a)(2) of this subpart shall conduct a performance test using the procedures in paragraphs (c)(1) through (c)(4) of this section. The organic HAP concentration and percent reduction may be measured as either total organic HAP or as TOC minus methane and ethane according to the procedures specified.

(1) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites.

(i) For determination of compliance with the 98 percent reduction of total organic HAP requirement of § 63.113(a)(2) of this subpart, sampling sites shall be located at the inlet of the control device as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section, and at the outlet of the control device.

(A) The control device inlet sampling site shall be located after the final product recovery device.

(B) If a process vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic HAP or TOC (minus methane and ethane) concentrations in all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(ii) For determination of compliance with the 20 parts per million by volume total organic HAP limit in § 63.113(a)(2) of this subpart, the sampling site shall be located at the outlet of the control device.

(2) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(3) To determine compliance with the 20 parts per million by volume total organic HAP limit in § 63.113(a)(2) of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part, may be used. The following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(ii) The concentration of either TOC (minus methane or ethane) or total organic HAP shall be calculated according to paragraph (c)(3)(ii)(A) or (c)(3)(ii)(B) of this section.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji}\right)}{x}$$

where:

C_{TOC}=Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

C_{ji}=Concentration of sample components j of sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to the equation in paragraph (c)(3)(ii)(A) of this section except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iii) The concentration of TOC or total organic HAP shall be corrected to 3 percent oxygen if a combustion device is the control device.

(A) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration ($\%O_{2d}$). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic HAP samples are taken.

(B) The concentration corrected to 3 percent oxygen (C_c) shall be computed using either of the following equations:

$$C_c = C_m\left(\frac{17.9}{20.9 - \%O_{2d}}\right)$$

where:

C_c=Concentration of TOC or organic HAP corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_m=Concentration of TOC (minus methane and ethane) or organic HAP, dry basis, parts per million by volume.

$\%O_{2d}$=Concentration of oxygen, dry basis, percent by volume.

(4) To determine compliance with the 98 percent reduction requirement of § 63.113(a)(2) of this subpart, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A; alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. The following procedures shall be used to calculate percent reduction efficiency:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time such as 15 minute intervals during the run.

(ii) The mass rate of either TOC (minus methane and ethane) or total organic HAP (E_i, E_o) shall be computed.

(A) The following equations shall be used:

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij}M_{ij}\right)Q_i$$

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj}M_{oj}\right)Q_o$$

where:

C_{ij}, C_{oj}=Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

E_i, E_o=Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

M_{ij}, M_{oj}=Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

Q_i, Q_o=Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

K_2=Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

(B) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by Method 18 of 40 CFR part 60, appendix A are summed using the equation in paragraph (c)(4)(ii)(A) of this section.

(C) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using the equation in paragraph (c)(4)(ii)(A) of this section. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iii) The percent reduction in TOC (minus methane and ethane) or total organic HAP shall be calculated as follows:

$$R = \frac{E_i - E_o}{E_i}(100)$$

where:

R=Control efficiency of control device, percent.

E_i=Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

E_o=Mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (c)(4)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

(iv) If the process vent stream entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total organic HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total organic HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic HAP exiting the combustion device, respectively.

(d) An owner or operator using a combustion device followed by a scrubber or other control device to control halogenated process vent streams in compliance with § 63.113(c)(1) of this subpart shall conduct a performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other control device used to reduce halogen emissions. For an owner or operator determining compliance with the less than 0.45 kilogram per hour outlet emission limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other control device and prior to any releases to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(3) To determine compliance with the percent removal efficiency, the mass emissions for any hydrogen halides and halogens present at the inlet of the scrubber or other control device shall be summed together. The mass emissions of the compounds present at the outlet of the scrubber or other control device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the less than 0.45 kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other control device is below 0.45 kilogram per hour.

(5) The owner or operator may use any other method to demonstrate compliance if the method or data has been validated according to the applicable procedures of Method 301 of appendix A of this part.

(e) An owner or operator using a scrubber or other control technique to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilogram per hour prior to a combustion control device in compliance with § 63.113(c)(2) of this subpart shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in § 63.115(d)(2)(v) of this subpart.

§ 63.117 Process vents provisions—reporting and recordkeeping requirements for group and TRE determinations and performance tests.

(a) Each owner or operator subject to the control provisions for Group 1 vent streams in § 63.113(a) of this subpart or the provisions for Group 2 vent streams with a TRE index value greater than 1.0 but less than or equal to 4.0 in § 63.113(d) of this subpart shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)(8) of this section, as applicable, and

(2) Include the data in paragraphs (a)(4) through (a)(8) of this section in the Notification of Compliance Status report as specified in § 63.152(b) of this subpart.

(3) If any subsequent TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)(8) of this section in the next Periodic Report as specified in § 63.152(c) of this subpart.

(4) Record and report the following when using a combustion device to achieve a 98 weight percent reduction in organic HAP or an organic HAP concentration of 20 parts per million by volume, as specified in § 63.113(a)(2) of this subpart:

(i) The parameter monitoring results for incinerators, catalytic incinerators, boilers or process heaters specified in table 3 of this subpart, and averaged over the same time period of the performance testing.

(ii) For an incinerator, the percent reduction of organic HAP or TOC achieved by the incinerator determined as specified in § 63.116(c) of this subpart, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in § 63.116(c) of this subpart at the outlet of the incinerator on a dry basis corrected to 3 percent oxygen.

(iii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(iv) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC, or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in § 63.116(c) of this subpart at the outlet of the combustion device on a dry basis corrected to 3 percent oxygen.

(5) Record and report the following when using a flare to comply with § 63.113(a)(1) of this subpart.

(i) Flare design (i.e., steam-assisted, air-assisted, or non-assisted).

(ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.116(a) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated process vent stream.

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in § 63.116(d) of this subpart;

(ii) The pH of the scrubber effluent, and

(iii) The scrubber liquid to gas ratio.

(7) Record and report the following when achieving and maintaining a TRE index value greater than 1.0 but less than 4.0 as specified in § 63.113(a)(3) or § 63.113(d) of this subpart:

(i) The parameter monitoring results for absorbers, condensers, or carbon adsorbers, as specified in table 4 of this subpart, and averaged over the same time period of the measurements of vent stream flow rate and concentration used in the TRE determination (both measured while the vent stream is normally routed and constituted), and

(ii) The measurements and calculations performed to determine the TRE index value of the vent stream.

(8) Record and report the halogen concentration in the process vent stream determined according to the procedures specified in § 63.115(d)(2)(v) of this subpart.

(b) The owner or operator of a Group 2 process vent with a TRE index greater than 4.0 as specified in § 63.113(e) of this subpart, shall maintain records and submit as part of the Notification of Compliance Status specified in § 63.152 of this subpart, measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in § 63.115(d)(3) of this subpart.

(c) Each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on a flow rate less than 0.005 standard cubic meter per minute must submit to the Administrator the flow rate measurement using methods and procedures specified in § 63.115 (a) and (b) of this subpart with the Notification of Compliance Status specified in § 63.152 of this subpart.

(d) Each owner or operator who elects to demonstrate that a process vent is a Group 2 process vent based on organic HAP or TOC concentration less than 50 parts per million by volume must submit to the Administrator an organic HAP or TOC concentration measurement using the methods and procedures specified in § 63.115 (a) and (c) of this subpart with the Notification of Compliance Status specified in § 63.152 of this subpart.

(e) If an owner or operator uses a control or recovery device other than those listed in tables 3 and 4 of this subpart or requests approval to monitor a parameter other than those specified in tables 3 and 4 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under § 63.151(f) or § 63.152(e) of this subpart. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Implementation Plan or permit application.

(f) For each parameter monitored according to tables 3 or 4 of this subpart or paragraph (e) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in § 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§ 63.118 Process vents provisions—Periodic reporting and recordkeeping requirements.

(a) Each owner or operator using a control device to comply with § 63.113 (a)(1) or (a)(2) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.114(a) of this subpart and listed in table 3 of this subpart or specified by the Administrator in accordance with § 63.114(c) and § 63.117(e) of this subpart. For flares, the hourly records and records of pilot flame outages specified in table 3 of this subpart shall be maintained in place of continuous records.

(2) Records of the daily average value of each continuously monitored parameter for each operating day, except as provided in paragraphs (a)(2)(iv) and (a)(2)(v) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day, except as provided in paragraph (a)(2)(ii) of this section. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the hourly or daily averages. Records shall be kept of the times and durations of all such periods and any other periods of process or control device operation when monitors are not operating.

(iii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status in § 63.152(b) of this subpart. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status in § 63.152(b) of this subpart or operating permit, the owner or operator may record that all values were within the range rather than calculating and recording a daily average for that operating day.

(v) For flares, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(3) Hourly records of whether the flow indicator specified under § 63.114(d)(1) of this subpart was operating and whether flow was detected at any time under the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the monitor is not operating.

(4) Where a seal mechanism is used to comply with § 63.114(d)(2) of this subpart, hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(b) Each owner or operator using a product recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in § 63.114(a)(3) or § 63.113(d) of this subpart shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.114(b) of this subpart and listed in table 4 of this subpart or specified by the Administrator in accordance with § 63.114(c) of this subpart and § 63.114(e) of this subpart and

(2) Records of the daily average value of each continuously monitored parameter for each operating day, except as provided in paragraph (b)(2)(iv) and (b)(2)(v) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day except as provided in paragraph (b)(2)(ii) of this section. The average shall cover a 24-hour period if operating is continous, or the number of hours of operation per operating day if operation is not continuous.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the hourly or daily averages. Records shall be kept of the times and durations of all such periods and any other periods of process or control device operation when monitors are not operating.

(iii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range rather than calculating and recording a daily average for that operating day.

(v) If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 4 of this subpart shall be kept instead of the daily averages.

(c) Each owner or operator subject to the provisions of this subpart and who elects to demonstrate compliance with the TRE index value greater than 4.0 under § 63.113(e) of this subpart or, greater than 1.0 under § 63.113(a)(3) or § 63.113(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in § 63.115(e) of this subpart; and

(2) Any recalculation of the TRE index value pursuant to § 63.115(e) of this subpart.

(d) Each owner or operator who elects to comply by maintining a flow rate less than 0.005 standard cubic meter per minute under § 63.113(f) of this subpart, shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in § 63.115(e) of this subpart that increase the vent stream flow rate,

(2) Any recalculation or measurement of the flow rate pursuant to § 63.115(e) of this subpart, and

(3) If the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d) of this subpart.

(e) Each owner or operator who elects to comply by maintaining an organic HAP concentration less than 50 parts per million by volume organic HAP concentration under § 63.113(g) of this subpart shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in § 63.115(e) of this subpart that increase the organic HAP concentration of the process vent stream,

(2) Any recalculation or measurement of the concentration pursuant to § 63.115(e) of this subpart, and

(3) If the organic HAP concentration increases to 50 parts per million by volume or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d) of this subpart.

(f) Each owner or operator who elects to comply with the requirements of § 63.113 of this subpart shall submit to the Administrator Periodic Reports of the following recorded information according to the schedule in § 63.152 of this subpart.

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraphs (a) and (b) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(2) For Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in § 63.152(c)(2)(ii)(A) of this subpart.

(3) Reports of the times and durations of all periods recorded under paragraph (a)(3) of this section when the vent stream is diverted from the control device through a bypass line.

(4) Reports of all periods recorded under paragraph (a)(4) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

(5) Reports of the times and durations of all periods recorded under paragraph (a)(2)(v) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (b)(2)(v) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(g) Whenever a process change, as defined in § 63.115(e) of this subpart, is made that causes a Group 2 process vent to become a Group 1 process vent, the owner or operator shall submit a report within 180 calendar days after the process change as specified in § 63.151(j) of this subpart. The report shall include:

(1) A description of the process change;

(2) The results of the recalculation of the flow rate, organic HAP concentration, and TRE index value required under § 63.115(e) of this subpart and recorded under paragraph (c), (d), or (e) of this section; and

(3) A statement that the owner or operator will comply with the provisions of § 63.113 of this subpart for Group 1 process vents by the dates specified in subpart F of this part.

(h) Whenever a process change, as defined in § 63.115(e) of this subpart, is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the TRE index value required under § 63.115(e) of this subpart and recorded under paragraph (c) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in § 63.113(d) of this subpart.

(i) Whenever a process change, as defined in § 63.115(e) of this subpart, is made that causes a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the flow rate and the TRE determination required under § 63.115(e) of this subpart and recorded under paragraph (d) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in § 63.113(d) of this subpart.

(j) Whenever a process change, as defined in § 63.115(e) of this subpart, is made that causes a Group 2 process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the organic HAP concentration and the TRE determination required under § 63.115(e) of this subpart and recorded under paragraph (e) of this section, and

(3) A statement that the owner or operator will comply with the requirements specified in § 63.113(d) of this subpart.

(k) The owner or operator is not required to submit a report of a process change if one of the conditions listed in paragraph (k)(1), (k)(2), (k)(3), or (k)(4) of this section is met.

(1) The process change does not meet the definition of a process change in § 63.115(e) of this subpart, or

(2) The vent stream flow rate is recalculated according to § 63.115(e) of this subpart and the recalculated value is less than 0.005 standard cubic meter per minute, or

(3) The organic HAP concentration of the vent stream is recalculated according to § 63.115(e) of this subpart and the recalculated value is less than 50 parts per million by volume, or

(4) The TRE index value is recalculated according to § 63.115(e) of this subpart and the recalculated value is greater than 4.0.

§ 63.119 Storage vessel provisions—reference control technology.

(a) For each storage vessel to which this subpart applies, the owner or operator shall comply with the requirements of paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of this section according to the schedule provisions of § 63.100 of subpart F of this part.

(1) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 of this subpart for new sources) storing a liquid for which the maximum true vapor pressure of the total organic HAP's in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce HAP emissions to the atmosphere by operating and maintaining either a fixed roof and internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, or a closed vent system and control device in accordance with the requirements in paragraph (b), (c), (d), or (e) of this section, or equivalent as provided in § 63.121 of this subpart.

(2) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 of this subpart for new sources) storing a liquid for which the maximum true vapor pressure of the total organic HAP's in the liquid is greater than or equal to 76.6 kilopascals, the owner or operator shall operate and maintain a closed vent system and control device meeting the requirements specified in paragraph (e) of this section, or equivalent as provided in § 63.121 of this subpart.

(3) For each Group 2 storage vessel that is not part of an emissions average as described in § 63.150 of this subpart, the owner or operator shall comply with the recordkeeping requirement in § 63.123(a) of this subpart and is not required to comply with any other provisions in §§ 63.119 through 63.123 of this subpart.

(4) For each Group 2 storage vessel that is part of an emissions average, the owner or operator shall comply with the emissions averaging provisions in § 63.150 of this subpart.

(b) The owner or operator who elects to use a fixed roof and an internal floating roof, as defined in § 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section.

[Note: The intent of paragraphs (b)(1) and (b)(2) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.]

(1) The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(2) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as possible.

(3) Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. Except as provided in paragraph (b)(3)(iv) of this section, the closure device shall consist of one of the devices listed in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of this section.

(i) A liquid-mounted seal as defined in § 63.111 of this subpart.

(ii) A metallic shoe seal as defined in § 63.111 of this subpart.

(iii) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous seals.

(iv) If the internal floating roof is equipped with a vapor-mounted seal as of December 31, 1992, the requirement for one of the seal options specified in paragraphs (b)(3)(i), (b)(3)(ii), and (b)(3)(iii) of this section does not apply until the earlier of the dates specified in paragraphs (b)(3)(iv)(A) and (b)(3)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(4) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(5) Except as provided in paragraph (b)(5)(viii) of this section, each internal floating roof shall meet the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section.

(i) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.

(ii) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket.

(iii) Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(iv) Each automatic bleeder vent shall be gasketed.

(v) Each rim space vent shall be gasketed.

(vi) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(vii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(viii) If the internal floating roof does not meet any one of the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of this section as of December 31, 1992, the requirement for meeting those specifications does not apply until the earlier of the dates specified in paragraphs (b)(5)(viii)(A) and (b)(5)(viii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(6) Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(c) The owner or operator who elects to use an external floating roof, as defined in § 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) of this section shall comply with the requirements specified in paragraphs (c)(1) through (c)(4) of this section.

(1) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge.

(i) Except as provided in paragraph (c)(1)(iv) of this section, the closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.

(ii) Except as provided in paragraph (c)(1)(v) of this section, the primary seal shall be either a metallic shoe seal or a liquid-mounted seal.

(iii) Except during the inspections required by § 63.120(b) of this subpart, both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion.

(iv) If the external floating roof is equipped with a liquid-mounted or metallic shoe primary seal as of December 31, 1992, the requirement for a secondary seal in paragraph (c)(1)(i) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(iv)(A) and (c)(1)(iv)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(v) If the external floating roof is equipped with a vapor-mounted primary seal and a secondary seal as of December 31, 1992, the requirement for a liquid-mounted or metallic shoe primary seal in paragraph (c)(1)(ii) of this section does not apply until the earlier of the dates specified in paragraphs (c)(1)(v)(A) and (c)(1)(v)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

(2) Each external floating roof shall meet the specifications listed in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(i) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the noncontact external floating roof shall provide a projection below the liquid surface except as provided in paragraph (c)(2)(xii) of this section.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal or lid which is to be maintained in a closed position (i.e., no visible gap) at all times except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed.

(iii) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(iv) Rim space vents are to be set to open only when the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(v) Automatic bleeder vents and rim space vents are to be gasketed.

(vi) Each roof drain that empties into the stored liquid is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(vii) Each unslotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(viii) Each unslotted guide pole shall have on the end of the pole a gasketed cap which is closed at all times except when gauging the liquid level or taking liquid samples.

(ix) Each slotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.

(x) Each slotted guide pole shall have a gasketed float or other device which closes off the liquid surface from the atmosphere.

(xi) Each gauge hatch/sample well shall have a gasketed cover which is closed at all times except when the hatch or well must be open for access.

(xii) If each opening in a noncontact external floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents does not provide a projection below the liquid surface as of December 31, 1992, the requirement for providing these projections below the liquid surface does not apply until the earlier of the dates specified in paragraphs (c)(2)(xii)(A) and (c)(2)(xii)(B) of this section.

(A) The next time the storage vessel is emptied and degassed.

(B) No later than 10 years after April 22, 1994.

[Note: The intent of paragraphs (c)(3) and (c)(4) of this section is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.]

(3) The external floating roof shall be floating on the liquid surface at all times

except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (c)(3)(i) through (c)(3)(iii) of this section.

(i) During the initial fill.

(ii) After the vessel has been completely emptied and degassed.

(iii) When the vessel is completely emptied before being subsequently refilled.

(4) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as possible.

(d) The owner or operator who elects to use an external floating roof converted to an internal floating roof (i.e., fixed roof installed above external floating roof) to comply with paragraph (a)(1) of this section shall comply with paragraphs (d)(1) and (d)(2) of this section.

(1) Comply with the requirements for internal floating roof vessels specified in paragraphs (b)(1), (2), and (3) of this section; and

(2) Comply with the requirements for deck fittings that are specified for external floating roof vessels in paragraphs (c)(2)(i) through (c)(2)(xii) of this section.

(e) The owner or operator who elects to use a closed vent system and control device, as defined in § 63.111 of this subpart, to comply with the requirements of paragraph (a)(1) or (a)(2) of this section shall comply with the requirements specified in paragraphs (e)(1) through (e)(5) of this section.

(1) Except as provided in paragraph (e)(2) of this section, the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements of § 63.11(b) of subpart A of this part.

(2) If the owner or operator can demonstrate that a control device installed on a storage vessel on or before December 31, 1992 is designed to reduce inlet emissions of total organic HAP by greater than or equal to 90 percent but less than 95 percent, then the control device is required to be operated to reduce inlet emissions of total organic HAP by 90 percent or greater.

(3) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph (e)(1) or (e)(2) of this section, as applicable, shall not exceed 240 hours per year.

(4) The specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during periods of planned routine maintenance.

(5) The specifications and requirements in paragraphs (e)(1) and (e)(2) of this section for control devices do not apply during a control system malfunction.

§ 63.120 Storage vessel provisions—procedures to determine compliance.

(a) To demonstrate compliance with § 63.119(b) of this subpart (storage vessel equipped with a fixed roof and internal floating roof) or with § 63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(7) of this section.

(1) The owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in paragraphs (a)(2) and (a)(3) of this section.

(2) For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in § 63.100 of subpart F of this part.

(ii) Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in § 63.100 of subpart F of this part.

(3) For vessels equipped with a double-seal system as specified in § 63.119(b)(3)(iii) of this subpart, the owner or operator shall perform either the inspection required in paragraph (a)(3)(i) of this section or the inspections required in both paragraphs (a)(3)(ii) and (a)(3)(iii) of this section.

(i) The owner or operator shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years after the compliance date specified in § 63.100 of subpart F of this part; or

(ii) The owner or operator shall visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in § 63.100 of subpart F of this part, and

(iii) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years after the compliance date specified in § 63.100 of subpart F of this part.

(4) If during the inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Except as provided in paragraph (a)(6) of this section, for all the inspections required by paragraphs (a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present.

(6) If the inspection required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel, the owner or operator shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned

Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling.

(7) If during the inspections required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this section, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP.

(b) To demonstrate compliance with § 63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section.

(1) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the primary seal shall be performed during the hydrostatic testing of the vessel or by the compliance date specified in § 63.100 of subpart F of this part, whichever occurs last, and at least once every 5 years thereafter.

(ii) For an external floating roof vessel equipped with a liquid-mounted or metallic shoe primary seal and without a secondary seal as provided for in § 63.119(c)(1)(iv) of this subpart, measurements of gaps between the vessel wall and the primary seal shall be performed by the compliance date specified in § 63.100 of subpart F of this part and at least once per year thereafter, until a secondary seal is installed. When a secondary seal is installed above the primary seal, measurements of gaps between the vessel wall and both the primary and secondary seals shall be performed within 90 calendar days of installation of the secondary seal, and according to the frequency specified in paragraphs (b)(1)(i) and (b)(1)(iii) of this section thereafter.

(iii) For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in § 63.100 of subpart F of this part and at least once per year thereafter.

(iv) If any storage vessel ceases to store organic HAP for a period of 1 year or more, or if the maximum true vapor pressure of the total organic HAP's in the stored liquid falls below the values defining Group 1 storage vessels specified in table 5 or table 6 of this subpart for a period of 1 year or more, measurements of gaps between the vessel wall and the primary seal, and gaps between the vessel wall and the secondary seal shall be performed within 90 calendar days of the vessel being refilled with organic HAP.

(2) Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described in paragraphs (b)(2)(i) through (b)(2)(iii) of this section.

(i) Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports.

(ii) Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where a 0.32 centimeter diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance.

(3) The owner or operator shall add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the primary seal shall not exceed 212 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 3.81 centimeters.

(4) The owner or operator shall add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 21.2 square centimeters per meter of vessel diameter and the width of any portion of any gap shall not exceed 1.27 centimeters. These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by paragraph (b)(1)(i) and (b)(1)(ii) of this section.

(5) The primary seal shall meet the additional requirements specified in paragraphs (b)(5)(i) and (b)(5)(ii) of this section.

(i) Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 61 centimeters above the stored liquid surface.

(ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(6) The secondary seal shall meet the additional requirements specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.

(i) The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall except as provided in paragraph (b)(4) of this section.

(ii) There shall be no holes, tears, or other openings in the seal or seal fabric.

(7) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in paragraphs (b)(1) and (b)(2) of this section or to inspect the vessel to determine compliance with paragraphs (b)(5) and (b)(6) of this section because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (b)(7)(i) or (b)(7)(ii) of this section.

(i) The owner or operator shall measure the seal gaps or inspect the storage vessel no later than 30 calendar days after the determination that the roof is unsafe, or

(ii) The owner or operator shall empty and remove the storage vessel from service no later than 45 calendar days after determining that the roof is unsafe. If the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the vessel will be emptied as soon as possible.

(8) The owner or operator shall repair conditions that do not meet requirements listed in paragraphs (b)(3), (b)(4), (b)(5), and (b)(6) of this section (i.e., failures) no later than 45 calendar days after identification, or shall empty and remove the storage vessel from service no later than 45 calendar days after identification. If during seal gap measurements required in paragraph (b)(1) and (b)(2) of this section or during inspections necessary to determine compliance with paragraphs (b)(5) and (b)(6) of this section a failure is detected that cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(9) The owner or operator shall notify the Administrator in writing 30 calendar days in advance of any gap measurements required by paragraph (b)(1) or (b)(2) of this section to afford the Administrator the opportunity to have an observer present.

(10) The owner or operator shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects; the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with organic HAP.

(ii) Except as provided in paragraph (b)(10)(iii) of this section, for all the inspections required by paragraph (b)(10) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(iii) If the inspection required by paragraph (b)(10) of this section is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(c) To demonstrate compliance with § 63.119(d) of this subpart (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements of paragraph (a) of this section.

(d) To demonstrate compliance with § 63.119(e) of this subpart (storage vessel equipped with a closed vent system and control device) using a control device other than a flare, the owner or operator shall comply with the requirements in paragraphs (d)(1) through (d)(7) of this section.

(1) The owner or operator shall either prepare a design evaluation, which includes the information specified in paragraph (d)(1)(i) of this section, or submit the results of a performance test as described in paragraph (d)(1)(ii) of this section.

(i) The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during reasonably expected maximum filling rate. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content under varying liquid level conditions, and the information specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(E) of this section, as applicable.

(A) If the control device receives vapors, gases or liquids, other than fuels, from emission points other than storage vessels subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet the emission reduction requirement specified in § 63.119 (e)(1) or (e)(2), as applicable, documentation that those conditions exist is sufficient to meet the requirements of paragraph (d)(1)(i) of this section.

(C) Except as provided in paragraph (d)(1)(i)(B) of this section, for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature.

(D) For carbon adsorbers, the design evaluation shall include the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(E) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.

(ii) If the control device used to comply with § 63.119(e) of this subpart is also used to comply with § 63.113(a)(2), § 63.126(b)(1), or § 63.139(c) of this subpart, the performance test required by § 63.116(c), § 63.128(a), or § 63.139(d)(1) of this subpart is acceptable to demonstrate compliance with § 63.119(e) of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (d)(1)(i) of this section, if the performance tests meets the criteria specified in paragraphs (d)(1)(ii)(A) and (d)(1)(ii)(B) of this section.

(A) The performance test demonstrates that the control device achieves greater than or equal to the required control efficiency specified in § 63.119 (e)(1) or (e)(2) of this subpart, as applicable; and

(B) The performance test is submitted as part of the Notification of Compliance Status required by § 63.151(b) of this subpart.

(2) The owner or operator shall submit, as part of the Implementation Plan required by § 63.151(c) of this subpart, the information specified in paragraph (d)(2)(i) of this section and in either (d)(2)(ii) or (d)(2)(iii) of this section.

(i) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed, and either

(ii) The documentation specified in paragraph (d)(1)(i) of this section, if the owner or operator elects to prepare a design evaluation; or

(iii) The information specified in paragraph (d)(2)(iii) (A) and (B) of this section if the owner or operator elects to submit the results of a performance test.

(A) Identification of the storage vessel and control device for which the performance test will be submitted, and

(B) Identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

(3) The owner or operator shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the information specified in paragraphs (d)(3)(i) and, if applicable, (d)(3)(ii) of this section.

(i) The operating range for each monitoring parameter identified in the Implementation Plan. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained

(ii) Results of the performance test described in paragraph (d)(1)(ii) of this section.

(4) The owner or operator shall demonstrate compliance with the requirements of § 63.119(e)(3) of this subpart (planned routine maintenance of a control device, during which the control device does not meet the specifications of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable, shall not exceed 240 hours per year) by including in each Periodic Report required by § 63.152(c) of this subpart the information specified in § 63.122(g)(1) of this subpart.

(5) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in § 63.152(b) of this subpart or in the operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status.

(6) Except as provided in paragraph (d)(7) of this section, each closed vent system shall be inspected as specified in § 63.148 of this subpart. The initial and annual inspections required by § 63.148(b) of this subpart shall be done during filling of the storage vessel.

(7) For any fixed roof tank and closed vent system that are operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(e) To demonstrate compliance with § 63.119(e) of this subpart (storage vessel equipped with a closed vent system and control device) using a flare, the owner or operator shall comply with the requirements in paragraphs (e)(1) through (e)(8) of this section.

(1) The owner or operator shall perform the compliance determination specified in § 63.11(b) of subpart A of this part.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the information specified in paragraphs (e)(2)(i) through (e)(2)(iii) of this section.

(i) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by paragraph (e)(1) of this section; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(3) The owner or operator shall demonstrate compliance with the requirements of § 63.119(e)(3) of this subpart (planned routine maintenance of a flare, during which the flare does not meet the specifications of § 63.119(e)(1) of this subpart, shall not exceed 240 hours per year) by including in each Periodic Report required by § 63.152(c) of this subpart the information specified in § 63.122(g)(1) of this subpart.

(4) The owner or operator shall continue to meet the general control device requirements specified in § 63.11(b) of subpart A of this part.

(5) Except as provided in paragraph (e)(6) of this section, each closed vent system shall be inspected as specified in § 63.148 of this subpart. The inspections required to be performed in accordance with § 63.148(c) of this subpart shall be done during filling of the storage vessel.

(6) For any fixed roof tank and closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

§ 63.121 Storage vessel provisions—alternative means of emission limitation.

(a) Determination of equivalence to the reduction in emissions achieved by the requirements of § 63.119 (b), (c), or (d) of this subpart will be evaluated according to § 63.102(b) of subpart F of this part.

(b) The determination of equivalence referred to in paragraph (a) of this section will be based on the application to the Administrator which shall include the information specified in either paragraph (b)(1) or (b)(2) of this section.

(1) Actual emissions tests that use full-size or scale-model storage vessels that accurately collect and measure all organic HAP emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(2) An engineering analysis that the Administrator determines is an accurate method of determining equivalence.

§ 63.122 Storage vessel provisions—reporting.

(a) For each Group 1 storage vessel, the owner or operator shall comply with the requirements of paragraphs (a)(1) through (a)(5) of this section.

(1) The owner or operator shall submit an Initial Notification as required by § 63.151(b) of this subpart.

(2) The owner or operator shall submit an Implementation Plan as required by § 63.151(c) of this subpart and shall submit as part of the Implementation Plan the information specified in paragraph (b) of this section.

(3) The owner or operator shall submit a Notification of Compliance Status as required by § 63.152(b) of this subpart and shall submit as part of the Notification of Compliance Status the information specified in paragraph (c) of this section.

(4) The owner or operator shall submit Periodic Reports as required by § 63.152(c) of this subpart and shall submit as part of the Periodic Reports the information specified in paragraphs (d), (e), (f), and (g) of this section.

(5) The owner or operator shall submit, as applicable, other reports as required by § 63.152(d) of this subpart, containing the information specified in paragraph (h) of this section.

(b) An owner or operator who elects to comply with § 63.119(e) of this subpart by using a closed vent system and a control device other than a flare shall submit, as part of the Implementation Plan required by § 63.151(c) of this subpart, the information specified in § 63.120(d)(2)(i) of this subpart and the information specified in either § 63.120(d)(2)(ii) of this subpart or § 63.120(d)(2)(iii) of this subpart.

(c) An owner or operator who elects to comply with § 63.119(e) of this subpart by using a closed vent system and a control device shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the information specified in either paragraph (c)(1) or (c)(2) of this section.

(1) If a control device other than a flare is used, the owner or operator shall submit the information specified in § 63.120(d)(3)(i) and, if applicable, (d)(3)(ii) of this subpart.

(2) If a flare is used, the owner or operator shall submit the information specified in § 63.120(e)(2)(i), (e)(2)(ii), and (e)(2)(iii) of this subpart.

(d) An owner or operator who elects to comply with § 63.119(b) of this subpart by using a fixed roof and an internal floating roof or with § 63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall submit, as part of the Periodic Report required under § 63.152(c) of this subpart, the results of each inspection conducted in accordance with § 63.120(a) of this subpart in which a failure is detected in the control equipment.

(1) For vessels for which annual inspections are required under § 63.120 (a)(2)(i) or (a)(3)(ii) of this subpart, the specifications and requirements listed in paragraphs (d)(1)(i) through (d)(1)(iii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(ii) Except as provided in paragraph (d)(1)(iii) of this section, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

(iii) If an extension is utilized in accordance with § 63.120(a)(4) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in § 63.120(a)(4) of this subpart; and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(2) For vessels for which inspections are required under § 63.120 (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of this subpart, the specifications and requirements listed in paragraphs (d)(2)(i) and (d)(2)(ii) of this section apply.

(i) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under § 63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(e) An owner or operator who elects to comply with § 63.119(c) of this subpart by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (e)(1), (e)(2), and (e)(3) of this section.

(1) The owner or operator shall submit, as part of the Periodic Report required under § 63.152(c) of this subpart, documentation of the results of each seal gap measurement made in accordance with § 63.120(b) of this subpart in which the requirements of § 63.120 (b)(3), (b)(4), (b)(5), or (b)(6) of this subpart are not met. This documentation shall include the information specified in paragraphs (e)(1)(i) through (e)(1)(iv) of this section.

(i) The date of the seal gap measurement.

(ii) The raw data obtained in the seal gap measurement and the calculations described in § 63.120 (b)(3) and (b)(4) of this subpart.

(iii) A description of any condition specified in § 63.120 (b)(5) or (b)(6) of this subpart that is not met.

(iv) A description of the nature of and date the repair was made, or the date the storage vessel was emptied.

(2) If an extension is utilized in accordance with § 63.120(b)(7)(ii) or (b)(8) of this subpart, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in § 63.120(b)(7)(ii) or (b)(8) of this subpart, as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made.

(3) The owner or operator shall submit, as part of the Periodic Report required under § 63.152(c) of this subpart, documentation of any failures that are identified during visual inspections required by § 63.120(b)(10) of this subpart. This documentation shall meet the specifications and requirements in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere, or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under § 63.152(c) of this subpart shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The periodic report shall also describe the nature of and date the repair was made.

(f) An owner or operator who elects to comply with § 63.119(d) of this subpart by using an external floating roof converted to an internal floating roof shall comply with the periodic reporting requirements of paragraph (d) of this section.

(g) An owner or operator who elects to comply with § 63.119(e) of this subpart by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by § 63.152(c) of this subpart, the information specified in paragraphs (g)(1) through (g)(3) of this section.

(1) As required by § 63.120(d)(4) and § 63.120(e)(3) of this subpart, the Periodic Report shall include the information specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to planned routine maintenance.

(2) If a control device other than a flare is used, the Periodic Report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with § 63.120(d)(3)(i) of this subpart. The description shall include the information specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) Identification of the control device for which the measured parameters

were outside of the established ranges, and

(ii) Cause for the measured parameters to be outside of the established ranges.

(3) If a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in § 63.11(b) of subpart A of this part and shall include the information specified in paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) Identification of the flare which does not meet the general requirements specified in § 63.11(b) of subpart A of this part, and

(ii) Reason the flare did not meet the general requirements specified in § 63.11(b) of subpart A of this part.

(h) An owner or operator who elects to comply with § 63.119 (b), (c), or (d) of this subpart shall submit, as applicable, the reports specified in paragraphs (h)(1) and (h)(2) of this section.

(1) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of a storage vessel that has been emptied and degassed.

(i) If the storage vessel is equipped with an internal floating roof as specified in § 63.119(b) of this subpart, the notification shall meet the requirements of either § 63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(ii) If the storage vessel is equipped with an external floating roof as specified in § 63.119(c) of this subpart, the notification shall meet the requirements of either § 63.120 (b)(10)(ii) or (b)(10)(iii) of this subpart, as applicable.

(iii) If the storage vessel is equipped with an external floating roof converted into an internal floating roof as specified in § 63.119(d) of this subpart, the notification shall meet the requirements of either § 63.120 (a)(5) or (a)(6) of this subpart, as applicable.

(2) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof as specified in § 63.119(c) of this subpart shall notify the Administrator of any seal gap measurements. This notification shall meet the requirements of § 63.120(b)(9) of this subpart.

§ 63.123 Storage vessel provisions—recordkeeping.

(a) Each owner or operator of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of §§ 63.119 through 63.123 of this subpart other than those required by this paragraph unless such vessel is part of an emissions average as described in § 63.150 of this subpart.

(b) Each owner or operator shall keep a record of all reports submitted in accordance with § 63.122 of this subpart, including the Initial Notification, Implementation Plan, Notification of Compliance Status, Periodic Reports, and other reports.

(c) An owner or operator who elects to comply with § 63.119(b) of this subpart shall keep a record that each inspection required by § 63.120(a) of this subpart was performed.

(d) An owner or operator who elects to comply with § 63.119(c) of this subpart shall keep records describing the results of each seal gap measurement made in accordance with § 63.120(b) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in § 63.120(b) (3) and (4) of this subpart.

(e) An owner or operator who elects to comply with § 63.119(d) of this subpart shall keep a record that each inspection required by § 63.120 (a) and (c) of this subpart was performed.

(f) An owner or operator who elects to comply with § 63.119(e) of this subpart shall keep in a readily accessible location the records specified in paragraphs (f)(1) and (f)(2) of this section.

(1) A record of the measured values of the parameters monitored in accordance with § 63.120(d)(5) of this subpart.

(2) A record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable, due to the planned routine maintenance. Such a record shall include the information specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this section.

(i) The first time of day and date the requirements of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable, were not met at the beginning of the planned routine maintenance, and

(ii) The first time of day and date the requirements of § 63.119 (e)(1) or (e)(2) of this subpart, as applicable, were met at the conclusion of the planned routine maintenance.

(g) An owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with § 63.120 (a)(1), (b)(7)(ii), or (b)(8) of this subpart shall keep in a readily accessible location, the documentation specified in § 63.120 (a)(4), (b)(7)(ii), or (b)(8), as applicable.

§ 63.124 Reserved.

§ 63.125 Reserved.

§ 63.126 Transfer operations provisions—reference control technology.

(a) For each Group 1 transfer rack the owner or operator shall equip each transfer rack with a vapor collection system and control device.

(1) Each vapor collection system shall be designed and operated to collect the organic HAP vapors displaced from tank trucks or railcars during loading, and to route the collected HAP vapors to a control device as provided in paragraph (b) of this section.

(2) Each vapor collection system shall be designed and operated such that organic HAP vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(3) Whenever organic HAP emissions are vented to a control device used to comply with the provisions of this subpart, such control device shall be operating.

(b) For each Group 1 transfer rack the owner or operator shall comply with paragraph (b)(1), (b)(2), or (b)(3) of this section.

(1) Use a control device to reduce emissions of total organic HAP's by 98 weight-percent or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be introduced into the flame zone of such a device.

(2) Reduce emissions of organic HAP's using a flare.

(i) The flare shall comply with the requirements of § 63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in § 63.111 of this subpart, shall not be vented to a flare.

(3) Reduce emissions of organic HAP using a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank trucks or railcars during loading; and to route the collected HAP vapors to the storage vessel from which the liquid being loaded originated, or to compress collected HAP vapors and commingle the liquid with the raw feed of a chemical manufacturing process unit.

(c) For each Group 2 transfer rack, the owner or operator shall maintain records as required in § 63.130(f). No other provisions for transfer racks apply to the Group 2 transfer rack.

(d) Halogenated emission streams from Group 1 transfer racks that are combusted shall be controlled according to paragraph (d)(1) or (d)(2) of this section. Determination of whether a vent stream is halogenated shall be made using procedures in (d)(3).

(1) If a combustion device is used to comply with paragraph (b)(1) of this section for a halogenated vent stream, then the vent stream shall be ducted from the combustion device to an additional control device, including, but not limited to, a scrubber before it is discharged to the atmosphere.

(i) Except as provided in paragraph (d)(1)(ii) of this section, the additional control device shall reduce overall emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 99 percent or shall reduce the outlet mass emission rate of total hydrogen halides and halogens to 0.45 kilograms per hour or less, whichever is less stringent.

(ii) If a scrubber or other halogen control device was installed prior to December 31, 1992, the control device shall reduce overall emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A control device, such as a scrubber, or other technique may be used to make the vent stream nonhalogenated by reducing the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to any combustion control device used to comply with the requirements of paragraphs (b)(1) or (b)(2) of this section.

(3) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(i) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume by compound) shall be determined based on the following procedures:

(A) Process knowledge that no halogen or hydrogen halides are present in the process, or

(B) Applicable engineering assessment as specified in § 63.115(d)(1)(iii) of this subpart, or

(C) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

(D) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(ii) The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 V_s \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{ji} * M_{ji} \right)$$

where:

E=Mass of halogen atoms, dry basis, kilograms per hour.

K_2=Constant, 2.494×10^{-9} (parts per million)$^{-1}$ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 °C.

C_j=Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

M_{ji}=Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

L_{ji}=Number of atoms of halogen i in compound j of the gas stream.

V_s=Flow rate of gas stream, dry standard cubic meters per minute, determined according to § 63.128(a)(8) of this subpart.

j=Halogenated compound j in the gas stream.

i=Halogen atom i in compound j of the gas stream.

n=Number of halogenated compounds j in the gas stream.

m=Number of different halogens i in each compound j of the gas stream.

(e) For each Group 1 transfer rack the owner or operator shall load organic HAP's into only tank trucks and railcars which:

(1) Have a current certification in accordance with the U. S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or

(2) Have been demonstrated to be vapor-tight within the preceding 12 months, as determined by the procedures in § 63.128(f) of this subpart. Vapor-tight means that the truck or railcar tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals.

(f) The owner or operator of a transfer rack subject to the provisions of this subpart shall load organic HAP's to only tank trucks or railcars equipped with vapor collection equipment that is compatible with the transfer rack's vapor collection system.

(g) The owner or operator of a transfer rack subject to this subpart shall load organic HAP's to only tank trucks or railcars whose collection systems are connected to the transfer rack's vapor collection systems.

(h) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure-vacuum vent in the transfer rack's vapor collection system or in the organic HAP loading equipment of each tank truck or railcar shall begin to open during loading.

(i) Each valve in the vent system that would lead the vent stream to the atmosphere, either directly or indirectly, shall be secured closed using a car seal or a lock-and-key type configuration, or shall be equipped with a flow indicator. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph

§ 63.127 Transfer operations provisions—monitoring requirements.

(a) Each owner or operator of a Group 1 transfer rack equipped with a combustion device used to comply with the 98 percent total organic HAP reduction or 20 parts per million by volume outlet concentration requirements in § 63.126(b)(1) of this subpart shall install, calibrate, maintain, and operate according to the manufacturers' specifications the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, as appropriate.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, a device (including but not limited to a thermocouple, infrared sensor, or an ultra-violet beam sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater with a design heat input capacity less than 44 megawatts is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all vent streams are introduced with the primary fuel or

are used as the primary fuel is exempt from this requirement.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in the case of halogenated vent streams, the following monitoring equipment is required for the scrubber:

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) Flow meters equipped with continuous recorders shall be located at the scrubber influent for liquid flow and the scrubber inlet for gas stream flow.

(b) Each owner or operator of a Group 1 transfer rack that uses a recovery device to comply with the 98 percent organic HAP reduction or 20 parts per million by volume HAP concentration requirements in § 63.126(b)(1) of this subpart shall install either an organic monitoring device equipped with a continuous recorder, or the monitoring equipment specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.

(1) Where an absorber is used, a scrubbing liquid temperature monitoring device equipped with a continuous recorder shall be used; and a specific gravity monitoring device equipped with a continuous recorder shall be used.

(2) Where a condenser is used, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used.

(3) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle shall be used.

(c) An owner or operator of a Group 1 transfer rack may request approval to monitor parameters other than those listed in paragraph (a) or (b) of this section. The request shall be submitted according to the procedures specified in § 63.151(f) or § 63.152(e) of this subpart. Approval shall be requested if the owner or operator:

(1) Seeks to demonstrate compliance with the standards specified in § 63.126(b) of this subpart with a control device other than an incinerator, boiler, process heater, flare, absorber, condenser, or carbon adsorber; or

(2) Uses one of the control devices listed in paragraphs (a) and (b) of this section, but seeks to monitor a parameter other than those specified in paragraphs (a) and (b) of this subpart.

(d) The owner or operator of a Group 1 transfer rack using a vent system that contains by-pass lines that could divert a vent stream flow away from the control device used to comply with § 63.126(b) of this subpart shall comply with paragraph (d)(1) or (d)(2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in § 63.130(b) of this subpart. The flow indicator shall be installed at the entrance to any by-pass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the by-pass line valve in the closed position with a car-seal or a lock-and-key type configuration.

(i) A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the by-pass line.

(ii) If a car-seal has been broken or a valve position changed, the owner or operator shall record that the vent stream has been diverted. The car-seal or lock-and-key combination shall be returned to the secured position as soon as practicable but not later than 15 calendar days after the change in position is detected.

(e) The owner or operator shall establish a range that indicates proper operation of the control device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in § 63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

§ 63.128 Transfer operations provisions—test methods and procedures.

(a) A performance test is required for determining compliance with the reduction of total organic HAP emissions in § 63.126(b) of this subpart for all control devices except as specified in paragraph (c) of this section. Performance test procedures are as follows:

(1) For control devices shared between transfer racks and process vents, the performance test procedures in § 63.116(c) of this subpart shall be followed.

(2) A performance test shall consist of three runs.

(3) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(4) For control devices shared between multiple arms that load simultaneously, the minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(5) For control devices that are capable of continuous vapor processing but do not meet the conditions in (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

(B) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete filling period, during which liquid organic HAP's are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(6) For intermittent vapor processing systems that do not meet the conditions in paragraph (a)(1) or (a)(4) of this section, each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(7) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of sampling sites.

(i) For an owner or operator complying with the 98-percent total organic HAP reduction requirements in § 63.126(b)(1) of this subpart, sampling sites shall be located as specified in paragraph (a)(7)(i)(A) or (a)(7)(i)(B) of this section.

(A) Sampling sites shall be located at the inlet and outlet of the control device, except as provided in paragraph (a)(7)(i)(B) of this section.

(B) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of

the inlet sampling sites shall ensure the measurement of total organic HAP or TOC (minus methane and ethane) concentrations in all vent streams and primary and secondary fuels introduced into the boiler or process heater. A sampling site shall also be located at the outlet of the boiler or process heater.

(ii) For an owner or operator complying with the 20 parts per million by volume limit in § 63.126(b)(1) of this subpart, the sampling site shall be located at the outlet of the control device.

(8) The volumetric flow rate, in standard cubic meters per minute at 20 °C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A as appropriate.

(9) For the purpose of determining compliance with the 20 parts per million by volume limit in § 63.125(b)(1), Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure either organic compound concentration or organic HAP concentration, except as provided in paragraph (a)(11) of this section.

(i) If Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate the concentration of organic compounds (C_T):

(A) The principal organic HAP in the vent stream shall be used as the calibration gas.

(B) The span value for Method 25A of 40 CFR part 60, appendix A shall be between 1.5 and 2.5 times the concentration being measured.

(C) Use of Method 25A of 40 CFR part 60, appendix A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(D) The concentration of TOC shall be corrected to 3 percent oxygen using the procedures and equation in paragraph (a)(9)(v) of this section.

(ii) If Method 18 of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds, the organic compound concentration (C_T) is the sum of the individual components and shall be computed for each run using the following equation:

$$C_T = \sum_{j=1}^{n} C_j$$

where:

C_T=Total concentration of organic compounds (minus methane and ethane), dry basis, parts per million by volume.

C_j=Concentration of sample components j, dry basis, parts per million by volume.

n=Number of components in the sample.

(iii) If an owner or operator uses Method 18 of 40 CFR part 60, appendix A to compute total organic HAP concentration rather than organic compounds concentration, the equation in paragraph (a)(9)(ii) of this section shall be used except that only organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of subpart F of this part.

(iv) The emission rate correction factor or excess air integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic HAP or organic compound samples, and the samples shall be taken during the same time that the organic HAP or organic compound samples are taken.

(v) The organic compound concentration corrected to 3 percent oxygen (C_c) shall be calculated using the following equation:

$$C_c = C_T\left(\frac{17.9}{20.9 - \%O_{2d}}\right)$$

where:

C_c=Concentration of organic compounds corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_T=Total concentration of organic compounds, dry basis, parts per million by volume.

$\%O_{2d}$=Concentration of oxygen, dry basis, percent by volume.

(10) For the purpose of determining compliance with the 98-percent reduction requirement in § 63.126(b)(1) of this subpart, Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used, except as provided in paragraph (a)(11) of this section.

(i) For the purpose of determining compliance with the reduction efficiency requirement, organic compound concentration may be measured in lieu of organic HAP concentration.

(ii) If Method 25A of 40 CFR part 60, appendix A is used to measure the concentration of organic compounds (C_T), the principal organic HAP in the vent stream shall be used as the calibration gas.

(A) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(B) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(C) The mass at the inlet and outlet of the control device during each testing interval shall be calculated as follows:

$$M_j = FKV_sC_T$$

where:

M_j=Mass of organic compounds emitted during testing interval j, kilograms.

V_s=Volume of air-vapor mixture exhausted at standard conditions, 20 °C and 760 millimeters mercury, standard cubic meters.

C_T=Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.

K=Density, kilograms per standard cubic meter organic HAP, 859 kilograms per standard cubic meter organic HAP. (Note: The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of M_j.)

$F=10^{-6}$=Conversion factor, (cubic meters organic HAP per cubic meters air) * (parts per million by volume)$^{-1}$.

(D) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated as follows:

$$E_i = \frac{\sum_{j=1}^{n} M_{ij}}{T}$$

$$E_o = \frac{\sum_{j=1}^{n} M_{oj}}{T}$$

where:

E_i, E_o=Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the combustion or recovery device, kilograms per hour.

M_{ij}, M_{oj}=Mass of organic compounds at the inlet (i) or outlet (o) during testing interval j, kilograms.

T=Total time of all testing intervals, hours.

n=Number of testing intervals.

(iii) If Method 18 of 40 CFR part 60, appendix A is used to measure organic compounds, the mass rates of organic compounds (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij} MW_{ij}\right) Q_i$$

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj} MW_{oj}\right) Q_o$$

where:

C_{ij}, C_{oj}=Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

MW_{ij}, MW_{oj}=Molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

Q_i, Q_o=Flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

K_2=Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

(iv) Where Method 18 or 25A of 40 CFR part 60, appendix A is used to measure the percent reduction in organic compounds, the percent reduction across the control device shall be calculated as follows:

$$R = \frac{E_i - E_o}{E_i}(100)$$

where:

R=Control efficiency of control device, percent.

E_i=Mass emitted or mass flow rate of organic compounds at the inlet to the combustion or recovery device as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.

E_o=Mass emitted or mass flow rate of organic compounds at the outlet of the combustion or recovery device, as calculated under paragraph (a)(10)(ii)(D) or (a)(10)(iii) of this section, kilogram per hour.

(11) The owner or operator may use any methods or data other than Method 18 or Method 25A of 40 CFR part 60, appendix A, if the method or data has been validated according to Method 301 of appendix A of this part.

(b) When a flare is used to comply with § 63.126(b)(2) of this subpart, the owner or operator shall comply with the flare provisions in § 63.11(b) of subpart A of this part.

(1) The compliance determination required by § 63.6(h) of subpart A of this part shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions. The observation period shall be at least 2 hours and shall be conducted according to Method 22 of 40 CFR part 60, appendix A.

(i) If the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(ii) If additional loading cycles are initiated within the 2-hour period, then visible emission observations shall be conducted for the additional cycles.

(2) An owner or operator is not required to conduct a performance test to determine the percent emission reduction or outlet total HAP or TOC concentration when a flare is used.

(c) An owner or operator is not required to conduct a performance test when any of the conditions specified in paragraph (c)(1), (c)(2), (c)(3), (c)(4), (c)(5), or (c)(6) of this section are met.

(1) When a boiler or process heater with a design heat input capacity of 44 megawatts or greater is used.

(2) When a boiler or process heater burning hazardous waste is used for which the owner or operator:

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H, or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266 subpart H.

(3) When a boiler or process heater into which the vent stream is introduced with the primary fuel.

(4) When a vapor balancing system is used.

(5) When emissions are recycled to a chemical manufacturing process unit.

(6) When a transfer rack transfers less than 11.8 million liters per year and the owner or operator complies with the requirements in paragraph (h) of this section or uses a flare to comply with § 63.126(b)(2) of this subpart.

(d) An owner or operator using a combustion device followed by a scrubber or other control device to control a halogenated transfer vent stream in compliance with § 63.126(d) of this subpart shall conduct a performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens.

(1) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other control device used to reduce halogen emissions. For an owner or operator complying with the 0.45 kilograms per hour outlet mass emission rate limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other control device and prior to release to the atmosphere.

(2) Except as provided in paragraph (d)(5) of this section, Method 26 or 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration in milligrams per dry standard cubic meter of the hydrogen halides and halogens that may be present in the stream. The mass emission rate of each hydrogen halide and halogen compound shall be calculated from the concentrations and the gas stream flow rate.

(3) To determine compliance with the percent emissions reduction limit, the mass emission rate for any hydrogen halides and halogens present at the scrubber inlet shall be summed together. The mass emission rate of the compounds present at the scrubber outlet shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(4) To demonstrate compliance with the 0.45 kilograms per hour mass emission rate limit, the test results must show that the mass emission rate of the total hydrogen halides and halogens measured at the scrubber outlet is below 0.45 kilograms per hour.

(5) The owner or operator may use any other method or data to demonstrate compliance if the method or data has been validated according to the protocol of Method 301 of appendix A of this part.

(e) The owner or operator shall inspect the vapor collection system and vapor balancing system, according to the requirements for vapor collection systems in § 63.148 of this subpart.

(1) Inspections shall be performed only while a tank truck or railcar is being loaded.

(2) For vapor collection systems only, an inspection shall be performed prior to each performance test required to demonstrate compliance with § 63.125(b)(1) of this subpart.

(3) For each vapor collection system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(f) For the purposes of demonstrating vapor tightness to determine compliance with § 63.126(e)(2) of this subpart, the following procedures and equipment shall be used:

(1) The pressure test procedures specified in Method 27 of 40 CFR part 60, appendix A; and

(2) A pressure measurement device which has a precision of ±2.5 millimeters of mercury and which is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

(g) An owner or operator using a scrubber or other control technique to reduce the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to a combustion device used to comply with § 63.128(d)(2) of this subpart shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in paragraph (d)(3) of this section.

(h) For transfer racks that transfer less than 11.8 million liters per year of liquid organic HAP's, the owner or operator may comply with the requirements in paragraphs (h)(1) through (h)(3) of this section instead of the requirements in paragraph (a) or (b) of this section.

(1) The owner or operator shall prepare, as part of the Implementation Plan required by § 63.151(c) of this subpart, a design evaluation that shall document that the control device being used achieves the required control efficiency during reasonably expected maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and organic HAP content, and the information specified in paragraphs (h)(1)(i) through (h)(1)(v) of this section, as applicable.

(i) If the control device receives vapors, gases, or liquids, other than fuels, from emission points other than transfer racks subject to this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(ii) If an enclosed combustion device with a maximum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet the 98-percent emission reduction requirement, documentation that those conditions exist is sufficient to meet the requirements of paragraph (h)(1) of this section.

(iii) Except as provided in paragraph (h)(1)(ii) of this section, for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature.

(iv) For carbon adsorbers, the design evaluation shall include the affinity of the organic HAP vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(v) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the operating range for each monitoring parameter identified in the Implementation Plan. The specified operating range shall represent the conditions for which the control device can achieve the 98-percent-or-greater emission reduction required by § 63.126(b)(1) of this subpart.

(3) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in § 63.152(b) of this subpart or operating permit and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status.

§ 63.129 Transfer operations provisions—reporting and recordkeeping for performance tests and notification of compliance status.

(a) Each owner or operator of a Group 1 transfer rack shall:

(1) Keep an up-to-date, readily accessible record of the data specified in paragraphs (a)(4) through (a)(7) of this section, as applicable.

(2) Include the data specified in paragraphs (a)(4) through (a)(7) of this section in the Notification of Compliance Status report as specified in § 63.152(b) of this subpart.

(3) If any subsequent performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) through (a)(7) of this section in the next Periodic Report as specified in § 63.152(c) of this subpart.

(4) Record and report the following when using a control device other than a flare to achieve a 98 weight percent reduction in total organic HAP or a total organic HAP concentration of 20 parts per million by volume, as specified in § 63.126(b)(1) of this subpart:

(i) The parameter monitoring results for thermal incinerators, catalytic incinerators, boilers or process heaters, absorbers, condensers, or carbon adsorbers specified in table 7 of this subpart, recorded during the performance test, and averaged over the time period of the performance testing.

(ii) The percent reduction of total organic HAP or TOC achieved by the control device determined as specified in § 63.128(a) of this subpart, or the concentration of total organic HAP or TOC (parts per million by volume, by compound) determined as specified in § 63.128(a) of this subpart at the outlet of the control device on a dry basis corrected to 3 percent oxygen.

(iii) The parameters shall be recorded at least every 15 minutes.

(iv) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(5) Record and report the following when using a flare to comply with § 63.126(b)(2) of this subpart:

(i) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.128(b) of this subpart; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(6) Record and report the following when using a scrubber following a combustion device to control a halogenated vent stream, as specified in § 63.126(d) of this subpart:

(i) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens determined according to the procedures in § 63.126(d) of this subpart;

(ii) The parameter monitoring results for scrubbers specified in table 7 of this subpart, and averaged over the time period of the performance test; and

(iii) The parameters shall be recorded at least every 15 minutes.

(7) Record and report the halogen concentration in the vent stream determined according to the procedures as specified in § 63.128(d) of this subpart.

(b) If an owner or operator requests approval to use a control device other than those listed in table 7 of this subpart or to monitor a parameter other than those specified in table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under § 63.151(f) or § 63.152(e) of this subpart. The Administrator will specify appropriate reporting and recordkeeping

requirements as part of the review of the Implementation Plan or permit application.

(c) For each parameter monitored according to table 7 of this subpart or paragraph (b) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control device. In order to establish the range, the information required in § 63.152(b)(2) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

(d) Each owner or operator shall maintain a record describing in detail the vent system used to vent each affected transfer vent stream to a control device. This document shall list all valves and vent pipes that could vent the stream to the atmosphere, thereby by-passing the control device; identify which valves are secured by car-seals or lock-and-key type configurations; and indicate the position (open or closed) of those valves which have car-seals. Equipment leaks such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(e) An owner or operator meeting the requirements of § 63.128(h) of this subpart shall submit, as part of the Implementation Plan required by § 63.151(c) of this subpart, the information specified in § 63.126(h)(1) of this subpart.

(f) An owner or operator meeting the requirements of § 63.128(h) of this subpart shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the operating range for each monitoring parameter identified in the Implementation Plan or in the operating permit.

§ 63.130 Transfer operations provisions—periodic recordkeeping and reporting.

(a) Each owner or operator using a control device to comply with § 63.126(b)(1) or (b)(2) of this subpart shall keep the following up-to-date, readily accessible records:

(1) While the transfer vent stream is being vented to the control device, continuous records of the equipment operating parameters specified to be monitored under § 63.127 of this subpart, and listed in table 7 of this subpart or specified by the Administrator in accordance with §§ 63.127(c) and 63.129(b). For flares, the hourly records and records of pilot flame outages specified in table 7 shall be maintained in place of continuous records.

(2) Records of the daily average value of each monitored parameter for each operating day, except as provided in paragraphs (a)(2)(iv) through (a)(2)(vii) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day, except as provided in paragraph (a)(2)(ii) of this section. The average shall cover periods of loading.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the hourly or daily averages. Records shall be kept of the times and durations of all such periods and any other periods of loading or control device operation.

(iii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range rather than calculating and recording a daily average for that operating day.

(v) For flares, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(vi) If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in table 7 of this subpart shall be kept instead of the daily averages.

(vii) Records of the duration of all periods when the vent stream is diverted through by-pass lines shall be kept rather than daily averages.

(3) For boilers or process heaters, records of any changes in the location at which the vent stream is introduced into the flame zone as required under the reduction of total organic HAP emissions in § 63.126(b)(1) of this subpart.

(b) If a vapor collection system containing valves that could divert the emission stream away from the control device is used, each owner or operator of a Group 1 transfer rack subject to the provisions of § 63.127(d) of this subpart shall keep up-to-date, readily accessible records of:

(1) Hourly records of whether the flow indicator specified under § 63.127(d)(1) of this subpart was operating and whether flow was detected at any time during the hour, as well as records of the times durations of all periods when the vent stream is diverted from the control device or the monitor is not operating.

(2) Where a seal mechanism is used to comply with § 63.127(d)(2), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the duration of all periods when the seal mechanism is broken, the by-pass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken, as listed in table 7 of this subpart.

(c) Each owner or operator of a Group 1 transfer rack who uses a flare to comply with § 63.126(b)(2) of this subpart shall keep up-to-date, readily accessible records of the flare pilot flame monitoring specified under § 63.127(a)(2) of this subpart.

(d) Each owner or operator of a transfer rack subject to the requirements of § 63.126 of this subpart shall submit to the Administrator Periodic Reports of the following information according to the schedule in § 63.152(c) of this subpart:

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values were outside the range established in the Notification of Compliance Status or operating permit.

(2) Reports of the duration of periods when monitoring data are not collected for each excursion caused by insufficient monitoring data as defined in § 63.152(c)(2)(ii)(A) of this subpart.

(3) Reports of the times and durations of all periods recorded under paragraph (b)(1) of this section when the vent stream was diverted from the control device.

(4) Reports of all times recorded under paragraph (b)(2) of this section when maintenance is performed on car-sealed valves, when the car-seal is broken, when the by-pass line valve position is changed, or the key for a lock-and-key type lock has been checked out.

(5) Reports of the times and durations of all periods recorded under paragraph (a)(2)(v) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (a)(2)(vi) of this section were outside the ranges established in the Notification of Compliance Status or operating permit.

(e) The owner or operator of a Group 1 transfer rack shall record that the

verification of DOT tank certification or Method 27 testing, required in § 63.126(e) of this subpart, has been performed. Various methods for the record of verification can be used, such as: A check off on a log sheet; a list of DOT serial numbers or Method 27 data; or a position description for gate security, showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(f) Each owner or operator of a Group 1 or Group 2 transfer rack shall record, update annually, and maintain the information specified in paragraphs (f)(1) through (f)(3) of this section in a readily accessible location on site:

(1) An analysis demonstrating the design and actual annual throughput of the transfer rack;

(2) An analysis documenting the weight-percent organic HAP's in the *liquid loaded. Examples of acceptable* documentation include but are not limited to analyses of the material and engineering calculations.

(3) An analysis documenting the annual rack weighted average HAP *partial pressure of the transfer rack.*

(i) For Group 2 transfer racks that are limited to transfer of organic HAP's with partial pressures less than 10.3 kilopascals, documentation is required of the organic HAP's (by compound) that are transferred. The rack weighted average partial pressure does not need to be calculated.

(ii) For racks transferring one or more organic HAP's with partial pressures greater than 10.3 kilopascals, as well as one or more organic HAP's with partial pressures less than 10.3 kilopascals, a rack weighted partial pressure shall be documented. The rack weighted average HAP partial pressure shall be weighted by the annual throughput of each chemical transferred.

§ 63.131 Process wastewater provisions—flow diagrams and tables.

(a) The flow diagrams in this subpart are provided as guidance for understanding the basic interrelationships of the wastewater provisions for process units at new and existing sources. Paragraphs (b) through (k) of this section briefly outline the flow diagrams provided.

(b) Figure 1 of this subpart provides an overview of the HON wastewater provisions.

(c) Figure 2 of this subpart outlines the process for determining whether a stream meets the definition of wastewater in § 63.101 of subpart F of this part.

(d) Figure 3 of this subpart summarizes the requirements for designating as a Group 1 wastewater stream a wastewater stream or mixture of wastewater streams.

(e) Figure 4 of this subpart summarizes the steps for making Group 1 and Group 2 determinations for wastewater streams that are generated from a process unit at a new source and contain organic HAP's listed in table 8 of this subpart.

(f) Figure 5 of this subpart summarizes the steps for making Group 1 and Group 2 determinations for wastewater streams that are generated from process units at new and existing sources and contain organic HAP's listed in table 9 of this subpart.

(g) Figure 6 of this subpart summarizes compliance options for control of wastewater streams containing organic HAP's listed in table 8 of this subpart.

(h) Figure 7 of this subpart summarizes compliance options for control of wastewater streams containing organic HAP's listed in table 9 of this subpart.

(i) Figure 8 of this subpart presents the process unit alternative compliance option for control of wastewater streams at existing sources containing organic HAP's listed in table 9 of this subpart.

(j) Figure 9 of this subpart presents the 95-percent biological treatment option for control of wastewater streams at new and existing sources containing organic HAP's listed in table 9 of this subpart.

(k) Figure 10 of this subpart outlines compliance options for control of residuals.

§ 63.132 Process wastewater provisions—general.

(a) For each process wastewater stream to which this subpart applies that is located at a new source, the owner or operator shall comply with the requirements in either paragraph (a)(1), (a)(2) or (a)(3) of this section no later than the dates specified in § 63.100 of subpart F of this part.

(1) The requirements of paragraphs (c), (e), and (h) of this section, or

(2) The requirements of paragraphs (d) through (i) of this section, or

(3) The requirements of paragraphs (d), (g), and (j) of this section.

(b) For each process wastewater stream to which this subpart applies that is located at an existing source, the owner or operator shall comply with the requirements in either paragraph (b)(1), (b)(2), or (b)(3) of this section no later than the dates specified in § 63.100 of subpart F of this part.

(1) The requirements of paragraphs (c) and (h) of this section, or

(2) The requirements of paragraphs (g), (h), and (i) of this section; or

(3) The requirements of paragraphs (g) and (j) of this section.

(c) For each process wastewater stream or mixture of wastewater streams to which this subpart applies that is located at a new or existing source, the owner or operator shall designate such streams as Group 1 wastewater streams according to procedures specified in § 63.144(d) of this subpart. The requirements of this paragraph are illustrated in figure 3 of this subpart.

(d) For each process wastewater stream to which this subpart applies that is located at a new source, the owner or operator shall determine the average flow rate and average VOHAP concentration of each organic HAP listed in table 8 of this subpart for the point of generation of each process wastewater stream generated by the chemical manufacturing process unit. Average flow rate shall be determined according to the procedures specified in § 63.144(c) of this subpart. Average VOHAP *concentration of each organic* HAP listed in table 8 of this subpart shall be determined according to the procedures specified in § 63.144(b) of this subpart. The requirements of this paragraph are illustrated in figure 4 of *this subpart.*

(1) A process wastewater stream shall be a Group 1 wastewater stream for organic HAP's listed in table 8 of this subpart if the average flow rate is 0.02 liter per minute or greater and the average VOHAP concentration of any individual organic HAP listed in table 8 of this subpart is 10 parts per million by *weight or greater.*

(2) A process wastewater stream shall be a Group 2 wastewater stream for organic HAP's listed in table 8 of this subpart if the average flow rate is less than 0.02 liter per minute or the average VOHAP concentration for each individual organic HAP listed in table 8 of this subpart is less than 10 parts per million by weight.

(e) Except as provided in paragraph (j) of this section, the owner or operator of each Group 1 stream for organic HAP's listed in table 8 of this subpart shall comply with the requirements of paragraphs (e)(1) through (e)(4) of this section and with the requirements of either paragraph (e)(5) or (e)(6) of this section.

(1) The requirements for waste management units specified in §§ 63.133 through 63.137 of this subpart.

(2) The monitoring and inspection requirements of § 63.143 of this subpart.

(3) The reporting and recordkeeping requirements of §§ 63.146 and 63.147 of this subpart.

(4) The requirements in paragraph (g) of this section to determine whether each stream is Group 1 or Group 2 for organic HAP's listed in table 9 of this subpart.

(5) The treatment requirements specified in § 63.138(b) of this subpart, or

(6) The 95-percent biological treatment option in § 63.138(e) of this subpart.

(f) The owner or operator of each Group 2 stream for organic HAP's listed in table 8 of this subpart shall comply with: (1) The recordkeeping and reporting requirements of §§ 63.146 and 63.147 of this subpart, and

(2) The requirements in paragraph (g) of this section to determine whether each stream is Group 1 or Group 2 for organic HAP's listed in table 9 of this subpart.

(g) The owner or operator of SOCMI process units at new and existing sources shall determine the average flow rate and total VOHAP average concentration for HAP's listed in table 9 of this subpart for the point of generation of each wastewater stream generated by the process unit. Average flow rate shall be determined according to the procedures specified in § 63.144(c) of this subpart. Total VOHAP average concentration shall be determined according to the procedures specified in § 63.144(b) of this subpart. The requirements of this paragraph are illustrated in figure 5 of this subpart.

(1) A process wastewater stream shall be a Group 1 wastewater stream for organic HAP's listed in table 9 of this subpart if:

(i) The total VOHAP average concentration of the wastewater stream is greater than or equal to 10,000 parts per million by weight at any flow rate, or

(ii) The total VOHAP average concentration is greater than or equal to 1,000 parts per million by weight and the average flow rate is greater than or equal to 10 liters per minute.

(2) A process wastewater stream shall be a Group 2 wastewater stream for HAP's listed in table 9 of this subpart if:

(i) The total VOHAP average concentration is less than 1,000 parts per million by weight, or

(ii) The average flow rate is less than 10 liters per minute and the total VOHAP average concentration is less than 10,000 parts per million by weight.

(h) Except as provided in paragraph (j) of this section, the owner or operator of each Group 1 stream for HAP's listed in table 9 of this subpart shall comply with the requirements of paragraphs (h)(1) through (h)(3) of this section and with the requirements of paragraph (h)(4), (h)(5), or (h)(6) of this section.

(1) The requirements for waste management units specified in §§ 63.133 through 63.137 of this subpart.

(2) The monitoring and inspection requirements of § 63.143 of this subpart.

(3) The reporting and recordkeeping requirements of §§ 63.146 and 63.147 of this subpart

(4) The treatment requirements specified in § 63.138(c) of this subpart, or

(5) The process unit alternative specified in § 63.138(d) of this subpart

(6) The 95-percent biological treatment option in § 63.138(e) of this subpart.

(i) The owner or operator of each Group 2 stream for HAP's listed in table 9 of this subpart shall comply with the recordkeeping and reporting requirements of §§ 63.146 and 63.147 of this subpart.

(j) The owner or operator may elect to transfer a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream to an on-site treatment operation not owned or operated by the owner or operator of the source generating the wastewater stream or residual, to an off-site treatment operation, or to sell it for any other purpose. The owner or operator transferring the wastewater stream or residual shall:

(1) Comply with the provisions specified in §§ 63.133 through 63.137 of this subpart for each waste management unit that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream prior to and during shipment or transport.

(2) Ensure that the wastewater stream or residual is ultimately treated in accordance with the requirements of:

(i) § 63.138(b) of this subpart if the stream or residual is Group 1 for table 8 compounds and with the requirements of § 63.138(c) of this subpart if the stream or residual is Group 1 for table 9 compounds, or

(ii) § 63.102(b) of subpart F or subpart D of this part, if alternative emission limitations have been granted in accordance with these provisions.

(3) Include with the shipment or transport of each Group 1 wastewater stream or residual removed from a Group 1 wastewater stream a notice. The notice shall state that the wastewater stream or residual contains organic HAP's which are required to be managed and treated in accordance with the provisions of this subpart. When the transport is continuous (for example, discharge to a publicly-owned treatment works), the notice shall be submitted to the treatment operator at least once per year.

§ 63.133 Process wastewater provisions—wastewater tanks.

(a) For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of either paragraph (a)(1) or (a)(2) as specified in table 10 of this subpart.

(1) The owner or operator shall operate and maintain a fixed roof unless the wastewater tank is used for mixing wastewater, heating wastewater, or treating with an exothermic reaction. In which case, the owner or operator shall comply with the requirements specified in paragraph (a)(2) of this section.

(2) The owner or operator shall comply with the requirements in paragraphs (b) through (h) of this section and shall operate and maintain one of the emission control techniques listed in paragraphs (a)(2)(i) through (a)(2)(iv).

(i) A fixed roof and a closed-vent system that routes the organic HAP vapors vented from the wastewater tank to a control device. The fixed roof, closed-vent system, and control device shall meet the requirements specified in paragraph (b) of this section;

(ii) A fixed roof and an internal floating roof that meets the requirements specified in § 63.119(b) of this subpart;

(iii) An external floating roof that meets the requirements specified in §§ 63.119(c), 63.120(b)(5), and 63.120(b)(6) of this subpart; or

(iv) An equivalent means of emission limitation. Determination of equivalence to the reduction in emissions achieved by the requirements of paragraphs (a)(2)(i) through (a)(2)(iii) of this section will be evaluated according to § 63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(2)(iv)(A) or (a)(2)(iv)(B) of this section.

(A) Actual emissions tests that use full-size or scale-model wastewater tanks that accurately collect and measure all organic HAP emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(B) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(i) of this section, the fixed roof shall meet the requirements of

paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the closed-vent system shall meet the requirements of paragraph (b)(3) of this section:

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of § 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with the requirements of § 63.148 of this subpart.

(4) For any fixed roof tank and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2)(ii) of this section, the floating roof shall be inspected according to the procedures specified in § 63.120(a)(2) and (a)(3) of this subpart.

(d) Except as provided in paragraph (e) of this section, if the owner or operator elects to comply with the requirements of (a)(2)(iii) of this section, seal gaps shall be measured according to the procedures specified in § 63.120(b)(2)(i) through (b)(4) of this subpart and the wastewater tank shall be inspected to determine compliance with § 63.120(b)(5) and (b)(6) of this subpart.

(e) If the owner or operator determines that it is unsafe to perform the seal gap measurements specified in § 63.120(b)(2)(i) through (b)(4) of this subpart or to inspect the wastewater tank to determine compliance with § 63.120(b)(5) and (b)(6) of this subpart because the floating roof appears to be structurally unsound and poses an imminent or potential danger to inspecting personnel, the owner or operator shall comply with the requirements in either paragraph (e)(1) or (e)(2) of this section.

(1) The owner or operator shall measure the seal gaps or inspect the wastewater tank within 30 calendar days of the determination that the floating roof is unsafe, or

(2) The owner or operator shall empty and remove the wastewater tank from service within 45 calendar days of determining that the roof is unsafe. If the wastewater tank cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include an explanation of why it was unsafe to perform the inspection or seal gap measurement, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the wastewater tank will be emptied as soon as possible.

(f) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with § 63.143 of this subpart. For wastewater tanks, improper work practice includes, but is not limited to, leaving open or ungasketed any access door or other opening when such door or opening is not in use.

(g) Except as provided in paragraph (e) of this section, each wastewater tank shall be inspected for control equipment failures as defined in paragraph (g)(1) of this section according to the schedule in paragraphs (g)(2) and (g)(3) of this section.

(1) Control equipment failures for wastewater tanks include, but are not limited to, the conditions specified in paragraphs (g)(1)(i) through (g)(1)(ix) of this section.

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, or other openings in the rim seal or seal fabric of the floating roof.

(v) There are visible gaps between the seal of an internal floating roof and the wall of the wastewater tank.

(vi) There are gaps between the metallic shoe seal or the liquid mounted primary seal of an external floating roof and the wall of the wastewater tank that exceed 212 square centimeters per meter of tank diameter or the width of any portion of any gap between the primary seal and the tank wall exceeds 3.81 centimeters.

(vii) There are gaps between the secondary seal of an external floating roof and the wall of the wastewater tank that exceed 21.2 square centimeters per meter of tank diameter or the width of any portion of any gap between the secondary seal and the tank wall exceeds 1.27 centimeters.

(viii) Where a metallic shoe seal is used on an external floating roof, one end of the metallic shoe does not extend into the stored liquid or one end of the metallic shoe does not extend a minimum vertical distance of 61 centimeters above the surface of the stored liquid.

(ix) A gasket, joint, lid, cover, or door is cracked, gapped, or broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (g)(1)(i) through (g)(1)(viii) according to the schedule specified in paragraphs (c) and (d) of this section.

(3) The owner or operator shall inspect for the control equipment failures in paragraph (g)(1)(ix) of this section initially, and semi-annually thereafter.

(h) Except as provided in § 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification. If a failure that is detected during inspections required by paragraphs (a)(2)(i) or (a)(3)(ii) of this section cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

§ 63.134 Process wastewater provisions—surface impoundments.

(a) For each surface impoundment that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) of this section.

(b) The owner or operator shall operate and maintain on each surface impoundment a cover (e.g., air-

supported structure or rigid cover) and a closed-vent system that routes the organic HAP vapors vented from the surface impoundment to a control device.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.

(iii) The cover shall be used at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the surface impoundment except during removal of treatment residuals in accordance with 40 CFR 268.4 or closure of the surface impoundment in accordance with 40 CFR 264.228.

(2) The control device shall be designed, operated, and inspected in accordance with § 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with § 63.148 of this subpart.

(4) For any cover and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(c) Each surface impoundment shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with § 63.143 of this subpart.

(1) For surface impoundments, improper work practice includes, but is not limited to, leaving open or ungasketed any access hatch or other opening when such hatch or opening is not in use.

(2) For surface impoundments, control equipment failure includes, but is not limited to, any time a seal, gasket, joint, lid, cover, or door is cracked, gapped, or broken.

(d) Except as provided in § 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§ 63.135 Process wastewater provisions—containers.

(a) For each container that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b) through (f) of this section.

(b) The owner or operator shall operate and maintain a cover on each container used to handle, transfer, or store a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with the following requirements:

(1) Except as provided in paragraph (d)(4) of this section, if the capacity of the container is greater than 0.42 m^3, the cover and all openings (e.g., bungs, hatches, sampling ports, and pressure relief devices) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(2) If the capacity of the container is less than or equal to 0.42 m^3, the owner or operator shall comply with either (b)(2)(i) or (b)(2)(ii) of this section.

(i) The container must meet existing DOT specifications and testing requirements under 49 CFR part 178; or

(ii) Except as provided in paragraph (d)(4) of this section, the cover and all openings shall be maintained without leaks as specified in § 63.148 of this subpart.

(3) The cover and all openings shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations.

(c) For containers with a capacity greater than or equal to 0.42 m^3, a submerged fill pipe shall be used when a container is being filled by pumping with a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream.

(1) The submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled.

(2) The cover shall remain in place and all openings shall be maintained in a closed, sealed position except for those openings required for the submerged fill pipe and for venting of the container to prevent physical damage or permanent deformation of the container or cover.

(d) During treatment of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, including aeration, thermal or other treatment, in a container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a closed-vent system that routes the organic HAP vapors vented from the container to a control device.

(1) Except as provided in paragraph (d)(4) of this section, the enclosure and all openings (e.g., doors, hatches) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(2) The control device shall be designed, operated, and inspected in accordance with § 63.139 of this subpart.

(3) Except as provided in paragraph (d)(4) of this section, the closed-vent system shall be inspected in accordance with § 63.148 of this subpart.

(4) For any enclosure and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(e) Each container shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures in accordance with § 63.143 of this subpart.

(1) For containers, improper work practice includes, but is not limited to, leaving open or ungasketed any access hatch or other opening when such hatch or opening is not in use.

(2) For containers, control equipment failure includes, but is not limited to, any time a seal, gasket, joint, lid, cover, or door is cracked, gapped, or broken.

(f) Except as provided in § 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

§ 63.136 Process wastewater provisions—individual drain systems.

(a) For each individual drain system that receives or manages a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (b), (c), and (d) of this section. For each junction box or drain that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the

requirements in paragraphs (b), (c), and (d) or with paragraphs (e), (f), and (g) of this section.

(b) If the owner or operator elects to comply with this paragraph, the owner or operator shall operate and maintain on each opening in the individual drain system a cover and closed-vent system that routes the organic vapors vented from the individual drain system to a control device and the owner or operator shall comply with the requirements of paragraphs (b)(1) through (b)(5) of this section.

(1) The cover and all openings shall meet the following requirements:

(i) Except as provided in paragraph (b)(4) of this section, the cover and all openings (e.g., access hatches, sampling ports) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(ii) The cover and all openings shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream is in the drain system except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with § 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with § 63.148 of this subpart.

(4) For any cover and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in § 63.148 of this subpart.

(5) The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere through means such as water seals.

(c) Each individual drain system shall be inspected initially, and semi-annually thereafter, for improper work practices and control equipment failures, in accordance with § 63.143 of this subpart.

(1) For individual drain systems, improper work practice includes, but is not limited to, leaving open or ungasketed any access hatch or other opening when such hatch or opening is not in use.

(2) For individual drain systems, control equipment failure includes, but is not limited to, any time a seal, gasket, joint, lid, cover, or door is cracked, gapped, or broken.

(d) Except as provided in § 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification.

(e) If the owner or operator elects to comply with this paragraph, the owner or operator shall comply with the requirements in paragraphs (e)(1) through (e)(3) of this section:

(1) Each drain shall be equipped with water seal controls, such as a p-trap or s-trap, or a tightly sealed cap or plug. The owner or operator shall comply with paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For each drain using a p-trap or s-trap, the owner or operator shall ensure that water is maintained in the p-trap or s-trap. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap.

(ii) If a water seal is used on a drain hub receiving a Group 1 wastewater, the owner or operator shall either extend the drain pipe discharging the wastewater below the liquid surface in the water seal, or install a flexible cap (or other enclosure which restricts wind motion) that encloses the space between the drain discharging the wastewater to the drain hub receiving the wastewater.

Note: Water seals which are used on hubs receiving Group 2 wastewater for the purpose of eliminating cross ventilation to drains carrying Group 1 wastewater are not required to have a flexible cap or extended subsurface drain.

(2) Each junction box shall be equipped with a cover and, if vented, shall have a vent pipe. Any vent pipe shall be at least 90 centimeters in length and shall not exceed 10.2 centimeters in diameter.

(i) Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

(ii) One of the following methods shall be used to control emissions from the junction box vent pipe to the atmosphere:

(A) Equip the junction box with a system to prevent the flow of organic HAP vapors from the vent pipe to the atmosphere during normal operation. An example of such a system includes use of water seal controls on the junction box.

(B) Connect the vent pipe to a closed-vent system that is inspected in accordance with the requirements of § 63.148 of this subpart and control device that is designed, operated, and inspected in accordance with the requirements of § 63.139 of this subpart.

(3) Each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visible gaps or cracks in joints, seals, or other emission interfaces.

(f) Equipment used to comply with paragraphs (e)(1), (e)(2), or (e)(3) of this section shall be inspected as follows:

(1) Each drain using a tightly sealed cap or plug shall be visually inspected initially, and semi-annually thereafter, to ensure caps or plugs are in place and properly installed.

(2) Each junction box shall be visually inspected initially, and semi-annually thereafter, to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.

(3) The unburied portion of each sewer line shall be visually inspected initially, and semi-annually thereafter, for indication of cracks or gaps that could result in air emissions.

(g) Except as provided in § 63.140 of this subpart, when a gap, or cracked or broken seal, joint, or cover is identified, first efforts at repair shall be made no later than 5 calendar days after identification, and repair shall be completed within 15 calendar days after identification.

§ 63.137 Process wastewater provisions—oil-water separators.

(a) For each oil-water separator that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (c) and (d) of this section and shall operate and maintain one of the following:

(1) A fixed roof and a closed vent system that routes the organic HAP vapors vented from the oil-water separator to a control device. The fixed roof, closed-vent system, and control device shall meet the requirements specified in paragraph (b) of this section;

(2) A floating roof meeting the requirements in 40 CFR part 60 subpart QQQ §§ 60.693–2 (a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4). For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, the owner or operator shall operate and maintain a fixed roof, closed vent system, and control device that meet the requirements specified in paragraph (b) of this section.

(3) An equivalent means of emission limitation. Determination of equivalence

to the reduction in emissions achieved by the requirements of paragraphs (a)(1) and (a)(2) of this section will be evaluated according to § 63.102(b) of subpart F of this part. The determination will be based on the application to the Administrator which shall include the information specified in either paragraph (a)(3)(i) or (a)(3)(ii) of this section.

(i) Actual emissions tests that use full-size or scale-model oil-water separators that accurately collect and measure all organic HAP emissions from a given control technique, and that accurately simulate wind and account for other emission variables such as temperature and barometric pressure, or

(ii) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(b) If the owner or operator elects to comply with the requirements of paragraphs (a)(1) or (a)(2) of this section, the fixed roof shall meet the requirements of paragraph (b)(1) of this section, the control device shall meet the requirements of paragraph (b)(2) of this section, and the closed-vent system shall meet the requirements of (b)(3) of this section.

(1) The fixed-roof shall meet the following requirements:

(i) Except as provided in (b)(4) of this section, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in § 63.148 of this subpart.

(ii) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the oil-water separator contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) The control device shall be designed, operated, and inspected in accordance with the requirements of § 63.139 of this subpart.

(3) Except as provided in paragraph (b)(4) of this section, the closed-vent system shall be inspected in accordance with the requirements of § 63.148 of this subpart.

(4) For any fixed roof and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements of § 63.148 of this subpart.

(c) If the owner or operator elects to comply with the requirements of paragraph (a)(2) of this section, seal gaps shall be measured according to the procedures specified in 40 CFR part 60 subpart QQQ § 60.696(d)(1) and the schedule specified in paragraphs (c)(1) and (c)(2) of this section.

(1) Measurement of primary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every 5 years thereafter.

(2) Measurement of secondary seal gaps shall be performed within 60 calendar days after installation of the floating roof and introduction of a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream and once every year thereafter.

(d) Each oil-water separator shall be inspected initially, and semi-annually thereafter, for improper work practices in accordance with § 63.143 of this subpart. For oil-water separators, improper work practice includes, but is not limited to, leaving open or ungasketed any access door or other opening when such door or opening is not in use.

(e) Each oil-water separator shall be inspected for control equipment failures as defined in paragraph (e)(1) of this section according to the schedule specified in paragraphs (e)(2) and (e)(3) of this section.

(1) For oil-water separators, control equipment failure includes, but is not limited to, the conditions specified in paragraphs (e)(1)(i) through (e)(1)(vii) of this section

(i) The floating roof is not resting on either the surface of the liquid or on the leg supports.

(ii) There is liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, or other openings in the rim seal or seal fabric of the floating roof.

(v) There are gaps between the primary seal and the separator wall that exceed 67 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the primary seal and the separator wall exceeds 3.8 centimeters.

(vi) There are gaps between the secondary seal and the separator wall that exceed 6.7 square centimeters per meter of separator wall perimeter or the width of any portion of any gap between the secondary seal and the separator wall exceeds 1.3 centimeters.

(vii) A gasket, joint, lid, cover, or door is cracked, gapped, or broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (e)(1)(i) through (e)(1)(vi) according to the schedule specified in paragraph (c) of this section.

(3) The owner or operator shall inspect for control equipment failures in paragraph (e)(1)(vii) of this section initially, and semi-annually thereafter.

(f) Except as provided in § 63.140 of this subpart, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification.

§ 63.138 Process wastewater provisions—treatment processes.

(a) Except as provided in paragraph (m) of this section, the owner or operator shall comply with the requirements of this section according to paragraph (a)(1) for new sources and paragraph (a)(2) for existing sources.

(1) The owner or operator at a new source shall comply with the requirements of paragraphs (f), (g), (h), (i), (j), (k), and (l) of this section and the requirements of either paragraphs (b) and (c), or (e) of this section.

(2) The owner or operator at an existing source shall comply with the requirements of paragraphs (f), (g), (h), (i), (j), (k), and (l) of this section and the requirements of paragraph (c), (d), or (e) of this section.

(b) Except as provided in the 95-percent biological treatment alternative in paragraph (e) of this section, the owner or operator of new sources shall comply with the following requirements for each wastewater stream that is a Group 1 wastewater stream for HAP's listed in table 8 of this subpart. The requirements of this paragraph are illustrated in figure 6 of this subpart.

(1) Except as provided in paragraph (b)(5) of this section, the Group 1 wastewater stream shall be treated by one of the following methods:

(i) Recycle to a process in accordance with the requirements specified in paragraph (f) of this section. Once a wastewater stream is returned to the production process, the wastewater stream is no longer subject to this section.

(ii) Treat using a waste management unit or treatment process which meets one of the following conditions:

(A) Reduces, by removal or destruction, the average VOHAP concentration of each individual organic HAP listed in table 8 of this subpart to less than 10 parts per million by weight as determined by the procedures specified in § 63.145(b) of this subpart;

(B) Meets all design and operation specifications for a steam stripper in paragraph (g) of this section; or

(C) Reduces, by removal or destruction, by 99 percent or more, the total HAP mass flow rate of organic HAP's listed in table 8 of this subpart for a single stream, or the combined HAP mass flow rate of organic HAP's listed in table 8 of this subpart for mixed streams as determined by the procedures specified in § 63.145(c) or (d) of this subpart.

(iii) Treat one Group 1 stream or a combination of one or more Group 1 or Group 2 wastewater streams using a waste management unit or treatment process which meets one of the following conditions:

(A) Reduces, by removal or destruction, by 99 percent or more the total HAP mass flow rate of organic HAP's listed in table 8 of this subpart for a single stream or the combined HAP mass flow rate of organic HAP's listed in table 8 of this subpart for mixed streams as determined by the procedures specified in § 63.145(c) or (d) of this subpart, or

(B) Meets all design and operation specifications for a steam stripper in paragraph (g) of this section; or

(C) Achieves the required HAP mass removal of organic HAP's listed in table 8 of this subpart determined by the procedure in § 63.145(f) of this subpart. The owner or operator shall demonstrate compliance with the required HAP mass removal by calculating the actual HAP mass removal according to the procedures in § 63.145(h) of this subpart. A series of treatment processes may be used to comply with this requirement. All wastewater collection and treatment processes and waste management units located between any two treatment processes being used to achieve the required HAP mass removal shall comply with paragraph (i) of this section. For example, if a combination of two steam strippers is used to achieve the required HAP mass removal, and a surface impoundment is located between the two steam strippers, then the surface impoundment shall comply with § 63.134 of this subpart.

(2) For each treatment process or waste management unit used to comply with the requirements of this paragraph, the owner or operator shall comply with paragraph (i) of this section for control of air emissions.

(3) For each residual removed from a Group 1 wastewater stream, the owner or operator shall comply with paragraph (h) of this section for control of air emissions.

(4) The intentional or unintentional reduction in the individual VOHAP concentration or the total VOHAP average concentration of a wastewater stream by dilution of the wastewater stream with other wastewaters or materials is not allowed for the purpose of complying with the effluent VOHAP concentration requirements specified in paragraph (b)(1)(ii)(A) of this section.

(5) If process changes, not wastewater treatment, result in a Group 1 wastewater stream for organic HAP's listed in table 8 of this subpart meeting the requirements of either paragraph (b)(5)(i) or (b)(5)(ii) of this section, the owner or operator need not comply with paragraph (b)(1) of this section for that stream.

(i) If the average flow rate at the point of generation is reduced to less than 0.02 liter per minute, or

(ii) If the average VOHAP concentration at the point of generation for each organic HAP listed in table 8 of this subpart is reduced to less than 10 parts per million by weight.

(c) Except as provided in the process unit alternative in paragraph (d) of this section and the 95-percent biological treatment alternative in paragraph (e) of this section, the owner or operator of new and existing sources shall comply with the following requirements for each wastewater stream that is a Group 1 wastewater stream for organic HAP's listed in table 9 of this subpart. The requirements of this paragraph are illustrated in figure 7 of this subpart.

(1) Except as provided in paragraphs (c)(5) through (c)(7) of this section, the Group 1 wastewater stream shall be treated by one of the following methods:

(i) Recycle to a process in accordance with the requirements specified in paragraph (i) of this section. Once a wastewater stream is returned to the production process, the wastewater stream is no longer subject to this section.

(ii) Treat using a waste management unit which meets one of the following conditions:

(A) Is a steam stripper meeting all of the design and operation specifications of paragraph (g) of this section;

(B) Reduces, by removal or destruction, by 99 percent or more, the total HAP mass flow rate of the organic HAP's listed in table 9 of this subpart for a single stream or the combined HAP mass flow rate of the organic HAP's listed in table 9 for mixed streams as determined by the procedures specified in § 63.145(c) or (d) of this subpart;

(C) Reduces, by removal or destruction, the total VOHAP average concentration of the organic HAP's listed in table 9 of this subpart to a level less than 50 parts per million by weight as determined by the procedures specified in § 63.145(b) of this subpart; or

(D) Reduces, by removal or destruction, the HAP mass flow rate of each organic HAP listed in table 9 of this subpart by at least the reduction efficiency percentages specified in table 9 of this subpart, as determined by the procedures specified in § 63.145(c) or (d) of this subpart.

(iii) Treat one Group 1 wastewater stream or a combination of Group 1 and Group 2 wastewater streams that have been aggregated or mixed for purposes of facilitating treatment using a waste management unit which meets one of the following conditions:

(A) Is a steam stripper meeting all of the design and operation specifications of paragraph (g) of this section; or

(B) Reduces, by removal or destruction, by 99 percent or more, the total HAP mass flow rate of the organic HAP's listed in table 9 of this subpart for a single stream or the combined HAP mass flow rate of the organic HAP's listed in table 9 of this subpart for mixed streams as determined by the procedures specified in § 63.145(c) or (d) of this subpart; or

(C) Reduces, by removal or destruction, the HAP mass flow rate of each organic HAP listed in table 9 of this subpart by at least the reduction efficiency percentages specified in table 9 of this subpart or more as determined by the procedures specified in § 63.145(c) or (d) of this subpart; or

(D) Achieves the required HAP mass removal of the HAP mass flow rate of the organic HAP's listed in table 9 of this subpart determined by the procedures in § 63.145(g) of this subpart. The owner or operator shall demonstrate compliance with the required HAP mass removal by calculating the actual HAP mass removal according to the procedures in § 63.145(h) of this subpart. A series of treatment processes may be used to comply with this requirement. All wastewater collection and treatment processes and waste management units located between any two treatment processes being used to achieve the required HAP mass removal shall comply with paragraph (i) of this section. For example, if a combination of two steam strippers are used to achieve the required HAP mass removal, and a surface impoundment is located between the two steam strippers, then the surface impoundment shall comply with § 63.134 of this subpart.

(2) For each treatment process or waste management unit used to comply with the requirements of this paragraph, the owner or operator shall comply with paragraph (i) of this section for control of air emissions.

(3) For each residual removed from a Group 1 wastewater stream, the owner or operator shall comply with paragraph (h) of this section for control of air emissions.

(4) The intentional or unintentional reduction in the individual VOHAP concentration or total VOHAP average concentration of a wastewater stream by dilution of the wastewater stream with other wastewaters or materials is prohibited for the purpose of complying with the effluent VOHAP concentration requirements specified in paragraph (c)(1)(ii)(C) of this section.

(5) If the sum, for the source, of the VOHAP mass flow rates of Group 1 wastewater streams for organic HAP's listed in table 9 of this subpart (as determined at each stream's point of generation by the procedures in § 63.144(e) of this subpart) is less than 1 megagram per year, the owner or operator need not comply with paragraph (c)(1) of this section.

(6) If a Group 1 wastewater stream for organic HAP's listed in table 9 of this subpart is treated or managed in treatment processes according to the requirements in paragraphs (c)(6)(i) and (c)(6)(ii) of this section, the owner or operator need not comply with the requirements of paragraph (c)(1) of this section.

(i) The sum, for the source, of the combined VOHAP mass flow rate of the organic HAP's listed in table 9 of this subpart of each Group 1 wastewater stream as determined by the procedures specified in § 63.144(f) of this subpart and in paragraphs (c)(6)(i)(A), (c)(6)(i)(B), and (c)(6)(i)(C) of this section is reduced to less than 1 megagram per year.

(A) The combined VOHAP mass flow rate of the organic HAP's listed in table 9 of this subpart in each untreated Group 1 wastewater stream is determined for that stream's point of generation.

(B) The combined VOHAP mass flow rate of the organic HAP's listed in table 9 of this subpart in each Group 1 wastewater stream that is treated to levels less stringent than those required by paragraph (c) of this section is determined at the treatment unit outlet, but before the wastewater stream is mixed with other wastewater streams and prior to exposure to the atmosphere.

(C) The combined VOHAP mass flow rate of the organic HAP's listed in table 9 of this subpart in each Group 1 wastewater stream treated to the levels required by paragraph (c) of this section is not included in the calculation of the total source combined VOHAP mass flow rate of the organic HAP's listed in table 9 of this subpart.

(ii) Each waste management unit that receives, manages, or treats the wastewater stream prior to or during treatment meets the requirements of §§ 63.133 through 63.137 of this subpart, as applicable.

(7) If process changes result in a Group 1 wastewater stream for organic HAP's listed in table 9 of this subpart meeting the requirements of either paragraph (c)(7)(i) or (c)(7)(ii) of this section, the owner or operator need not comply with paragraph (c)(1) of this section for that stream.

(i) The total VOHAP average concentration of organic HAP's listed in table 9 of this subpart at the point of generation is reduced to less than 1,000 parts per million by weight, or

(ii) The flow rate at the point of generation is reduced to less than 10 liters per minute and the total VOHAP average concentration of organic HAP's listed in table 9 of this subpart at the point of generation is reduced to less than 10,000 parts per million by weight.

(d) As an alternative to the treatment requirements in paragraph (c) of this section, an owner or operator may elect to treat all wastewater streams generated at an existing source by complying with the requirements of paragraphs (d)(1) through (d)(4) of this section. The requirements of this Process Unit Alternative are illustrated in figure 8 of this subpart.

(1) The owner or operator shall ensure that the total VOHAP average concentration of organic HAP's listed in table 9 of this subpart of each process wastewater stream exiting the chemical manufacturing process unit is less than 10 parts per million by weight as determined by the procedures in § 63.145(b) of this subpart.

(2) If the total VOHAP average concentration of organic HAP's listed in table 9 of this subpart for any individual wastewater stream or combination of wastewater streams, as determined either at the point of generation for an individual wastewater stream or at the point following combination with other process wastewater streams prior to exposure to the atmosphere, is greater than or equal to 10 parts per million by weight, the owner or operator shall comply with the requirements of either paragraph (d)(2)(i) or (d)(2)(ii) of this section.

(i) The wastewater stream shall be treated to achieve a total VOHAP average concentration of organic HAP's listed in table 9 of this subpart of less than 10 parts per million by weight as determined by the procedures in § 63.145(b) of this subpart, or

(ii) The wastewater stream shall be recycled to the process in accordance with paragraphs (f)(1) and (f)(2) of this section. Once a wastewater stream is returned to the production process, the wastewater stream is no longer subject to this section.

(3) For each residual removed from a wastewater stream, the owner or operator shall comply with paragraph (h) of this section for control of air emissions.

(4) For each treatment process or waste management unit that receives, manages, or treats wastewater streams generated within the process unit, the owner or operator shall comply with paragraph (i) of this section for control of air emissions.

(e) As an alternative to the treatment requirements in paragraphs (b) and (c) of this section, an owner or operator may elect to treat all Group 1 and Group 2 wastewater streams in a biological treatment unit by complying with the requirements of paragraphs (e)(1) through (e)(4) of this section.

(1) Except as provided in paragraph (e)(4) of this section, the owner or operator shall ensure that all wastewater streams entering a biological treatment unit are treated to destroy at least 95-percent total organic HAP mass of all organic HAP's listed in table 9 of this subpart.

(2) The owner or operator shall demonstrate that 95 percent of the mass of the HAP's listed in table 9 is removed from the wastewater stream or combination of wastewater streams by the procedure specified in § 63.145(i) of this subpart.

(3) For each treatment process or waste management unit that receives, manages, or treats wastewater streams subject to this paragraph, the owner or operator shall comply with paragraph (i) of this section for control of air emissions from the point of generation to the biological treatment unit.

(4) The owner or operator may combine this compliance option with other options provided in either paragraph (b) of this section for new sources or (c) or (d) of this section for new and existing sources. However, if a wastewater stream is in compliance with a treatment option provided in either paragraph (b), (c), or (d) of this section, and the treated wastewater is mixed with untreated wastewater that is destined for the biological treatment unit, the owner or operator shall comply with the requirements in § 63.133 through § 63.137 of this subpart until the wastewater enters the biological treatment unit.

(f) If an owner or operator elects to comply with the provisions in paragraph (b)(1)(i), (c)(1)(i), (d)(2)(ii), or (h)(1) of this section to recycle to a

production process a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the requirements of paragraphs (f)(1) and (f)(2) of this section.

(1) The wastewater stream or residual shall not be exposed to the atmosphere during recycle or at the process unit, and

(2) Each waste management unit that receives, manages, or treats the wastewater stream or residual, prior to or during recycle, shall meet the requirements of §§ 63.133 through 63.137 of this subpart, as applicable.

(3) Each waste management unit that receives, manages, or treats the wastewater stream or residual, prior to or during recycle, shall meet the inspection and monitoring requirements in § 63.143(a) as summarized in table 11 of this subpart, as applicable. Recycled wastewater streams and recycled residuals are not subject to the monitoring requirements for treatment processes in § 63.143(b) as summarized in table 12 of this subpart.

(g) If an owner or operator elects to comply with paragraph (b)(1)(ii)(B), (b)(1)(iii)(B), (c)(1)(ii)(A), or (c)(1)(iii)(A) of this section, the owner or operator shall operate and maintain a steam stripper that meets the requirements of paragraphs (g)(1) through (g)(5) of this section.

(1) Minimum active column height of 5 meters,

(2) Countercurrent flow configuration with a minimum of 10 actual trays,

(3) Minimum steam flow rate of 0.04 kilograms of steam per liter of wastewater feed,

(4) Minimum wastewater feed temperature to the steam stripper of 95 °C,

(5) Maximum liquid loading of 67,100 liters per hour per square meter, and

(6) Minimum steam quality of 2,765 kilojoules per kilogram.

(h) For each residual removed from a Group 1 wastewater stream, the owner or operator shall control for air emissions by complying with paragraph (i) of this section and by complying with one of the provisions in paragraphs (h)(1) through (h)(3) of this section. The requirements of this paragraph are illustrated in figure 8 of this subpart.

(1) Recycle the residual to a production process or sell the residual for the purpose of recycling in accordance with the requirements specified in paragraph (f) of this section. Once a residual is returned to the production process, the residual is no longer subject to this section.

(2) Return the residual to the treatment process.

(3) Treat the residual to destroy the total combined HAP mass flow rate by 99 percent or more, as determined by the procedures specified in § 63.145 (c) or (d) of this subpart.

(i) For each treatment process or waste management unit that receives, manages, or treats a Group 1 wastewater stream, or residual removed from a Group 1 wastewater stream, prior to and during treatment or recycle, the owner or operator shall comply with the requirements of paragraph (i)(1), (i)(2), or (i)(3) of this section.

(1) If the treatment process or waste management unit is a wastewater tank, surface impoundment, container, individual drain system, or oil-water separator, the owner or operator shall comply with the applicable provisions in §§ 63.133 through 63.137 of this subpart.

(2) If the treatment process or waste management unit is a properly operated biological treatment unit which meets the HAP mass removal requirements of either paragraph (b)(1)(iii)(C) or (e) of this section for new sources, or either paragraph (c)(1)(iii)(D) or (e) of this section for new and existing sources, as applicable, the biological treatment unit need not be covered and vented to a control device as required by the applicable provisions in §§ 63.133 through 63.137 of this subpart; or

(3) If §§ 63.133 through 63.137 of this subpart are not applicable to the treatment process or waste management unit, the owner or operator shall comply with the requirements in paragraphs (i)(3)(i) through (i)(3)(iv) of this section.

(i) Each opening from the treatment process or waste management unit shall be covered and vented to a closed-vent system that routes the organic HAP vapors from the unit to a control device designed and operated in accordance with § 63.139 of this subpart;

(ii) The closed-vent system shall be inspected in accordance with § 63.148 of this subpart.

(iii) Except as provided in paragraph (i)(3)(iv) of this section, each cover shall be maintained without leaks as specified in § 63.148 of this subpart.

(iv) For any cover and closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements in § 63.148 of this subpart.

(j) Except as provided in paragraph (m) of this section, the owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each treatment process or waste management unit used to comply with paragraph (b)(1), (c)(1), or (d) of this section achieves the conditions specified in paragraph (b)(1), (c)(1), or (d) of this section, whichever is applicable. If a biological treatment unit is used to comply with the HON, the owner or operator shall comply with paragraph (j)(3) of this section.

(1) A design evaluation and supporting documentation that addresses the operating characteristics of the treatment process or waste management unit and that is based on operation at a representative wastewater stream flow rate and a VOHAP concentration under which it would be most difficult to demonstrate compliance; or

(2) Performance tests conducted using test methods and procedures that meet the requirements specified in § 63.145 of this subpart.

(3) The owner or operator shall use the procedures specified in appendix C of this part to demonstrate compliance.

(k) If the treatment process or waste management unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times that a Group 1 wastewater stream, or residual removed from a Group 1 wastewater stream, is in the treatment process or waste management unit, except during inspection and maintenance, and except as provided in paragraph (i)(2) of this section for properly operated biological treatment units.

(1) Each seal, access door, and all other openings shall be checked by visual inspections initially, and semi-annually thereafter, to ensure that no cracks or gaps occur and that openings are closed and gasketed properly.

(2) When a gap, tear, or broken seal or gasket is identified by a visual inspection, first efforts at repair shall be no later than 5 calendar days after the leak is detected, and repair shall be completed within 15 calendar days after identification.

(l) The owner or operator of a treatment process or waste management unit that is used to comply with the provisions of this section shall monitor the unit in accordance with the applicable requirements in § 63.143 of this subpart.

(m) A wastewater stream or residual is in compliance with the requirements of paragraphs (b), (c), and (h) of this section, as applicable, and is exempt from the requirements of paragraph (j) of this section provided that the owner or operator complies with the requirements of paragraphs (f), (i), (k), and (l) of this section and documents that the wastewater stream or residual is in compliance with one of the regulatory requirements specified in

paragraphs (m)(1) through (m)(3) of this section.

(1) The wastewater stream or residual is discharged to a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;

(2) The wastewater stream or residual is discharged to an industrial furnace or boiler burning hazardous waste for which the owner or operator:

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(3) The wastewater stream or residual is discharged to an underground injection well for which the owner or operator has been issued a final permit under 40 CFR part 270 or 40 CFR part 144 and complies with the requirements of 40 CFR part 122.

[Note: The owner or operator shall comply with all applicable HON requirements prior to the point where the wastewater enters the underground portion of the injection well.]

§ 63.139 Process wastewater provisions—control devices.

(a) For each control device used to comply with the provisions in §§ 63.133 through 63.138 of this subpart, the owner or operator shall operate and maintain the control device in accordance with the requirements of paragraphs (b) through (f) of this section.

(b) Whenever organic HAP emissions are vented to a control device which is used to comply with the provisions of this subpart, such control device shall be operating.

(c) The control device shall be designed and operated in accordance with paragraph (c)(1), (c)(2), (c)(3), (c)(4), or (c)(5) of this section.

(1) An enclosed combustion device (including but not limited to a vapor incinerator, boiler, or process heater) shall meet the conditions in paragraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(i) Reduce the total organic compound emissions, less methane and ethane, or total organic HAP emissions vented to the control device by 95 percent by weight or greater;

(ii) Achieve an outlet total organic compound concentration, less methane and ethane, or total organic HAP concentration of 20 parts per million by volume on a dry basis corrected to 3 percent oxygen. The owner or operator shall use either Method 18 of 40 CFR part 60, appendix A, or any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part; or

(iii) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760 °C.

(2) A vapor recovery system (including but not limited to a carbon adsorption system or condenser) shall reduce the total organic compound emissions, less methane and ethane, or total organic HAP emissions vented to the control device of 95 percent by weight or greater.

(3) A flare shall comply with the requirements of 63.11(b) of subpart A of this part.

(4) A scrubber shall reduce the total organic compound emissions, less methane and ethane, or total organic HAP emissions in such a manner that 95 weight percent is destroyed by chemical reaction with the scrubbing liquid.

(5) Any other control device used shall reduce the total organic compound emissions, less methane and ethane, or total organic HAP emissions vented to the control device by 95 percent by weight or greater.

(d) Except as provided in paragraph (d)(4) of this section, an owner or operator shall demonstrate that each control device achieves the appropriate conditions specified in paragraph (c) of this section by using one of the methods specified in paragraphs (d)(1), (d)(2), or (d)(3) of this section.

(1) Performance tests conducted using the test methods and procedures specified in § 63.145(e) of this subpart; or

(2) A design evaluation that addresses the vent stream characteristics and control device operating parameters specified in paragraphs (d)(2)(i) through (d)(2)(vii) of this section.

(i) For a thermal vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(ii) For a catalytic vapor incinerator, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(iii) For a boiler or process heater, the design evaluation shall consider the vent stream composition, constituent concentrations, and flow rate; shall establish the design minimum and average flame zone temperatures and combustion zone residence time; and shall describe the method and location where the vent stream is introduced into the flame zone.

(iv) For a condenser, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(v) For a carbon adsorption system that regenerates the carbon bed directly on-site in the control device such as a fixed-bed adsorber, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration stream flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(vi) For a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device such as a carbon canister, the design evaluation shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(vii) For a scrubber, the design evaluation shall consider the vent stream composition; constituent concentrations; liquid-to-vapor ratio; scrubbing liquid flow rate and concentration; temperature; and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and will include the additional information in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) of this

section for trays and a packed column scrubber.

(A) Type and total number of theoretical and actual trays;

(B) Type and total surface area of packing for entire column, and for individual packed sections if column contains more than one packed section.

(3) For flares, the compliance determination specified in § 63.11(b) of subpart A of this part.

(4) An owner or operator using any control device specified in paragraphs (d)(4)(i) through (d)(4)(iii) of this section is exempt from the requirements in paragraphs (d)(1) through (d)(3) of this section and from the requirements in § 63.6(f) of subpart A of this part.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(ii) A boiler or process heater into which the emission stream is introduced with the primary fuel.

(iii) A boiler or process heater burning hazardous waste for which the owner or operator:

(A) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H, or

(B) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(e) The owner or operator of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with § 63.143 of this subpart.

(f) Except as provided in § 63.140 of this subpart, if visible defects in ductwork, piping, and connections to covers and control devices are observed during an inspection, a first effort to repair the control device shall be made as soon as practicable but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or the visible defect is observed.

§ 63.140 Process wastewater provisions—delay of repair.

Delay of repair of equipment for which an improper work practice or a control equipment failure has been identified, is allowed if the repair is technically infeasible without a shutdown, as defined in § 63.101 of subpart F of this part, or if the owner or operator determines that emissions of purged material from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown.

§ 63.141 [Reserved]

§ 63.142 [Reserved]

§ 63.143 Process wastewater provisions—inspections and monitoring of operations.

(a) For each wastewater tank, surface impoundment, container, individual drain system, and oil-water separator that receives, manages, or treats a Group 1 wastewater stream, a residual removed from a Group 1 wastewater stream, a recycled Group 1 wastewater stream, or a recycled residual removed from a Group 1 wastewater stream, the owner or operator shall comply with the inspection requirements specified in table 11 of this subpart.

(b) For each design steam stripper and biological treatment unit used to comply with § 63.138 of this subpart, the owner or operator shall comply with the monitoring requirements specified in table 12 of this subpart.

(c) If the owner or operator elects to comply with items 1 or 2 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the biological treatment unit. The request shall be submitted according to the procedures specified in § 63.146(a)(3) of this subpart.

(d) If the owner or operator elects to comply with item 4 in table 12 of this subpart, the owner or operator shall request approval to monitor appropriate parameters that demonstrate proper operation of the selected treatment process. The request shall be submitted according to the procedures specified in § 63.146(a)(3) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Implementation Plan or permit application.

(e) Except as provided in paragraphs (e)(4) and (e)(5) of this section, for each control device used to comply with the requirements of §§ 63.133 through 63.139 of this subpart, the owner or operator shall comply with the requirements in § 63.139(d) of this subpart, and with the requirements specified in paragraph (e)(1), (e)(2), or (e)(3) of this section.

(1) The owner or operator shall comply with the monitoring requirements specified in table 13 of this subpart; or

(2) The owner or operator shall use an organic monitoring device installed at the outlet of the control device and equipped with a continuous recorder. Continuous recorder is defined in § 63.111 of this subpart; or

(3) The owner or operator shall request approval to monitor parameters other than those specified in paragraphs (e)(1) and (e)(2) of this section. The request shall be submitted according to the procedures specified in § 63.146(a)(3) of this subpart, and shall include a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Implementation Plan or permit application.

(4) For a boiler or process heater in which all vent streams are introduced with primary fuel, the owner or operator shall comply with the requirements in § 63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(5) For a boiler or process heater with a design heat input capacity of 44 megawatts or greater, the owner or operator shall comply with the requirements in § 63.139(d) of this subpart but the owner or operator is exempt from the monitoring requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(f) For each parameter monitored in accordance with paragraph (c), (d), or (e) of this section, the owner or operator shall establish a range that indicates proper operation of the treatment process or control device. In order to establish the range, the owner or operator shall comply with the requirements specified in § 63.146 (b)(7)(ii)(A) and (b)(8)(ii) of this subpart.

(g) Monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications.

§ 63.144 Process wastewater provisions—test methods and procedures for determining applicability and Group 1/Group 2 determinations.

(a) An owner or operator of a wastewater stream shall comply with paragraph (a)(1), (a)(2), or (a)(3) of this section. These may be used in combination.

(1) An owner or operator shall determine whether a wastewater stream is a Group 1 or Group 2 wastewater stream in accordance with paragraphs (b) and (c) of this section.

(2) An owner or operator shall comply with the requirements for designating a wastewater stream to be a Group 1 wastewater stream in accordance with paragraph (d) of this section.

(3) An owner or operator shall demonstrate compliance with the source-wide 1 megagram per year option

in accordance with either paragraph (e) or (f) of this section.

(b) An owner or operator of a new or existing source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the total VOHAP average concentration for HAP's listed on table 9 of this subpart; and, for new sources, the owner or operator shall determine the average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart either at the point of generation of each wastewater stream as specified in paragraph (b)(1) of this section or downstream of the point(s) of generation for a single wastewater stream or a mixture of wastewater streams as specified in paragraph (b)(2) of this section.

(1) An owner or operator who elects to determine the total VOHAP average concentration for HAP's listed on table 9 of this subpart or the average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart at the point of generation shall comply with paragraph (b)(3), (b)(4), or (b)(5) of this section.

(2) An owner or operator who elects to determine the total VOHAP average concentration for HAP's listed on table 9 of this subpart or the average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart downstream of the point of generation shall comply with paragraph (b)(3), (b)(4), or (b)(5) of this section and with paragraph (b)(6) of this section. An owner or operator shall make corrections to account for changes in VOHAP concentration that result from air emissions; mixing with other water or wastewater streams; and treatment or otherwise handling the wastewater stream to remove or destroy HAP's.

(3) Knowledge of the wastewater. The owner or operator shall provide sufficient information to document the total VOHAP average concentration for HAP's listed on table 9 of this subpart or average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart for each wastewater stream. Examples of information that could constitute knowledge include material balances, records of chemical purchases, process stoichiometry, or previous test results provided the results are still representative of current operating practices at the process unit(s). If test data are used, then the owner or operator shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the total VOHAP average concentration of HAP's listed on table 9 of this subpart or average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart for the wastewater stream. The owner or operator shall document how process knowledge is used to determine the total VOHAP average concentration of HAP's listed on table 9 of this subpart or the average VOHAP concentration of each individually speciated HAP listed on table 8 of this subpart, if it is determined that the wastewater stream is not a Group 1 wastewater stream due to VOHAP concentration.

(4) Bench-scale or pilot-scale test data. The owner or operator shall provide sufficient information to demonstrate that the bench-scale or pilot-scale test concentration data are representative of the actual total VOHAP average concentration of HAP's listed on table 9 of this subpart or average VOHAP concentration of each individually speciated organic HAP listed on table 8 of this subpart. The owner or operator shall also provide documentation describing the testing protocol, and the means by which sampling variability and analytical variability were accounted for in the determination of total VOHAP average concentration or average VOHAP concentration of each individually speciated organic HAP for the wastewater stream.

(5) Measurements made at the point of generation or at a location downstream of the point of generation. Each wastewater stream shall be analyzed using one of the following test methods for determining the total VOHAP average concentration or average VOHAP concentration of each individually speciated organic HAP.

(i) Use procedures specified in Method 305 of 40 CFR part 63, appendix A.

(A) The following equation shall be used to calculate the VOHAP concentration of an individually speciated organic HAP listed on table 8 of this subpart:

$$C_i = \left(C_C * \frac{MW}{24.055} * \frac{P_i}{760} * \frac{293}{T_i} * t * L * 10^3 \right) / M_s$$

where:

C_i=VOHAP concentration of the individually-speciated organic HAP in the wastewater, parts per million by weight.

C_C=Concentration of the organic HAP (i) in the gas stream, as measured by Method 305 of appendix A of this part, parts per million by volume on a dry basis.

M_S=Mass of sample, from Method 305 of appendix A of this part, milligrams.

MW=Molecular weight of the organic HAP (i), grams per gram-mole.

24.055=Ideal gas molar volume at 293 °Kelvin and 760 millimeters of mercury, liters per gram-mole.

P_i=Barometric pressure at the time of sample analysis, millimeters mercury absolute.

760=Reference or standard pressure, millimeters mercury absolute.

293=Reference or standard temperature, °Kelvin.

T_i=Sample gas temperature at the time of sample analysis, °Kelvin.

t=Actual purge time, from Method 305 of appendix A of this part, minutes.

L=Actual purge rate, from Method 305 of appendix A of this part, liters per minute.

10^3=Conversion factor, milligrams per gram.

(B) Total VOHAP concentration (stream) can be determined by summing the VOHAP concentrations of all individually speciated organic HAP's in the wastewater.

$$C_{stream} = \sum_{i=1}^{n} C_i$$

where:

C_{stream}=Total VOHAP concentration of wastewater stream

i=Number of organic HAP's in the wastewater stream

C_i=VOHAP concentration of individual organic HAP (i) calculated according to the procedures in paragraph (b)(5)(i)(A) of this section

(C) The calculations in paragraph (b)(5)(i)(A), and where applicable, (b)(5)(i)(B) of this section shall be performed for a minimum of three samples from each wastewater stream

which are representative of normal flow and concentration conditions. Wastewater samples shall be collected using the sampling procedures specified in Method 25D of 40 CFR part 60, appendix A. Where feasible, samples shall be taken from an enclosed pipe prior to the wastewater being exposed to the atmosphere. When sampling from an enclosed pipe is not feasible, a minimum of three representative samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of organic HAP's prior to sampling.

(D) If the wastewater stream has a steady flow rate throughout the year, the total VOHAP average concentration for HAP's listed on table 9 of this subpart of the wastewater stream shall be calculated by averaging the values calculated in paragraph (b)(5)(i)(B) for the individual samples:

$$C_{stream,avg} = \frac{\sum_{j=1}^{m} C_{stream,j}}{j}$$

where:

$C_{stream,avg}$=total VOHAP average concentration for HAP's listed on table 9 of this subpart of the wastewater stream

j=number of samples

$C_{stream,j}$=total VOHAP concentration of wastewater stream as measured in sample (j), calculated according to the procedures in paragraph (b)(5)(i)(B) of this section

(E) The average VOHAP concentration for each individually speciated organic HAP (i) listed on table 8 of this subpart shall be calculated by averaging the values calculated in paragraph (b)(5)(i)(A) of this section for the individual samples:

$$C_{i,avg} = \frac{\sum_{j=1}^{m} C_{i,j}}{j}$$

where:

$C_{i,avg}$=average VOHAP concentration for each individually speciated organic HAP (i) listed on table 8 of this subpart

j=number of samples

$C_{i,j}$=VOHAP concentration of an individual organic HAP (i) as measured in sample (j)

(ii) Use Method 25D of part 60, appendix A to measure total VO average concentration as a surrogate for total VOHAP average concentration;

(iii) Use a test method or results from a test method that measures organic HAP concentrations in the wastewater, and that has been validated according to section 5.1 or 5.3 of Method 301 of appendix A of this part. The specific requirement of Method 305 of appendix A of this part to collect the sample into polyethylene glycol would not be applicable. The concentrations of the individual organic HAP's measured in the water may be corrected to their concentrations had they been measured by Method 305 of appendix A of this part, by multiplying each concentration by the compound-specific fraction measured factor listed in table 34 of this subpart.

(iv) If the chemical manufacturing process unit equipment has variable flow rates (e.g., flexible operation units), the owner or operator shall make corrections to account for such changes.

(6) When the total VOHAP average concentration or the average VOHAP concentration of each individual organic HAP is determined downstream of the point of generation at a location where two or more wastewater streams have been mixed, or one or more wastewater streams have been treated or organic HAP losses to the atmosphere have occurred, the owner or operator shall make corrections for such changes in VOHAP concentration when calculating to represent the VOHAP concentration at the point of generation. Total VOHAP average concentration or average VOHAP concentration of each individual organic HAP shall be determined for each individual wastewater stream according to the procedure specified in paragraph (b)(3), (b)(4), or (b)(5) of this section.

(c) An owner or operator who elects to comply with paragraph (a)(1) of this section shall determine the annual average wastewater flow rate either at the point of generation for each wastewater stream, as specified in paragraph (c)(1) of this section, or downstream of the point(s) of generation for a single wastewater stream or a mixture of wastewater streams as specified in paragraph (c)(2) of this section.

(1) An owner or operator who elects to determine the annual average wastewater flow rate at the point of generation shall comply with paragraph (c)(3), (c)(4), or (c)(5) of this section.

(2) An owner or operator who elects to determine the annual average wastewater flow rate downstream of the point of generation shall comply with paragraph (c)(3), (c)(4), or (c)(5) of this section and with paragraph (c)(6) of this section.

(3) Use the maximum annual average production capacity of the process unit, knowledge of the process, and mass balance information to either: Estimate directly the annual average wastewater flow rate; or estimate the total annual wastewater volume and then divide total volume by 525,600 minutes in a year. If knowledge of the process is used to determine the annual average flow rate for a wastewater stream and it is determined that the wastewater stream is not Group 1, the owner or operator shall document how process knowledge is used to determine annual average flow rate.

(4) Select the highest annual average flow rate of wastewater from historical records representing the most recent 5 years of operation or, if the process unit has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the process unit.

(5) Measure the flow rate of the wastewater for the point of generation during conditions that are representative of average wastewater generation rates.

(6) When the average wastewater flow rate is determined downstream of the point of generation at a location where two or more wastewater streams have been mixed, or one or more wastewater streams have been treated or organic HAP losses to the atmosphere have occurred, the owner or operator shall make corrections for such changes in average wastewater flow rate when calculating to represent the average wastewater flow rate at the point of generation. The annual average flow rate shall be determined for each individual wastewater stream according to the procedures specified in paragraph (c)(1), (c)(2), or (c)(3) of this section.

(d) An owner or operator who elects to comply with paragraph (a)(2) of this section shall designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams and shall comply with the requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) From the point of generation for each wastewater stream that is included in the Group 1 designation to the location where the owner or operator elects to designate such wastewater stream(s) as Group 1 wastewater, the owner or operator must comply with all applicable emission suppression requirements specified in §§ 63.133 through 63.137.

(2) From the location where the owner or operator designates a wastewater stream or mixture of wastewater streams to be Group 1 wastewater, such Group 1 wastewater streams shall be managed in accordance with all applicable emission suppression requirements specified in §§ 63.133 through 63.137

and with the treatment requirements in § 63.138 of this part.

(3) An owner or operator who complies with paragraph (d) of this section is not required to determine the VOHAP concentration or flow rate for each wastewater stream at its point of generation. However, an owner or operator who elects to designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams shall determine the following characteristics for the location where Group 1 designation is made [Note: Characteristics must be known to ensure compliance with treatment requirements]:

(i) The total VOHAP average concentration for HAP's listed on table 9 of this subpart or the VOHAP average concentration for each individually speciated organic HAP listed on table 8 of this subpart using the methods specified in paragraph (b)(3), (b)(4), or (b)(5)(i) through (b)(5)(iv) of this section, and

(ii) The average wastewater flow rate using methods specified in paragraph (c)(1) or (c)(2), or by measuring the flow rate of the wastewater during conditions that are representative of average wastewater generation rates.

(e) To demonstrate that the total source VOHAP mass flow rate from untreated Group 1 wastewater streams in new and existing SOCMI units is less than 1 megagram per year as specified in § 63.138(c)(5) of this subpart, an owner or operator who elects to comply with paragraph (a)(3) of this section shall determine for the source the total VOHAP mass flow rate from all Group 1 wastewater streams identified in § 63.132(g)(1) of this subpart at their points of generation by the following procedure:

(1) Determine the total VOHAP average concentration for each wastewater stream using the procedures specified in paragraph (b) of this section.

(2) Calculate the annual total VOHAP mass flow rate in each wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in paragraph (c) of this section, times the total VOHAP average concentration, as determined by procedures specified in paragraph (b) of this section.

(3) Calculate the total source VOHAP mass flow rate from all Group 1 wastewater streams by adding together the annual total VOHAP mass flow rate from each Group 1 wastewater stream.

(f) An owner or operator who elects to comply with paragraph (a)(3) of this section and to reduce the total source VOHAP mass flow rate to less than 1 megagram per year in accordance with § 63.138(c)(6) of this subpart shall determine the total source VOHAP mass flow rate from Group 1 wastewater streams identified in § 63.132(g)(1) of this subpart by the following procedures:

(1) The annual total VOHAP mass flow rate of each Group 1 wastewater stream treated to the level of the provisions of § 63.138(c) of this subpart shall not be included in the total source VOHAP mass flow rate calculation.

(2) For each untreated Group 1 wastewater stream, annual total VOHAP mass flow rate shall be determined by the procedures in paragraph (e) of this section.

(3) For each Group 1 wastewater stream treated to levels less than required by the provisions of § 63.138(c) of this subpart, the annual total VOHAP mass flow rate shall be determined as follows:

(i) Measurement or sampling shall occur at the point of discharge of the treatment process or series of treatment processes. The point of discharge is defined as the point where the treated wastewater exits the treatment process but before it is mixed with other wastewater streams, and prior to exposure to the atmosphere.

(ii) Determine the total VOHAP average concentration for each wastewater stream at the point of discharge using the procedures specified in paragraph (b) of this section.

(iii) Calculate the annual total VOHAP mass flow rate of each wastewater stream by multiplying the annual average flow rate of the wastewater stream times the total VOHAP average concentration.

(4) The total source VOHAP mass flow rate shall be calculated by summing the annual total VOHAP mass flow rate from all wastewater streams as determined in paragraphs (f)(2) and (f)(3) of this section.

§ 63.145 Process wastewater provisions—test methods and procedures to determine compliance.

(a) This paragraph applies to the use of all performance tests to demonstrate compliance of a treatment process or waste management unit.

(1) The test shall be conducted when the treatment process or waste management unit is operating at a representative inlet wastewater stream flow rate and VOHAP concentration under which it would be most difficult to demonstrate compliance.

(2) Operations during periods of start-up, shutdown, or malfunction shall not constitute representative conditions for the purpose of a test.

(3) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(4) The owner or operator shall record all process information as is necessary to document operating conditions during the test.

(b) This paragraph applies to the use of performance tests to demonstrate compliance of a treatment process with the parts per million by weight wastewater stream concentration limits at the outlet of the treatment process.

(1) The total VOHAP average concentration shall be measured for compliance with the concentration alternatives specified in § 63.138(c)(1)(ii)(C), (d)(1), and (d)(2)(i) of this subpart; or the average concentration of each HAP shall be measured for compliance with the concentration alternatives specified in § 63.138(b)(1)(ii)(A) of this subpart.

(2) A minimum of three representative samples of the wastewater stream exiting the treatment process shall be collected and analyzed using the procedures in § 63.144(b)(5) of this subpart.

(c) This paragraph applies to the use of performance tests to demonstrate compliance of a noncombustion treatment process with the percent reduction limits. Refer to paragraph (c)(1) of this section to demonstrate compliance with the percent reduction limits for total HAP mass flow rate. Refer to paragraph (c)(2) of this section to demonstrate compliance with the percent reduction limits for each individually speciated HAP.

(1) The percent reduction of total HAP mass flow rate shall be measured for compliance with § 63.138(b)(1)(ii)(C), (b)(1)(iii)(A), (c)(1)(ii)(B), or (c)(1)(iii)(B) of this subpart by the procedures in paragraphs (c)(1)(i) through (c)(1)(iii) of this section.

(i) The same test method shall be used to analyze the wastewater samples from both the inlet and outlet of the treatment process.

(ii) The total HAP mass flow rate entering the treatment process (E_b) and exiting the treatment process (E_a) shall be determined by computing the product of the average flow rate of the wastewater stream entering or exiting the treatment process, and the total average HAP concentration of the entering or exiting wastewater streams, respectively.

(A) The flow rate of the entering and exiting wastewater streams shall be determined using the inlet and outlet flow meters, respectively. Where the outlet flow is not greater than the inlet

flow, a flow meter shall be used at either the inlet or outlet.

(B) The total HAP average concentrations of the entering and exiting wastewater streams shall be determined according to the procedures specified in either paragraph (c)(1)(ii)(B)(*1*) or (c)(1)(ii)(B)(*2*) of this section.

(*1*) Calculated according to the procedures specified in paragraphs (j) and (k) of this section; or

(*2*) By direct measurement using the method specified in § 63.144(b)(5)(iii) of this subpart and no correction to the concentrations is required.

(C) Three grab samples of the entering wastewater stream shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs.

(D) Three grab samples of the exiting wastewater stream shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over the same 3-hour period at which the total HAP mass flow rate entering the treatment process is determined.

(E) The total HAP mass flow rates entering and exiting the treatment process are calculated as follows:

$$E_b = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_{bp} C_{bp}\right)$$

$$E_a = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_{ap} C_{ap}\right)$$

where:

E_b=Total HAP mass flow rate entering the treatment process, kilograms per hour.

E_a=Total HAP mass flow rate exiting the treatment process, kilograms per hour.

K=Density of the wastewater stream, kilograms per cubic meter.

V_{bp}=Average volumetric flow rate of wastewater entering the treatment process during each run p, cubic meters per hour.

V_{ap}=Average volumetric flow rate of wastewater exiting the treatment process during each run p, cubic meters per hour.

$C_{bp,avg}$=Total HAP average concentration in the wastewater stream entering the treatment process during each run p, parts per million by weight. This shall be determined using the procedure in paragraph (k) of this section.

$C_{ap,avg}$=Total HAP average concentration in the wastewater stream exiting the treatment process during each run p, parts per million by weight. This shall be determined using the procedure in paragraph (k) of this section.

p=Run

n=Number of runs.

(iii) The percent reduction across the treatment process shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:

R=HAP control efficiency of the treatment process, percent.

E_b=Total HAP mass flow rate entering the treatment process, kilograms per hour.

E_a=Total HAP mass flow rate exiting the treatment process, kilograms per hour.

(2) The percent reduction of the mass flow rate of each individually speciated HAP shall be measured for compliance with § 63.138(c)(1)(ii)(D) or (c)(1)(iii)(C) of this subpart by the procedures in paragraphs (c)(2)(i) through (c)(2)(iii) of this section.

(i) The same test method shall be used to analyze the wastewater samples from both the inlet and outlet of the treatment process.

(ii) The HAP mass flow rate of each individually speciated HAP compound entering the treatment process (E_b) and exiting the treatment process (E_a) shall be determined by computing the product of the flow rate of the wastewater stream entering or exiting the treatment process, and the average HAP concentration of each individual HAP compound of the entering or exiting wastewater streams, respectively.

(A) The flow rate of the entering and exiting wastewater streams shall be determined using the inlet and outlet flow meters, respectively.

(B) The average HAP concentration of each individual HAP of the entering and exiting wastewater streams shall be determined according to the procedures specified in either paragraph (c)(2)(ii)(B)(*1*) or (c)(2)(ii)(B)(*2*) of this section.

(*1*) Calculated according to the procedures specified in paragraph (j) of this section; or

(*2*) By direct measurement using the method specified in § 63.144(b)(5)(iii) and no correction to the concentrations is required.

(C) Three grab samples of the entering wastewater stream shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs.

(D) Three grab samples of the exiting wastewater stream shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over the same 3-hour period at which the total HAP mass flow rate entering the treatment process is determined.

(E) The HAP mass flow rates of each individual HAP compound entering and exiting the treatment process are calculated as follows:

$$E_b = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_{bp} C_{bp}\right)$$

$$E_a = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_{ap} C_{ap}\right)$$

where:

E_b=HAP mass flow rate of an individually speciated HAP compound entering the treatment process, kilograms per hour.

E_a=HAP mass flow rate of an individually speciated HAP compound exiting the treatment process, kilograms per hour.

K=Density of the wastewater stream, kilograms per cubic meter.

V_{bp}=Average volumetric flow rate of wastewater exiting the treatment process during each run p, cubic meters per hour.

V_{ap}=Average volumetric flow rate of wastewater exiting the treatment process during each run p, cubic meters per hour.

C_{bp}=Average HAP concentration of an individually speciated HAP in the wastewater stream entering the treatment process during each run p, parts per million by weight.

C_{ap}=Average HAP concentration of an individually speciated HAP in the wastewater stream exiting the treatment process during each run p, parts per million by weight.

n=Number of runs.

(iii) The percent reduction across the treatment process for each individually speciated HAP compound shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:

R=Control efficiency for an individually speciated HAP compound of the treatment process, percent.
E_b=HAP mass flow rate of an individually speciated HAP compound entering the treatment process, kilograms per hour.
E_a=HAP mass flow rate of an individually speciated HAP compound exiting the treatment process, kilograms per hour.

(d) This paragraph applies to the use of a performance test to demonstrate compliance of a combustion treatment process with the percent reduction limits for total HAP mass flow rate.

(1) The percent reduction of total HAP mass flow rate shall be measured for compliance with § 63.138(b)(1)(ii)(C), (b)(1)(iii)(A), (c)(1)(ii)(B) or (c)(1)(iii)(B) of this subpart by the procedures in paragraphs (d)(1)(i) through (d)(1)(vi) of this section.

(i) The total HAP mass flow rate entering the combustion unit (E_b) shall be determined by computing the product of the average flow rate of the wastewater stream entering the combustion unit, as determined by the inlet flow meter, and the total HAP average concentration in the waste stream entering the combustion device, as determined according to the procedures specified in paragraph (c)(1)(ii)(B) of this section.

(ii) Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over at least a 3-hour period.

(iii) If grab sampling techniques are used, then these grab samples shall be taken at a minimum of three equally spaced time intervals during the run.

(iv) The total HAP mass flow rate entering the combustion unit (E_b) is calculated as follows:

$$E_b = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_p C_p\right)$$

where:
E_b=Total HAP mass flow rate entering the combustion unit, kilograms per hour.
K=Density of the wastewater stream, kilograms per cubic meter.
V_p=Average volumetric flow rate of waste entering the combustion unit during each run p, cubic meters per hour.
C_p=Total HAP average concentration in the wastewater stream entering the combustion unit during each run p, parts per million by weight. This shall be determined using the procedure in paragraph (k) of this section.
p=Runs.
n=Number of runs.

(v) The total HAP mass flow rate exiting the combustion unit exhaust stack (E_a) shall be determined as follows:

(A) The time period for the test shall not be less than 3 hours during which at least three 1-hour runs are conducted and be the same time period at which the total HAP mass flow rate entering the treatment process is determined. Each run shall represent a time-integrated composite sample corresponding to the periods when the waste feed is sampled.

(B) A run shall consist of a 1-hour period during the test. For each run:

(1) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(2) The total HAP average concentration in the exhaust downstream of the combustion unit shall be determined using Method 18 of 40 CFR part 60, appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part.

(C) The total HAP mass emitted during each run shall be calculated as follows:

$$M_p = \frac{V}{10^6}\sum_{j=1}^{m} 0.0416\ MW_j C_j$$

where:
M_p=Total HAP mass emitted during run p, kilograms.
V=Volume of air-vapor mixture exhausted at standard conditions, cubic meters.
C_j=HAP concentration of compound j measured in the exhaust, parts per million by volume.
MW_j=Molecular weight of compound j in exhaust stream, kilograms per kilogram-mole.
p=Run.
m=Number of organic HAP's in total.
0.0416=Conversion factor for molar volume, kilogram-mole per cubic meter at 293 °Kelvin and 760 millimeters mercury absolute.

(D) The total HAP mass emission rate in the exhaust shall be calculated as follows:

$$E_a = \left(\sum_{p=1}^{n} M_p\right) T$$

where:
E_a=Total HAP mass flow rate emitted, kilograms per hour.
M_p=Total mass of total or strippability group VOHAP emitted during run p, kilograms.
T=Total time of all runs, hours.
n=Number of runs.

(vi) The total HAP destruction efficiency for the combustion unit shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:
R=HAP destruction efficiency for the combustion unit, percent.
E_b=Total HAP mass flow rate entering the combustion unit, kilograms per hour.
E_a=Total HAP mass flow rate exiting the combustion unit, kilograms per hour.

(2) The percent reduction of the mass flow rate of each individual HAP shall be measured for compliance with § 63.138(c)(1)(ii)(D) or (c)(1)(iii)(C) of this subpart by the procedures in paragraphs (d)(2)(i) through (d)(2)(vi) of this section.

(i) The mass flow rate of each individual HAP entering the combustion unit (E_b) shall be determined by computing the product of the average flow rate of the wastewater stream entering the combustion unit, as determined by the inlet flow meter, and the average HAP concentration of each individual HAP in the waste stream entering the combustion device as determined according to the procedures specified in paragraph (c)(2)(ii)(B) of this section.

(ii) Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over at least a 3-hour period.

(iii) If grab sampling techniques are used, then these grab samples shall be taken at a minimum of three equally spaced time intervals during the run.

(iv) The total HAP mass flow rate of each individual HAP entering the combustion unit is calculated as follows:

$$E_b = \frac{K}{n \times 10^6}\left(\sum_{p=1}^{n} V_p C_p\right)$$

where:
E_b=HAP mass flow rate of an individually speciated HAP compound entering the combustion unit, kilograms per hour.
K=Density of the waste stream, kilograms per cubic meter.
V_p=Average volumetric flow rate of waste entering the combustion unit during each run p, cubic meters per hour.
C_p=Average HAP concentration of an individually speciated HAP

compound in the waste stream entering the combustion unit during each run p, parts per million by weight.

p=Run.

n=Number of runs.

(v) The mass flow rate of each individually speciated HAP exiting the combustion unit exhaust stack (E_a) shall be determined as follows:

(A) The time period for the test shall not be less than 3 hours during which at least three 1-hour runs are conducted and be the same time period at which the mass flow rate of each individually speciated HAP entering the treatment process is determined. Each run shall represent a time-integrated composite sample corresponding to the periods when the waste feed is sampled.

(B) A run shall consist of a 1-hour period during the test. For each run:

(1) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D from appendix A of 40 CFR part 60, as appropriate.

(2) The average concentration of each individually speciated HAP in the exhaust downstream of the combustion unit shall be determined using Method 18 of appendix A of 40 CFR part 60. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part.

(C) The mass of each individually speciated HAP emitted during each run shall be calculated as follows:

$$M_p = \frac{V}{10^6}\, 0.0416\, MW_j C_j$$

where:

M_p=Mass of an individual HAP emitted during run p, kilograms.

V=Volume of air-vapor mixture exhausted at standard conditions, cubic meters.

C_j=VOHAP concentration of compound j measured in the exhaust, parts per million by volume.

MW_j=Molecular weight of compound j in exhaust stream, kilograms per kilogram-mole.

0.0416=Conversion factor for molar volume, kilogram-mole per cubic meter at 293 °Kelvin and 760 millimeters mercury absolute.

(D) The mass emission rate in the exhaust of each individual HAP shall be calculated as follows:

$$E_a = \left(\sum_{p=1}^{n} M_p \right) T$$

where:

E_a=Mass flow rate of each individual HAP, kilograms per hour.

M_p=Mass of each individual HAP emitted during run p, kilograms.

T=Total time of all runs, hours.

p=Run.

n=Number of runs.

(vi) The destruction efficiency of each individual HAP for the combustion unit shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:

R=HAP destruction efficiency of an individual HAP for the combustion unit, percent.

E_b=Mass flow rate of an individual HAP entering the combustion unit, kilograms per hour.

E_a=Mass flow rate of an individual HAP exiting the combustion unit, kilograms per hour.

(e) A performance test to demonstrate compliance of a vent stream control device with the organic compound reduction efficiency requirement specified under § 63.139(d)(1) of this subpart shall use the following procedures:

(1) Sampling sites shall be selected using Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate.

(2) The mass flow rate of organic compounds entering and exiting the control device shall be determined as follows:

(i) The time period for the test shall not be less than 3 hours during which at least three runs are conducted.

(ii) A run shall consist of a 1-hour period during the test. For each run:

(A) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(B) The organic concentration in the vent stream entering and exiting the control device shall be determined using Method 18 of 40 CFR part 60, appendix A. Alternatively, any other test method validated according to the procedures in Method 301 of appendix A of this part may be used.

(iii) The mass flow rate of organic compounds entering and exiting the control device during each run shall be calculated as follows:

$$E_a = \frac{0.0416}{10^6 \times m}\left[\sum_{p=1}^{m} V_{ap}\left(\sum_{n=1}^{n} C_{aip} MW_i\right)\right]$$

$$E_b = \frac{0.0416}{10^6 \times m}\left[\sum_{p=1}^{m} V_{bp}\left(\sum_{n=1}^{n} C_{bip} MW_i\right)\right]$$

where:

E_a=Mass flow rate of organic compounds exiting the control device, kilograms per hour.

E_b=Mass flow rate of organic compounds entering the control device, kilograms per hour.

V_{ap}=Average volumetric flow rate of vent stream exiting the control device during run p at standards conditions, cubic meters per hour.

V_{bp}=Average volumetric flow rate of vent stream entering the control device during run p at standards conditions, cubic meters per hour.

p=Run.

m=Number of runs.

C_{aip}=Concentration of organic compound i measured in the vent stream exiting the control device during run p as determined by Method 18 of 40 CFR part 60, appendix A, parts per million by volume on a dry basis.

C_{bip}=Concentration of organic compound i measured in the vent stream entering the control device during run p as determined by Method 18 of 40 CFR part 60, appendix A, parts per million by volume on a dry basis.

MW_i = Molecular weight of organic compound i in the vent stream, kilograms per kilogram-mole.

n = Number of organic compounds in the vent stream.

0.0416 = Conversion factor for molar volume, kilograms-mole per cubic meter at 293° Kelvin and 760 millimeters mercury absolute.

(3) The organic reduction efficiency for the control device shall be calculated as follows:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:

R = Total organic reduction efficiency for the control device, percent.

E_b = Mass flow rate of organic compounds entering the control device, kilograms per hour.

E_a = Mass flow rate of organic compounds exiting the control device, kilograms per hour.

(f) A performance test to demonstrate compliance with the mass removal provision for new sources in § 63.138(b)(1)(iii)(C) of this subpart shall consist of a determination of mass removal required to be achieved, and a determination of mass removal actually achieved. Actual mass removal and compliance shall be determined by the procedure in paragraph (h) of this section. The required mass removal for each Group 1 wastewater stream prior to

combination of the streams for treatment shall be determined using the following equation:

$$RMR = \left(\frac{60K}{10^6} V \sum_{j=1}^{n} C_{j,avg} \right) 0.99 * 60$$

where:

RMR = Required mass removal of organic HAP's listed in table 8 of this subpart in a Group 1 wastewater stream, in kilograms per year.

K = Density of the Group 1 wastewater stream, kilograms per liter.

V = Annual average wastewater flowrate of the Group 1 wastewater stream, liters per minute.

n = Number of organic HAP's listed in table 8 of this subpart in stream.

$C_{j,avg}$ = Average HAP concentration of each organic HAP j listed in table 8 of this subpart in the Group 1 wastewater stream at the point of generation, parts per million by weight.

0.99 = Required removal fraction of organic HAP's listed in table 8 of this subpart.

(1) The annual average wastewater flow rate for each Group 1 wastewater stream to be combined for treatment (V), shall be determined using the procedures specified in § 63.144(c) of this subpart.

(2) The average HAP concentration of each HAP (Cj,avg) listed in table 8 of this subpart in each Group 1 wastewater stream to be combined for treatment shall be determined according to the procedures specified in either paragraph (f)(2)(i) or (f)(2)(ii) of this section.

(i) Calculated according to the procedures specified in paragraph (j) of this section; or

(ii) By direct measurement using the method specified in § 63.144(b)(5)(iii) of this subpart and no correction to the concentrations is required.

(3) The total required mass removal is calculated by adding the required mass removal for each individual Group 1 stream to be combined for treatment.

(g) A performance test to demonstrate compliance with the mass removal provisions for new and existing sources in § 63.138(c)(1)(iii)(D) of this subpart shall consist of a determination of mass removal required to be achieved, and a determination of mass removal actually achieved. Actual mass removal and compliance shall be determined by the procedure in paragraph (h) of this section. The required mass removal for each Group 1 wastewater stream prior to combination of the streams for treatment shall be determined using the following equation:

$$RMR = \frac{K}{10^6} V \sum_{j=1}^{n} \left(C_{j,avg} * \frac{F}{100} \right) * 60$$

where:

RMR = Required mass removal of table 9 organic HAP's in a Group 1 wastewater stream, prior to combination with other Group 1 wastewater streams, kilograms per hour.

K = Density of the Group 1 wastewater stream, kilograms per liter.

V = Annual average wastewater flow rate of the Group 1 wastewater stream, liters per minute.

n = Number of table 9 organic HAP compounds in stream.

$C_{j,avg}$ = Average HAP concentration of each organic HAP j listed in table 9 of this subpart in the Group 1 wastewater stream at the point of generation, parts per million by weight.

F = Required percent removal of each compound j (target removal efficiency from table 9 of this subpart).

(1) The annual average wastewater flow rate for each Group 1 wastewater stream to be combined for treatment (V), shall be determined using the procedures specified in § 63.144(c) of this subpart.

(2) The average HAP concentration of each table 9 organic HAP compound (Cj,avg) in each Group 1 wastewater stream to be combined for treatment shall be determined according to the procedures specified in either paragraph (g)(2)(i) or (g)(2)(ii) of this section.

(i) Calculated according to the procedures specified in paragraph (j) of this section; or

(ii) By direct measurement using the method specified in § 63.144(b)(5)(iii) of this subpart and no correction to the concentrations is required.

(3) The total required mass removal is calculated by adding together the required mass removal for each individual Group 1 wastewater stream to be combined for treatment.

(h) For a performance test to demonstrate compliance of a treatment process with the mass removal standards, the actual total HAP mass removal of organic HAP's listed in table 9 of this subpart [for compliance with § 63.138(c)(1)(iii)(D) of this subpart] or of organic HAP's listed in table 8 of this subpart [for compliance with § 63.138(b)(1)(iii)(C) of this subpart] in the wastewater stream shall be determined by the following procedure:

(1) The actual mass removal of a treatment process, or series of treatment processes other than a properly operated biological treatment unit shall be determined using the following equation:

$$MR = (E_b - E_a)$$

where:

MR = Actual total HAP mass removal by the treatment process or series of treatment processes of organic HAP's listed in table 9 of this subpart or of organic HAP's listed in table 8 of this subpart, kilograms per hour.

E_b = Total HAP mass flow rate of organic HAP's listed in table 9 of this subpart or of organic HAP's listed in table 8 of this subpart entering the treatment process, kilograms per hour.

E_a = Total HAP mass flow rate of organic HAP's listed in table 9 of this subpart or of organic HAP's listed in table 8 of this subpart exiting the treatment process, kilograms per hour.

(2) The actual mass removal (MR) of a treatment process which is a properly operated biological treatment unit is equal to the mass removed due to biological destruction. The mass removal should be determined using the following equation:

$$MR = (E_b - E_a) * F_{bio}$$

where:

MR = Actual mass removal by the biological treatment process of total organic HAP's listed on table 8 or table 9 of this subpart, kilograms per hour.

E_b = Mass flow rate of total organic HAP's listed on table 8 or table 9 of this subpart entering the biological treatment process, kilograms per hour.

E_a = Mass flow rate of total organic HAP's listed on table 8 or table 9 of this subpart exiting the biological treatment process, kilograms per hour.

F_{bio} = The fraction of organic HAP's listed on table 8 of this subpart, or the total organic HAP's listed on table 9 of this subpart, biodegraded in a properly operated biological treatment unit. This fraction shall be determined using the procedures in appendix C of this part.

(i) The total HAP mass flow rate of organic HAP's listed in table 9 of this subpart or of organic HAP's listed in table 8 of this subpart entering the treatment process (E_b) shall be determined using the procedures specified in paragraph (d)(2)(iv) of this section for combustion and paragraph (c)(1)(ii)(E) of this section for noncombustion.

(ii) The total HAP mass flow rate of organic HAP's listed in table 9 of this

subpart or of organic HAP's listed in table 8 of this subpart exiting the treatment process (E_a) shall be determined using the procedures specified in paragraph (d)(2)(v) of this section for combustion and paragraph (c)(1)(ii)(E) of this section for noncombustion.

(3) Compliance with the mass removal provisions in § 63.138(b)(1)(iii)(C) or § 63.138(c)(1)(iii)(D) of this subpart is achieved when the actual mass removal of the treatment process (MR) is demonstrated to meet or exceed the total required mass removal (RMR), determined using the procedures specified in paragraph (f) or (g) of this section.

(i) This paragraph applies to the use of a performance test to demonstrate compliance of a biological treatment process with the 95 percent HAP mass reduction requirement of § 63.138(e) of this subpart for organic HAP's listed on table 8 or table 9 of this subpart. The percent HAP mass reduction of a biological treatment unit is equal to the mass removed due to biological destruction. The percent VOHAP mass reduction should be determined using the following equation:

$$R = \frac{(E_b - E_a) * F_{bio}}{E_b}$$

where:

R=Control efficiency of the biological treatment process, percent.

E_b=Mass flow rate of total organic HAP's entering the treatment process, kilograms per hour.

E_a=Mass flow rate of total organic HAP's exiting the treatment process, kilograms per hour.

F_{bio}=The fraction of HAP biodegraded in a properly operated biological treatment unit. This fraction shall be determined using the procedures in appendix C of this part.

(1) The total HAP mass flow rate entering the biological treatment process (E_b) shall be determined using the procedures specified in paragraph (d)(2)(iv) of this section for combustion and paragraph (c)(1)(ii)(E) of this section for noncombustion.

(2) The total HAP mass flow rate exiting the biological treatment process (E_a) shall be determined using the procedures specified in paragraph (d)(2)(v) of this section for combustion and paragraph (c)(1)(ii)(E) of this section for noncombustion.

(3) For new sources that start up within nine months of promulgation, an owner or operator may determine $K_{l,i}$, which is needed when determining F_{bio}, by using the average of results from several test methods.

(j) The owner or operator shall convert the average VOHAP concentration of each individually speciated HAP, i, to the average HAP concentration of each individually speciated HAP using the following equation:

$$C_{(b \text{ or } a),i} = \frac{C_{i,avg}}{F_{mi}}$$

where:

$C_{(b \text{ or } a),i}$=Average HAP concentration of each individually speciated HAP, i, in the wastewater stream entering (b) or exiting (a) the treatment process, parts per million by weight.

$C_{i,avg}$=VOHAP concentration of the individually speciated organic HAP calculated according to the procedures specified in § 63.144(b)(5)(i)(E).

F_{mi}=Fraction measured of each individually speciated organic HAP in wastewater as listed in table 34 of this subpart.

(k) The owner or operator shall calculate the total VOHAP average concentration using the following equation:

$$C_{(b \text{ or } a),avg} = \sum_{n=1}^{i} C_{(b \text{ or } a),i}$$

where:

$C_{(b \text{ or } a),avg}$=Total VOHAP average concentration in the wastewater stream entering (b) or exiting (a) the treatment process, parts per million by weight.

$C_{(b \text{ or } a),i}$ = Average HAP concentration of each individually speciated HAP, i, in the wastewater stream entering (b) or exiting (a) the treatment process, calculated according to the procedures specified in paragraph (j) of this section, parts per million by weight.

§ 63.146 Process wastewater provisions—reporting.

(a) The owner or operator shall submit the information specified in paragraphs (a)(1) through (a)(3) of this section as part of the Implementation Plan required by § 63.151(c), (d), or (e) of this subpart.

(1) For each new source, the owner or operator shall submit the information specified in table 14a of this subpart for organic HAP's listed on table 8 of this subpart.

(2) For each new and existing source, the owner or operator shall submit the information specified in table 14b of this subpart for organic HAP's listed on table 9 of this subpart. For each new source, the owner or operator is not required to submit information on table 14b of this subpart for any organic HAP's that have been documented in table 14a of this subpart. If applicable, the owner or operator must comply with paragraph (a)(2)(i) or (a)(2)(ii) of this section.

(i) The owner or operator who elects to comply with § 63.138(c)(5) of this subpart, must submit in table 14b of this subpart the annual total VOHAP mass flow rate of each Group 1 stream at the point of generation in megagrams per year.

(ii) If the sum, for the source, of the total VOHAP mass flow rate of those Group 1 wastewater streams not treated to levels required in § 63.138(c)(1) of this subpart has been reduced to less than 1 megagram per year, the owner or operator shall enter the following on table 14b of this subpart:

(A) The VOHAP mass flow rate at the point of generation for each untreated Group 1 wastewater stream;

(B) The VOHAP mass flow rate at the outlet of the treatment process for each Group 1 wastewater stream treated less stringently than required in § 63.138(c)(1) of this subpart;

(C) Zero for each Group 2 wastewater stream and for each Group 1 wastewater stream treated to the level required in § 63.138(b)(1) of this subpart; and

(D) The sum of the VOHAP mass flow rates in paragraphs (a)(2)(ii)(A), (a)(2)(ii)(B), and (a)(2)(ii)(C) of this section to demonstrate that annual total VOHAP mass flow rate for the source has been reduced below 1 megagram per year.

(3) For each waste management unit, treatment process, or control device used to comply with § 63.138(b)(1), (c)(1), (d), (e), or § 63.139 of this subpart for which the owner or operator seeks to monitor a parameter other than those specified in table 11, table 12, or table 13 of this subpart, the owner or operator

shall submit a request for approval to monitor alternative parameters according to the procedures specified in § 63.151(g) or § 63.152(e) of this subpart.

(b) The owner or operator shall submit the information specified in paragraphs (b)(1) through (b)(9) of this section as part of the Notification of Compliance Status required by § 63.152(b) of this subpart.

(1) For each new source, the owner or operator shall submit the information specified in table 15a of this subpart for organic HAP's listed on table 8 of this subpart.

(2) For each new and existing source, the owner or operator shall submit the information specified in table 15b of this subpart for organic HAP's listed on table 9 of this subpart. For each new source, the owner or operator is not required to submit information on table 15b of this subpart for any organic HAP's that have been documented in table 15a of this subpart.

(3) For each existing source for which the owner or operator elects to comply with the Process Unit Alternative specified in § 63.138(d) of this subpart, the owner or operator shall submit the information specified in table 16 of this subpart. If table 16 of this subpart is completed for the Notification of Compliance Status, then table 15b of this subpart need not be completed.

(4) For each treatment process identified in table 15a, 15b, or 16 of this subpart that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 17 of this subpart.

(5) For each waste management unit identified in table 15a, 15b, or 16 of this subpart that receives or manages a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 18 of this subpart.

(6) For each residual removed from a Group 1 wastewater stream, the owner or operator shall submit the information specified in table 19 of this subpart.

(7) For each control device used to comply with §§ 63.133 through 63.139 of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(7)(i) and (b)(7)(ii) of this section.

(i) For each flare, the owner or operator shall submit the information specified in paragraphs (b)(7)(i)(A) through (b)(7)(i)(C) of this section.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.139(c)(3) of this subpart; and

(C) Reports of the times and durations of all periods during the compliance determination when the pilot flame is absent or the monitor is not operating.

(ii) For each control device other than a flare, the owner or operator shall submit the information specified in paragraph (b)(7)(ii)(A) of this section and in either paragraph (b)(7)(ii)(B) or (b)(7)(ii)(C) of this section.

(A) The information on parameter ranges specified in § 63.152(b)(2) of this subpart for the applicable parameters specified in table 13 of this subpart, unless the parameter range has already been established in the operating permit; and either

(B) The design evaluation specified in § 63.139(d)(2) of this subpart; or

(C) Results of the performance test specified in § 63.139(d)(1) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value, averaged over the period of the performance test, of each parameter identified in the Implementation Plan or operating permit as being monitored in accordance with § 63.143 of this subpart; and applicable supporting calculations.

(8) For each treatment process used to comply with § 63.138(b)(1)(iii)(C), (c)(1)(iii)(D), (d), or (e) of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(i) and (b)(8)(ii) of this section.

(i) For Items 1 and 2 in table 12 of this subpart, the owner or operator shall submit the information specified in paragraphs (b)(8)(ii)(A) and (b)(8)(ii)(B) of this section.

(A) The information on parameter ranges specified in § 63.152(b)(2) of this subpart for the parameters approved by the Administrator, unless the parameter range has already been established in the operating permit.

(B) Results of the initial measurements of the parameters approved by the Administrator and any applicable supporting calculations.

(ii) For Item 3 in table 12 of this subpart, the owner or operator shall submit the information on parameter ranges specified in § 63.152(b)(2) of this subpart for the parameters specified in Item 3 of table 12 of this subpart, unless the parameter range has already been established in the operating permit.

(9) Except as provided in paragraph (b)(9)(iii) of this section, for each waste management unit or treatment process used to comply with § 63.138(b)(1), (c)(1), (d), (e), or (h)(3) of this subpart, the owner or operator shall submit the information specified in either paragraph (b)(9)(i) or (b)(9)(ii) of this section.

(i) The design evaluation and supporting documentation specified in § 63.138(j)(1) of this subpart.

(ii) Results of the performance test specified in § 63.138(j)(2) of this subpart. Performance test results shall include operating ranges of key process and control parameters during the performance test; the value, averaged over the period of the performance test, of each parameter identified in the Implementation Plan or operating permit as being monitored in accordance with § 63.143 of this subpart; and applicable supporting calculations.

(iii) If the owner or operator elects to use one of the technologies specified in § 63.138(m) of this subpart, the owner or operator is exempt from the requirements specified in paragraphs (b)(9)(i) and (b)(9)(ii) of this section.

(c) For each waste management unit that receives, manages, or treats a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream, the owner or operator shall submit as part of the next Periodic Report required by § 63.152(c) of this subpart the results of each inspection required by § 63.143(a) of this subpart in which a control equipment failure was identified. Control equipment failure is defined for each waste management unit in §§ 63.133 through 63.137 of this subpart. Each Periodic Report shall include the date of the inspection, identification of each waste management unit in which a control equipment failure was detected, description of the failure, and description of the nature of and date the repair was made.

(d) Except as provided in paragraph (f) of this section, for each treatment process used to comply with § 63.138(b)(1), (c)(1), (d), or (e) of this subpart, the owner or operator shall submit as part of the next Periodic Report required by § 63.152(c) the information specified in paragraphs (d)(1) and (d)(2) of this section for the monitoring required by § 63.143(b) of this subpart.

(1) For Items 1 and 2 in table 12, the owner or operator shall submit the information specified in either paragraph (d)(1)(i) or (d)(1)(ii) of this section.

(i) For each parameter approved by the Administrator and required by the Administrator to be monitored continuously, the owner or operator shall submit the monitoring results for

each operating day during which the daily average value of the monitored parameter is outside the range established in the Notification of Compliance Status or operating permit.

(ii) For each parameter approved by the Administrator for which monitoring is not required by the Administrator to be continuous, the owner or operator shall submit the results of measurements that indicate that the biological treatment unit failed to meet the requirements specified in the applicable paragraphs cited in column 1 of table 12 of this subpart.

(2) For Item 3 in table 12 of this subpart, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of any monitored parameter specified in Item 3 of table 12 of this subpart was outside the range established in the Notification of Compliance Status or operating permit.

(e) Except as provided in paragraph (f) of this section, for each control device used to comply with §§ 63.133 through 63.139 of this subpart, the owner or operator shall submit as part of the next Periodic Report required by § 63.152(c) of this subpart the information specified in either paragraph (e)(1) or (e)(2) of this section.

(1) The information specified in table 20 of this subpart, or

(2) If the owner or operator elects to comply with § 63.143(e)(2) of this subpart, i.e., an organic monitoring device installed at the outlet of the control device, the owner or operator shall submit the monitoring results for each operating day during which the daily average concentration level or reading is outside the range established in the Notification of Compliance Status or operating permit.

(f) Where the owner or operator obtains approval to use a treatment process or control device other than one for which monitoring requirements are specified in § 63.143 of this subpart, or to monitor parameters other than those specified in table 12 or 13 of this subpart, the Administrator will specify appropriate reporting requirements.

(g) If the owner or operator requests an extension for emptying a wastewater tank in accordance with § 63.133(e)(2) of this subpart, the request shall include the information specified in § 63.133(e)(2) of this subpart.

§ 63.147 Process wastewater provisions—recordkeeping.

(a) The owner or operator shall keep a record of all reports submitted in accordance with § 63.146 of this subpart, including the Implementation Plan, Notification of Compliance Status, and Periodic Reports.

(b) The owner or operator transferring a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with § 63.132(i) of this subpart shall keep a record of the notice sent to the treatment operator stating that the wastewater stream or residual contains organic HAP's which are required to be managed and treated in accordance with the provisions of this subpart.

(c) The owner or operator shall keep in a readily accessible location the records specified in paragraphs (c)(1) through (c)(6) of this section.

(1) A record that each waste management unit inspection required by §§ 63.133 through 63.137 of this subpart was performed.

(2) A record that each inspection for control devices required by § 63.139 of this subpart was performed.

(3) A record of the results of each seal gap measurement required by §§ 63.133(d) and 63.137(c) of this subpart. The records shall include the date of the measurement, the raw data obtained in the measurement, and the calculations described in § 63.120(b) (2), (3), and (4) of this subpart.

(4) For Item 1 and Item 2 of table 12 of this subpart, the owner or operator shall keep the records approved by the Administrator.

(5) Except as provided in paragraphs (e) and (g) of this section, continuous records of the monitored parameters specified in Item 3 of table 12 and table 13 of this subpart, and in § 63.143(e)(2) of this subpart.

(6) Documentation of a decision to use an extension, as specified in § 63.133(e)(2) or (h) of this subpart, which shall include a description of the failure, documentation that alternate storage capacity is unavailable, and specification of a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(d) For each boiler or process heater used to comply with §§ 63.133 through 63.139 of this subpart, the owner or operator shall keep a record of any changes in the location at which the vent stream is introduced into the flame zone as required in § 63.139(c)(1) of this subpart.

(e) The owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day, except as provided in paragraphs (e)(3) and (e)(4) of this section.

(1) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day, except as provided in paragraph (e)(2) of this section. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(2) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the hourly or daily averages. Records shall be kept of the times and durations of all such periods and any other periods of process or control device operation when monitors are not operating.

(3) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(4) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range rather than calculating and recording a daily average for that operating day.

(5) For flares, records of the times and duration of all periods during which the pilot flame is absent shall be kept rather than daily averages.

(6) For carbon adsorbers, the owner or operator shall keep the records specified in paragraphs (e)(6)(i) and (e)(6)(ii) of this section instead of daily averages.

(i) Records of the total regeneration stream mass flow for each carbon bed regeneration cycle.

(ii) Records of the temperature of the carbon bed after each regeneration cycle.

(f) Where the owner or operator obtains approval to use a control device other than one for which monitoring requirements are specified in § 63.143 of this subpart, or to monitor parameters other than those specified in table 12 or table 13 of this subpart, the Administrator will specify appropriate recordkeeping requirements.

(g) If the owner or operator uses process knowledge to determine the VOHAP concentration of a wastewater stream as specified in § 63.144(b)(1) of this subpart and/or uses process knowledge to determine the annual average flow rate as specified in § 63.144(e)(1) of this subpart, and determines that the wastewater stream is not a Group 1 wastewater stream, the owner or operator shall keep in a readily accessible location the documentation of how process knowledge was used to determine the VOHAP concentration

and/or the annual average flow rate of the wastewater stream.

§ 63.143 Leak inspection provisions.

(a) Except as provided in paragraph (k) of this section, for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (b) through (j) of this section.

(b) Except as provided in paragraphs (g) and (h) of this section, each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (b)(1) and (b)(2) of this section and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in paragraph (b)(3) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (c) of this section.

(iii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(3) For each fixed roof, cover, and enclosure, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (c) of this section, and

(ii) Conduct semi-annual visual inspections for visible, audible, or olfactory indications of leaks as specified in § 63.133 through § 63.137 of this subpart.

(c) Each vapor collection system, closed vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in paragraphs (c)(1) through (c)(5) of this section.

(1) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A.

(2) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream.

(3) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(4) Calibration gases shall be as follows:

(i) Zero air (less than 10 parts per million hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration less than 10,000 parts per million.

(5) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60 appendix A.

(6) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance.

(d) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (e) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (d)(3) of this section.

(3) For leaks found in vapor collection systems used for transfer operations, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next transfer loading operation, whichever is later.

(e) Delay of repair of a vapor collection system, closed vent system, fixed roof, cover, or enclosure for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in § 63.101 of subpart F of this part, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown.

(f) For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (f)(1) or (f)(2) of this section, except as provided in paragraph (f)(3) of this section.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in § 63.118(a)(3) of this subpart. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(3) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(g) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (b)(1), (b)(2), or (b)(3)(i) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(h) Any parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated, as described in paragraph (i)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (b)(1), (b)(2), and (b)(3)(i) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(i) The owner or operator shall record the information specified in paragraphs (i)(1) through (i)(5) of this section.

(1) Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the vapor collection system, closed vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each vapor collection system or closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (i)(3)(i) or (i)(3)(ii) of this section.

(i) Hourly records of whether the flow indicator specified under paragraph (f)(1) of this section was operating and whether flow was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the monitor is not operating.

(ii) Where a seal mechanism is used to comply with paragraph (f)(2) of this section, hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(4) For each inspection during which a leak is detected, a record of the information specified in paragraphs (i)(4)(i) through (i)(4)(viii) of this section.

(i) The instrument identification numbers; operator name or initials; and identification of the equipment.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) Maximum instrument reading measured by the method specified in paragraph (d) of this section after the leak is successfully repaired or determined to be nonrepairable.

(iv) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(v) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.

(vi) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(vii) Dates of shutdowns that occur while the equipment is unrepaired.

(viii) The date of successful repair of the leak.

(5) For each inspection conducted in accordance with paragraph (c) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(6) For each visual inspection conducted in accordance with paragraph (b)(1)(ii) or (b)(3)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(j) The owner or operator shall submit as part of the reports required by § 63.182(b) of subpart H of this part, the information specified in paragraphs (j)(1) through (j)(3) of this section.

(1) The information specified in paragraph (i)(4) of this section;

(2) Reports of the times and durations of all periods recorded under paragraph (i)(3)(i) of this section when the vent stream is diverted from the control device through a bypass line; and

(3) Reports of all periods recorded under paragraph (i)(3)(ii) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

(k) If a closed-vent system subject to this section is also subject to § 63.172 of subpart H of this part, the owner or operator shall comply with the provisions of § 63.172 of subpart H of this part and is exempt from the requirements of this section.

§ 63.149 [Reserved]

§ 63.150 Emissions averaging provisions.

(a) This section applies to owners or operators of existing sources who seek to comply with the emission standard in § 63.112(a) of this subpart by using emissions averaging according to § 63.112(f) of this subpart rather than following the provisions of §§ 63.113 through 63.148 of this subpart.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Implementation Plan containing all of the information required in § 63.151(d) of this subpart for all points to be included in an emissions average. The Implementation Plan or operating permit application shall identify all emission points to be included in the emissions average. This must include any Group 1 emission points to which the reference control technology (defined in § 63.111 of this subpart) is not applied and all other emission points being controlled as part of the average.

(c) The following emission points can be used to generate emissions averaging credits, if control was applied after November 15, 1990 and if sufficient information is available to determine the appropriate value of credits for the emission point:

(1) Group 2 emission points.

(2) Group 1 emission points that are controlled by a technology that the Administrator or permitting authority agrees has a higher nominal efficiency than the reference control technology. Information on the nominal efficiencies for such technologies must be submitted and approved as provided in paragraph (i) of this section.

(3) Emission points from which emissions are reduced by pollution prevention measures. Percent reductions for pollution prevention measures shall be determined as specified in paragraph (j) of this section.

(i) For a Group 1 emission point, the pollution prevention measure must reduce emissions more than the reference control technology would have had the reference control technology been applied to the emission point instead of the pollution prevention measure except as provided in paragraph (c)(3)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 emission point, the pollution prevention measure alone does not have to reduce emissions more than the reference control technology, but the combination of the pollution prevention measure and other controls must reduce emissions more than the reference control technology would have had it been applied instead.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, unless the level of control is increased after November 15, 1990, in which case credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points that are controlled by a reference control technology, unless the reference control technology has been approved for use in a different manner and a higher nominal efficiency has been assigned according to the procedures in paragraph (i) of this section. For example, it is not allowable to claim that an internal floating roof meeting the specifications of § 63.119(b) of this subpart applied to a storage vessel is achieving greater than 95 percent control.

(3) Emission points on shut-down process units. Process units that are shut down cannot be used to generate credits or debits.

(4) Wastewater that is not process wastewater or wastewater streams treated in biological treatment units. These two types of wastewater cannot be used to generate credits or debits. For the purposes of this section, the terms wastewater and wastewater stream are used to mean process wastewater.

(5) Emission points controlled to comply with a State or Federal rule other than this subpart, unless the level of control has been increased after November 15, 1990 above what is required by the other State or Federal rule. Only the control above what is required by the other State or Federal rule will be credited. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the point is subsequently made subject to a State or Federal rule other than this subpart, the point can continue to generate emissions averaging credit for the purpose of complying with the previously approved average.

(e) For all points included in an emissions average, the owner or operator shall:

(1) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the reference control technology for those emission points. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 or Group 2 emission points that are overcontrolled to compensate for the debits. Equations in paragraph (h) of this section shall be used to calculate credits. Emission points and controls that meet the criteria of paragraph (c) of this section may be included in the credit calculation, whereas those described in paragraph (d) of this section shall not be included.

(3) Demonstrate that annual credits calculated according to paragraph (h) of this section are greater than or equal to debits calculated for the same annual compliance period according to paragraph (g) of this section.

(i) The owner or operator may choose to include more than the required number of credit-generating emission points in an average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Implementation Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debits from the debit-generating emission points must be made under representative operating conditions. After the compliance date, actual operating data will be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (g) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h) of this section. Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in § 63.152(c) of this subpart. Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.152(c)(5)(iv)(B) of this subpart.

(f) Debits and credits shall be calculated in accordance with the methods and procedures specified in paragraphs (g) and (h) of this section, respectively, and shall not include emissions from the following:

(1) More than 20 individual Group 1 or Group 2 emission points. Where pollution prevention measures (as specified in paragraph (j)(1) of this section) are used to control emission points to be included in an emissions average, no more than 25 emission points may be included in the average. For example, if two emission points to be included in an emissions average are controlled by pollution prevention measures, the average may include up to 22 emission points.

(2) Periods of start-up, shutdown, and malfunction as described in the source's start-up, shutdown, and malfunction plan required by § 63.6(e)(3) of subpart A of this part.

(3) Periods of monitoring excursions as defined in § 63.152(c)(2)(ii)(A) of this subpart. For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) No credits would be assigned to the credit-generating emission point.

(ii) Maximum debits would be assigned to the debit-generating emission point.

(iii) The owner or operator may demonstrate to the Administrator that full or partial credits or debits should be assigned using the procedures in paragraph (l) of this section.

(g) Debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or is controlled to a level less stringent than the reference control technology, and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) The overall equation for calculating source-wide debits is:

$$\text{Debits} = \sum_{i=1}^{n}\left(EPV_{iACTUAL} - (0.02)EPV_{iu}\right) + \sum_{i=1}^{n}\left(ES_{iACTUAL} - (0.05)ES_{iu}\right) + \sum_{i=1}^{n}\left(ETR_{iACTUAL} - (0.02)ETR_{iu}\right) + \sum_{i=1}^{n}\left(EWW_{iACTUAL} - EWW_{ic}\right)$$

where:

Debits and all terms of the equation are in units of megagrams per month, and

$EPV_{iACTUAL}$=Emissions from each Group 1 process vent i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(2) of this section.

$(0.02)\ EPV_{iu}$=Emissions from each Group 1 vent i if the reference control technology had been applied to the uncontrolled

emissions, calculated according to paragraph (g)(2) of this section.

$ES_{iACTUAL}$=Emissions from each Group 1 storage vessel i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(3) of this section.

(0.05) ES_{iu}=Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(3) of this section.

$ETR_{iACTUAL}$=Emissions from each Group 1 transfer rack i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(4) of this section.

(0.02) ETR_{iu}=Emissions from each Group 1 transfer rack i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (g)(4) of this section.

$EWW_{iACTUAL}$=Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to paragraph (g)(5) of this section.

EWW_{iu}=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. This is calculated according to paragraph (g)(5) of this section.

n=The number of emission points being included in the emissions average. The value of n is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(2) Emissions from process vents shall be calculated as follows:

(i) For purposes of determining process vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be after the final product recovery device, if any recovery devices are present; before any control device (for process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere. Method 1 or 1A of part 60, appendix A, shall be used for selection of the sampling site.

(ii) The following equation shall be used for each process vent i to calculate EPV_{iu}:

$$EPV_{iu} = (2.494 \times 10^{-9}) Qh \left(\sum_{j=1}^{n} C_j M_j \right)$$

where:

EPV_{iu}=Uncontrolled process vent emission rate from process vent i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D of part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the vent, hours per month.

C_j=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18 of part 60, appendix A.

M_j=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP's.

(A) The values of Q, C_j, and M_j shall be determined during a performance test conducted under representative operating conditions. The values of Q, C_j, and M_j shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(2)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q, C_j, and M_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q, C_j, and M_j. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate $EPV_{iACTUAL}$:

(A) If the vent is not controlled by a control device or pollution prevention measure, $EPV_{iACTUAL} = EPV_{iu}$, where EPV_{iu} is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the vent is controlled using a control device or a pollution prevention measure achieving less than 98-percent reduction,

$$EPV_{iACTUAL} = EPV_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%} \right)$$

(1) The percent reduction shall be measured according to the procedures in § 63.116 of this subpart if a combustion control device is used. For a flare meeting the criteria in § 63.116(a) of this subpart, or a boiler or process heater meeting the criteria in § 63.116(b) of this subpart, the percent reduction shall be 98 percent. If a non-combustion control device is used, percent reduction shall be demonstrated by a performance test at the inlet and outlet of the device, or, if testing is not feasible, by a control design evaluation and documented engineering calculations.

(2) For determining debits from Group 1 process vents, product recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating $EPV_{iACTUAL}$. The sampling site for measurement of uncontrolled emissions is after the final product recovery device. However, as provided in § 63.113(a)(3) of this subpart, a Group 1 process vent may add sufficient product recovery to raise the TRE index value above 1.0, thereby becoming a Group 2 process vent.

(3) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from storage vessels shall be calculated as follows:

(i) The following equation shall be used for each storage vessel i to calculate ES_{iu}:

$$ES_{iu} = \frac{L_B + L_W}{12}$$

where:

ES_{iu}=Uncontrolled emissions, defined as emissions from a fixed roof vessel having identical dimensions and vessel color as vessel i, megagrams per month.

L_B=Breathing loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(A) of this section.

L_W=Working loss emissions, megagrams per year, calculated according to paragraph (g)(3)(i)(B) of this section.

12=Constant, months per year.

(A) Breathing loss emissions shall be calculated using the following equation:

$$L_S = 1.02 \times 10^{-5} M_v \left(\frac{P}{P_A - P} \right)^{0.68} D^{1.73} H^{0.51} \Delta T^{0.50} F_p C K_C$$

where:

M_v=Molecular weight of vapor in storage vessel, pound per pound-mole.

P_A=Average atmospheric pressure, pounds per square inch absolute.

P=True vapor pressure of the HAP at liquid storage temperature, pounds per square inch absolute. See table 21 of this subpart.

D = Tank diameter, feet.

H=Average vapor space height, feet. Use vessel-specific values or an assumed value of one-half the height.

ΔT=Average ambient diurnal temperature change, °F. A typical value of 20 °F may be used.

F_p=Paint factor, dimensionless, from table 22 of this subpart; use F_p=1 for vessels located indoors.

C=Adjustment factor for small diameter tanks, dimensionless; use C=1 for diameter ≥30 feet; use C = 0.0771D − 0.0013D^2 − 0.1334 for diameter <30 feet.

K_C=Product factor, dimensionless. Use 1.0 for organic HAP's.

(B) Working losses shall be calculated using the following equation:

$L_W = 1.089 \times 10^{-8} M_v (P)(V)(N)(K_N)(K_C)$

where:

V=Tank capacity, gallon.

N=Number of turnovers per year.

K_N=Turnover factor, dimensionless, and

$$K_N = \frac{180 + N}{6N} \text{ for turnovers } > 36$$

$K_N = 1$ for turnovers ≤36.

M_v, P, and K_C as defined in paragraph (g)(3)(i)(A) of this section.

(C) The owner or operator may elect to calculate ES_{iu} in accordance with the methods described in American Petroleum Institute Publication 2518, Evaporative Loss from Fixed-Roof Tanks (incorporated by reference as specified in § 63.14 of this part).

(1) The owner or operator who elects to use these alternative methods must use them for all storage vessels included in the emissions average as debit or credit generating points.

(2) The equations of paragraphs (g)(3)(i)(A) and (g)(3)(i)(B) of this section shall not be used in conjunction with the alternative methods provided under paragraph (g)(3)(i)(C) of this section.

(ii) The following procedures and equations shall be used for each fixed roof storage vessel i that is not controlled with a floating roof to calculate $ES_{iACTUAL}$:

(A) If the vessel is not controlled, $ES_{iACTUAL} = ES_{iu}$, where ES_{iu} is calculated according to the procedures in paragraph (g)(3)(i) of this section.

(B) Except as provided in paragraph (g)(3)(ii)(C) of this section, if the vessel is controlled using a control device or pollution prevention measure achieving less than 95-percent reduction,

$$ES_{iACTUAL} = ES_{iu} * \left(\frac{1 - \text{Percent reduction}}{100} \right)$$

(1) The percent reduction for a control device shall be determined through a design evaluation according to the procedures specified in § 63.120(d) of this subpart.

(2) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(C) If the vessel is controlled according to the provisions of § 63.119(e)(2) of this section whereby the control device is only required to achieve at least 90-percent reduction, the vessel shall not be considered to be generating debits.

(iii) The following equation shall be used for each internal floating roof vessel i that does not meet the specifications of § 63.119(b) or (d) of this subpart to calculate $ES_{iACTUAL}$:

$$ES_{iACTUAL} = \frac{L_W + L_R + L_F + L_D}{12}$$

where:

L_W=Withdrawal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(A) of this section.

L_R=Rim seal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(B) of this section.

L_F=Fitting loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(C) of this section.

L_D=Deck seam loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iii)(D) of this section.

12=Constant, months per year.

(A) Withdrawal loss emissions shall be calculated using the following equation:

$$L_W = \frac{1.018 \times 10^{-5} Q C W_L}{D} \left[1 + \left(\frac{N_c F_c}{D} \right) \right]$$

where:

Q=Throughput, gallon per year; (gallon/turnover) * (turnovers per year).

C=Shell clingage factor, barrel per 1,000 square foot, see table 23 of this subpart.

WL=Average liquid density, pound per gallon.

D=Tank diameter, feet.

N_c=Number of columns, dimensionless, see table 24 of this subpart.

F_c=Effective column diameter, feet (column perimeter (feet)÷3.1416), see table 25 of this subpart.

(B) Rim seal loss emissions shall be calculated using the following equation:

$$L_R = \frac{K_s V^n P^* D M_v K_c}{2{,}205}$$

where:

M_v=Molecular weight of vapor in storage vessel; pound per pound-mole.

D=Tank diameter, feet.

K_c=Product factor, dimensionless; use 1.0 for organic HAP's.

K_s=Seal factor, pound-mole per [foot (miles per hour)^n year], see table 26 of this subpart.

V=Average wind speed at the source, miles per hour. A value of 10 miles per hour may be assumed if source-specific data are not available.

n=Seal related wind speed exponent, dimensionless, see table 26 of this subpart.

2,205=Constant, pounds per megagram.

P^*=Vapor pressure function, dimensionless, and

$$P^* = \frac{\frac{P}{P_A}}{\left[1+\left(1-\frac{P}{P_A}\right)0.5\right]^2}$$

where:

P_A=Average atmospheric pressure, pounds per square inch absolute.

P=True vapor pressure at liquid storage temperature, pounds per square inch absolute.

(C) Fitting loss emissions shall be calculated using the following equation:

$$L_F = \frac{F_F P^* M_v K_c}{2{,}205}$$

where:

F_F=The total deck fitting loss factor, pound-mole per year, and

where:

$$F_F = \sum_{i=1}^{n}\left(N_{F_i}K_{F_i}\right) = \left[\left(N_{F_1}K_{F_1}\right)+\left(N_{F_2}K_{F_2}\right)+\ldots+\left(N_{F_n}K_{F_n}\right)\right]$$

N_{Fi}=Number of fittings of a particular type, dimensionless. N_{Fi} is determined for the specific tank or estimated from tables 24 and 27 of this subpart.

K_{Fi}=Deck fitting loss factor for a particular type fitting, pound-mole per year. K_{Fi} is determined for each fitting type from table 27 of this subpart.

n=Number of different types of fittings, dimensionless.

P^*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(D) Deck seam loss emissions shall be calculated using the following equation:

$$L_D = \frac{K_D S_D D^2 P^* M_v K_c}{2{,}205}$$

where:

K_D=Deck seam loss factor, pound-mole per foot per year, and

K_D=0.34 for non-welded decks.

K_D=0 for welded decks.

S_D=Deck seam length factor, feet per square foot, see table 28 of this subpart.

D, P^*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iii)(B) of this section.

(iv) The following equation shall be used for each external floating roof vessel i that does not meet the specifications of § 63.119(c) of this subpart to calculate $ES_{iACTUAL}$:

$$ES_{iACTUAL} = \frac{L_W + L_R + L_F}{12}$$

where:

L_W=Withdrawal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(A) of this section.

L_R=Rim seal loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(B) of this section.

L_F=Fitting loss emissions, megagrams per year, calculated according to paragraph (g)(3)(iv)(C) of this section.

12=Constant, months per year.

(A) Withdrawal loss emissions shall be calculated using the following equation:

$$L_W = \frac{4.28*10^{-4} Q C W_L}{D}$$

where:

Q=Throughput, gallons per year.

C=Shell clingage factor, barrel per 1,000 square foot, see table 23 of this subpart.

W_L=Average liquid density, pound per gallon.

D=Vessel diameter, feet.

(B) Rim seal loss emissions shall be calculated using the following equation:

$$L_R = \frac{K_s V^N P^* D M_v K_c}{2{,}205}$$

where:

K_s=Seal factor, pound-mole per [foot (miles per hour)^N year], see table 29 of this subpart.

V=Average wind speed, miles per hour, at the source. A value of 10 miles per hour may be assumed if source-specific data are not available.

N=Seal wind speed exponent, dimensionless, see table 29 of this subpart.

P^*=Vapor pressure function, dimensionless, as defined in paragraph (g)(3)(iii)(B) of this section.

D=Vessel diameter, feet.

M_v=Molecular weight of the HAP, pound per pound-mole.

K_c=Product factor, dimensionless; use 1.0 for organic HAP's.

2,205=Constant, pounds per megagram

(C) Fitting loss emissions shall be calculated using the following equation:

$$L_F = \frac{F_F P^* M_v K_c}{2{,}205}$$

where:

F_F=The total deck fitting loss factor, pound-mole per year, and

$$F_F = \sum_{i=1}^{n}\left(N_{F_i}K_{F_i}\right) = \left[\left(N_{F_1}K_{F_1}\right)+\left(N_{F_2}K_{F_2}\right)+\ldots+\left(N_{F_n}K_{F_n}\right)\right]$$

where:

N_{Fi}=Number of fittings of a particular type, dimensionless. N_{Fi} is determined for the specific tank or estimated from tables 30 through 32 of this subpart.

K_{Fi}=Deck fitting loss factor for a particular type fitting, pound-mole per year, and

$K_{Fi}=K_{Fai}+K_{Fbi}\,V^{mi}$, pound-mole per year, see table 30 of this subpart for the appropriate values of K_{Fa}, K_{Fb}, and m for each fitting type.

V, P^*, M_v, K_c, and 2,205 as defined in paragraph (g)(3)(iv)(B) of this section.

(4) Emissions from transfer racks shall be calculated as follows:

(i) The following equation shall be used for each transfer rack i to calculate ETR_{iu}:

$$ETR_{iu} = \left(1.20\times10^{-7}\right)\frac{SPMG}{T}$$

where:

ETR_{iu}=Uncontrolled transfer HAP emission rate from transfer rack i, megagrams per month.

S=Saturation factor, dimensionless (see table 33 of this subpart).

P=Weighted average rack partial pressure of organic HAP's

transferred at the rack during the month, kilopascals.

M = Weighted average molecular weight of organic HAP's transferred at the transfer rack during the month, gram per gram-mole.

G = Monthly volume of organic HAP's transferred, liters per month.

T = Weighted rack bulk liquid loading temperature during the month, Kelvin (°C + 273).

(ii) The following equation shall be used for each transfer rack i to calculate the weighted average rack partial pressure:

$$P = \frac{\sum_{j=1}^{j=n}(P_j)(G_j)}{G}$$

where:

P_j = Maximum true vapor pressure of individual organic HAP transferred at the rack, kilopascals.

G = Monthly volume of organic HAP transferred, liters per month, and

$$G = \sum_{j=1}^{j=n} G_j$$

G_j = Monthly volume of individual organic HAP transferred at the transfer rack, liters per month.

n = Number of organic HAP's transferred at the transfer rack.

(iii) The following equation shall be used for each transfer rack i to calculate the weighted average rack molecular weight:

$$M = \frac{\sum_{j=1}^{j=n}(M_j)(G_j)}{G}$$

where:

M_j = Molecular weight of individual organic HAP transferred at the rack, gram per gram-mole.

G, G_j, and n as defined in paragraph (g)(4)(ii) of this section.

(iv) The following equation shall be used for each transfer rack i to calculate the monthly weighted rack bulk liquid loading temperature:

$$T = \frac{\sum_{j=1}^{j=n}(T_j)(G_j)}{G}$$

where:

T_j = Average annual bulk temperature of individual organic HAP loaded at the transfer rack, Kelvin (°C + 273).

G, G_j, and n as defined in paragraph (g)(4)(ii) of this section.

(v) The following procedures and equations shall be used to calculate $ETR_{iACTUAL}$:

(A) If the transfer rack is not controlled, $ETR_{iACTUAL} = ETR_{iu}$, where ETR_{iu} is calculated using the equations specified in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack is controlled using a control device or a pollution prevention measure achieving less than the 98-percent reduction.

$$ETR_{iACTUAL} = ETR_{iu}\left(\frac{1 - \text{Percent reduction}}{100\%}\right)$$

(1) The percent reduction for a control device shall be measured according to the procedures and test methods specified in § 63.128(a) of this subpart. For a flare meeting the criteria in § 63.128(b) of this subpart or a boiler or process heater meeting the criteria in § 63.128(c) of this subpart, the percent reduction shall be 98 percent. If testing is not feasible, percent reduction shall be determined through a design evaluation according to the procedures specified in § 63.128(h) of this subpart.

(2) Procedures for calculating the percent reduction for pollution prevention measures are specified in paragraph (j) of this section.

(5) Emissions from wastewater shall be calculated as follows:

(i) The following equation shall be used for each wastewater stream i to calculate EWW_{ic}:

$$EWW_{ic} = (6.0*10^{-8})Q_i H_i \sum_{m=1}^{s}(1 - Fr_m)Fe_m HAP_{im}$$

$$+ (0.05)(6.0*10^{-8})Q_i H_i \sum_{m=1}^{s}(Fr_m HAP_{im})$$

where:

EWW_{ic} = Monthly wastewater stream emission rate if wastewater stream i is controlled by the reference control technology, megagrams per month.

Q_i = Average flow rate for wastewater stream i, as determined by the procedure in § 63.144(c)(3) of this subpart, liters per minute.

H_i = Number of hours during the month that wastewater stream i was generated, hours per month.

Fr_m = Fraction removed of organic HAP m in wastewater, from table 9 of this subpart, dimensionless.

Fe_m = Fraction emitted of organic HAP m in wastewater from table 9 of this subpart, dimensionless.

s = Total number of organic HAP's in wastewater stream i.

HAP_{im} = Average concentration of organic HAP m in wastewater stream i, parts per million by weight,

(A) HAP_{im} shall be determined for the point of generation or at a location downstream of the point of generation using the sampling procedure in § 63.144(b)(5)(i)(C) of this subpart. The samples collected may be analyzed by either of the following procedures:

(1) A test method or results from a test method that measures organic HAP concentrations in the wastewater, and that has been validated pursuant to section 5.1 or 5.3 of Method 301 of appendix A of this part may be used; or

(2) Method 305 of appendix A of this part may be used to determine C_{im}, the average VOHAP concentration of organic HAP m in wastewater stream i, and then HAP_{im} may be calculated using the following equation:

$HAP_{im} = C_{im}/Fm_m$,

where Fm_m for organic HAP m is obtained from table 34 of this subpart.

(B) Values for Q_i, HAP_{im}, and C_{im} shall be determined during a performance test conducted under representative conditions. The average value obtained from three test runs shall be used. The values of Q_i, HAP_{im}, and C_{im} shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(5)(i)(C) of this section.

(C) If there is a change to the process or operation such that the previously measured values of Q_i, HAP_{im}, and C_{im} are no longer representative, a new performance test shall be conducted to determine new representative values of Q_i, HAP_{im}, and C_{im}. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(ii) The following equation shall be used to calculate $EWW_{iACTUAL}$ for each wastewater stream i that is not managed according to the provisions for waste management units of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable, which specify equipment and work practices for suppressing and controlling vapors.

$$EWW_{iACTUAL} = (6.0 \times 10^{-8}) Q_i H_i \sum_{m=1}^{s} Fe_m HAP_{im}$$

where:

$EWW_{iACTUAL}$=Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

Q_i, H_i, s, Fe_m, and HAP_{im} are as defined and determined according to paragraph (g)(5)(i) of this section.

(iii) The following equation shall be used to calculate $EWW_{iACTUAL}$ for each wastewater stream i that is managed according to the requirements of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable, and wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology (for the purposes of the wastewater emissions averaging provisions, the term control is used to mean treatment):

$$EWW_{iACTUAL} = \left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left[Fe_m HAP_{im}\left(1 - PR_{im}\right)\right] + \left(1 - \frac{R_i}{100\%}\right)\left(6.0*10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(HAP_{im} PR_{im}\right)$$

where:

$EWW_{iACTUAL}$=Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

PR_{im}=The efficiency of the treatment process, or series of treatment processes, which treat wastewater stream i, in reducing the emission potential of organic HAP m in wastewater, dimensionless, as calculated by:

$$PR_{im} = \frac{HAP_{im-in} - HAP_{im-out}}{HAP_{im-in}}$$

where:

HAP_{im-in}=Average concentration of organic HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater entering the first treatment process in the series.

HAP_{im-out}=Average concentration of organic HAP m, parts per million by weight, as defined and determined according to paragraph (g)(5)(i) of this section, in the wastewater exiting the last treatment process in the series.

R_i=Reduction efficiency of the device used to control any vapor streams emitted and collected from wastewater stream i during treatment, dimensionless, as determined according to the procedures in § 63.145(e) of this subpart.

Q_i, H_i, s, Fe_m, and HAP_{im} are as defined and determined according to paragraph (g)(5)(i) of this section.

(h) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from a Group 1 or Group 2 emission point that has been controlled after November 15, 1990 to a level more stringent than what is required by this subpart or any other State or Federal rule or statute. Credits shall be calculated as follows:

(1) The overall equation for calculating source-wide credits is:

$$\text{Credits} = D\sum_{i=1}^{n}\left((0.02)\,EPV1_{ie} - EPV1_{iACTUAL}\right) + D\sum_{i=1}^{m}\left(EPV2_{iBASE} - EPV2_{iACTUAL}\right) + D\sum_{i=1}^{n}$$

$$\left((0.05)\,ES1_{ie} - ES1_{iACTUAL}\right) + D\sum_{i=1}^{m}\left(ES2_{iBASE} - ES2_{iACTUAL}\right) + D\sum_{i=1}^{n}\left((0.02)\,ETR1_{ie} - ETR1_{iACTUAL}\right)$$

$$+ D\sum_{i=1}^{m}\left(ETR2_{iBASE} - ETR2_{iACTUAL}\right) + D\sum_{i=1}^{n}\left(EWW1_{ie} - EWW1_{iACTUAL}\right) + D\sum_{i=1}^{m}\left(EWW2_{iBASE} - EWW2_{iACTUAL}\right)$$

where: Credits and all terms of the equation are in units of megagrams per month, the baseline date is November 15, 1990, and:

D=Discount factor=0.9 for all credit generating emission points except those controlled by a pollution prevention measure, which will not be discounted.

$EPV1_{iACTUAL}$=Emissions for each Group 1 process vent i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(2) of this section.

$(0.02)\,EPV1_{ie}$=Emissions from each Group 1 process vent i if the reference control technology had been applied to the uncontrolled emissions. $EPV1_{ie}$ is calculated according to paragraph (h)(2) of this section.

$EPV2_{iACTUAL}$=Emissions from each Group 2 process vent i that is controlled, calculated according to paragraph (h)(2) of this section.

$EPV2_{iBASE}$=Emissions from each Group 2 process vent i at the baseline date, as calculated in paragraph (h)(2) of this section.

$ES1_{iACTUAL}$=Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(3) of this section.

$(0.05)\,ES1_{ie}$=Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions. $ES1_{ie}$ is calculated according to paragraph (h)(3) of this section.

$ES2_{iACTUAL}$=Emissions from each Group 2 storage vessel i that is controlled, calculated according to paragraph (h)(3) of this section.

$ES2_{iBASE}$=Emissions from each Group 2 storage vessel i at the baseline date, as calculated in paragraph (h)(3) of this section.

$ETR1_{iACTUAL}$=Emissions from each Group 1 transfer rack i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(4) of this section.

$(0.02)\,ETR1_{ie}$=Emissions from each Group 1 transfer rack i if the reference control technology had been applied to the uncontrolled emissions. $ETR1_{ie}$ is calculated according to paragraph (h)(4) of this section.

$ETR2_{iACTUAL}$=Emissions from each Group 2 transfer rack i that are controlled, calculated according to paragraph (h)(4) of this section.

$ETR2_{iBASE}$=Emissions from each Group 2 transfer rack i at the baseline date, as calculated in paragraph (h)(4) of this section.

$EWW1_{iACTUAL}$ = Emissions from each Group 1 wastewater stream i that is controlled to a level more stringent than the reference control technology, calculated according to paragraph (h)(5) of this section.

$EWW1_{ie}$ = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions, calculated according to paragraph (h)(5) of this section.

$EWW2_{iACTUAL}$ = Emissions from each Group 2 wastewater stream i that is controlled, calculated according to paragraph (h)(5) of this section.

$EWW2_{iBASE}$ = Emissions from each Group 2 wastewater stream i at the baseline date, calculated according to paragraph (h)(5) of this section.

n = Number of Group 1 emission points included in the emissions average. The value of n is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

m = Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(i) For an emission point controlled using a reference control technology, the percent reduction for calculating credits shall be no greater than the nominal efficiency associated with the reference control technology, unless a higher nominal efficiency is assigned as specified in paragraph (h)(1)(ii) of this section.

(ii) For an emission point controlled to a level more stringent than the reference control technology, the nominal efficiency for calculating credits shall be assigned as described in paragraph (i) of this section. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedures in paragraph (i) of this section.

(iii) For an emission point controlled using a pollution prevention measure, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section.

(2) Emissions from process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 process vents, $EPV1_{ie}$, shall be calculated according to the procedures

and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 process vents controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction, $EPV1_{iACTUAL}$, shall be calculated according to the following equation:

$$EPV1_{iACTUAL} = EPV1_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 process vents, $EPV2_{iACTUAL}$:

(A) For a Group 2 process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, if the control achieves a percent reduction less than or equal to 98 percent reduction,

$$EPV2_{iACTUAL} = EPV2_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

(*1*) $EPV2_{iu}$ shall be calculated according to the equations and procedures for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section, except as provided in paragraph (h)(2)(iii)(A)(*3*) of this section.

(*2*) The percent reduction shall be calculated according to the procedures in paragraphs (g)(2)(iii)(B)(*1*) through (g)(2)(iii)(B)(*3*) of this section, except as provided in paragraph (h)(2)(iii)(A)(*4*) of this section.

(*3*) If a recovery device was added as part of a pollution prevention project, $EPV2_{iu}$ shall be calculated prior to that recovery device. The equation for EPV_{iu} in paragraph (g)(2)(ii) of this section shall be used to calculate $EPV2_{iu}$; however, the sampling site for measurement of vent stream flow rate and organic HAP concentration shall be at the inlet of the recovery device.

(*4*) If a recovery device was added as part of a pollution prevention project, the percent reduction shall be demonstrated by conducting a performance test at the inlet and outlet of that recovery device.

(B) For a Group 2 process vent controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction,

$$EPV2_{iACTUAL} = EPV2_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iv) Emissions from Group 2 process vents at baseline, $EPV2_{iBASE}$, shall be calculated as follows:

(A) If the process vent was uncontrolled on November 15, 1990, $EPV2_{iBASE}=EPV2_{iu}$ and shall be calculated according to the procedures and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the process vent was controlled on November 15, 1990,

$$EPV2_{iBASE} = EPV2_{iu}\left(1 - \frac{\text{Percent reduction \%}}{100\%}\right)$$

where $EPV2_{iu}$ is calculated according to the procedures and equation for EPV_{iu} in paragraphs (g)(2)(i) and (g)(2)(ii) of this section. The percent reduction shall be calculated according to the procedures specified in paragraphs (g)(2)(iii)(B)(*1*) through (g)(2)(iii)(B)(*3*) of this section.

(C) If a recovery device was added to a process vent as part of a pollution prevention project initiated after November 15, 1990, $EPV2_{iBASE}=EPV2_{iu}$, where $EPV2_{iu}$ is calculated according to paragraph (h)(2)(iii)(A)(*3*) of this section.

(*3*) Emissions from storage vessels shall be determined as follows:

(i) Uncontrolled emissions from Group 1 storage vessels, $ES1_{iu}$, shall be calculated according to the equations and procedures for ES_{iu} in paragraph (g)(3)(i) of this section.

(ii) Actual emissions from Group 1 storage vessels controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent emission reduction, $ES1_{iACTUAL}$, shall be calculated according to the following equation:

$$ES1_{iACTUAL} = ES1_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 storage vessels, $ES2_{iACTUAL}$:

(A) For a Group 2 storage vessel controlled using a control device or a pollution prevention measure (other than an internal or external floating roof) achieving a percent reduction less than or equal to 95-percent reduction,

$$ES2_{iACTUAL} = ES2_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

(*1*) $ES2_{iu}$ is calculated according to the equations and procedures for ES_{iu} in paragraph (g)(3)(i) of this section.

(*2*) The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(*1*) and (g)(3)(ii)(B)(*2*) of this section.

(*3*) If an internal or external floating roof meeting the specifications of § 63.119 (b), (c), or (d) of this subpart is used to control the vessel, the percent reduction shall be 95 percent.

(B) If a Group 2 storage vessel is controlled with an internal or external floating roof not meeting the specifications of § 63.119 (b), (c), or (d) of this subpart, $ES2_{iACTUAL}$ shall be calculated as specified for $ES_{iACTUAL}$ in paragraph (g)(3)(iii) or (g)(3)(iv) of this section.

(C) For a Group 2 storage vessel controlled using a technology with an approved nominal efficiency greater than 95 percent or a pollution prevention measure achieving greater than 95 percent reduction,

$$ES2_{iACTUAL} = ES2_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right)$$

(iv) Emissions from Group 2 storage vessels at baseline, $ES2_{iBASE}$, shall be calculated as follows:

(A) If the fixed-roof vessel was uncontrolled on November 15, 1990, $ES2_{iBASE}=ES2_{iu}$ and shall be calculated according to the procedures and equations for ES_{iu} in paragraph (g)(3)(i) of this section.

(B) If the storage vessel was controlled on November 15, 1990:

(*1*) The equations for $ES_{iACTUAL}$ in paragraph (g)(3)(iii) of this section shall be used to calculate $ES2_{iBASE}$ for vessels controlled with an internal floating roof that does not meet the specifications of § 63.119 (b) or (d) of this subpart.

(*2*) The equations for $ES_{iACTUAL}$ in paragraph (g)(3)(iv) of this section shall be used to calculate $ES2_{iBASE}$ for vessels controlled with an external floating roof that does not meet the specifications of § 63.119(c) of this subpart.

(*3*) The following equations shall be used to calculate $ES2_{iBASE}$ for vessels controlled with a control device,

$$ES2_{iBASE} = ES2_{iu}\left(1 - \frac{\text{Percent reduction \%}}{100\%}\right)$$

where $ES2_{iu}$ shall be calculated according to the equations for ES_{iu} in paragraph (g)(3)(i) of this section. The percent reduction shall be calculated according to the procedures in paragraphs (g)(3)(ii)(B)(*1*) and (g)(3)(ii)(B)(*2*) of this section.

(4) Emissions from transfer racks shall be determined as follows:

(i) Uncontrolled emissions from Group 1 transfer racks, $ETR1_{iu}$, shall be calculated according to the procedures and equations for ETR_{iu} as described in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(ii) Actual emissions from Group 1 transfer racks controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction, $ETR_{iACTUAL}$, shall be calculated according to the following equation:

$$ETR1_{iACTUAL} = ETR1_{iu}\left(1 - \frac{\text{Nominal efficiency}}{100\%}\right)$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 transfer racks, $ETR2_{iACTUAL}$:

(A) For a Group 2 transfer rack controlled by a control device or a pollution prevention measure achieving a percent reduction less than or equal to 98 percent reduction,

$$ETR2_{iACTUAL} = ETR2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

(*1*) $ETR2_{iu}$ shall be calculated according to the equations and procedures for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(*2*) The percent reduction shall be calculated according to the procedures

in paragraph (g)(4)(v)(B)(*1*) and (g)(4)(v)(B)(*2*) of this section.

(B) For a Group 2 transfer rack controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction,

$$ETR2_{iACTUAL} = ETR2_{iu}\left(1 - \frac{\text{Nominal efficiency}}{100\%}\right)$$

(iv) Emissions from Group 2 transfer racks at baseline, $ETR2_{iBASE}$, shall be calculated as follows.

(A) If the transfer rack was uncontrolled on November 15, 1990, $ETR2_{iBASE}=ETR2_{iu}$ and shall be calculated according to the procedures and equations for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section.

(B) If the transfer rack was controlled on November 15, 1990,

$$ETR2_{iBASE} = ETR2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right)$$

where $ETR2_{iu}$ is calculated according to the procedures and equations for ETR_{iu} in paragraphs (g)(4)(i) through (g)(4)(iv) of this section. Percent reduction shall be calculated according to the procedures in paragraphs (g)(4)(v)(B)(*1*) and (g)(4)(v)(B)(*2*) of this section.

(5) Emissions from wastewater shall be determined as follows:

(i) $EWW1_{ic}$ shall be calculated according to the equation for EWW_{ic} in paragraph (g)(5)(i) of this section.

(ii) $EWW2_{iBASE}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(ii) of this section for each Group 2 wastewater stream i, which, on November 15, 1990, was not managed according to the requirements of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable.

(iii) $EWW2_{iBASE}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i, which, on November 15, 1990, was managed according to the requirements of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable, and was uncontrolled or controlled to a level less stringent than the reference control technology.

(iv) For Group 2 wastewater streams that are managed according to the requirements of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable, $EWW2_{iACTUAL}$ shall be calculated as follows:

(A) $EWW2_{iACTUAL}$ shall be calculated according to the equation for $EWW_{iACTUAL}$ in paragraph (g)(5)(iii) of this section for each Group 2 wastewater stream i that is controlled to a level less stringent than, or equivalent to, the reference control technology.

(B) $EWW2_{iACTUAL}$ shall be calculated according to the procedures for calculating $EWW1_{iACTUAL}$ in paragraph (h)(5)(v) of this section for each Group 2 wastewater stream that is controlled to a level more stringent than the reference control technology.

(v) The following equations for $EWW1_{iACTUAL}$ shall be used to calculate emissions from each Group 1 wastewater stream i that is managed according to the requirements of §§ 63.133 through 63.137 or § 63.138(i)(3) of this subpart, as applicable, and is controlled to a level more stringent than the reference control technology.

(A) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the total VOHAP concentration of stream i greater than that of the design steam stripper specified in § 63.138(g) of this subpart, and the control device used to reduce organic HAP emissions from the vapor stream(s) vented from the treatment process(es) achieves a percent reduction equal to 95 percent, the following equation shall be used:

$$EWW1_{iACTUAL} = \left(6.0*10^{-8}\right)Q_iH_i\sum_{m=1}^{s}\left[Fe_mHAP_{im}\left(1-Fr_m\right)\right] + \left(1-\frac{\text{Nominal efficiency \%}}{100}\right)\left(6.0*10^{-8}\right)Q_iH_i\sum_{m=1}^{s}\left[HAP_{im}Fr_m\right]$$

where all terms are as defined and determined in paragraph (g)(5) of this section.

(B) If the Group 1 wastewater stream i is not controlled using a treatment process or series of treatment processes with a nominal reduction efficiency in the total VOHAP concentration greater than that of the design steam stripper specified in § 63.138(g) of this subpart, but the vapor stream(s) vented from the treatment process(es) are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used:

$$EWWI_{i,ACTUAL} = \left(6.0*10^{-8}\right)Q_i H_i \sum_{m=1}^{5}\left[Fe_m HAP_{im}\left(1-Fr_m\right)\right] + \left(1-\frac{\text{Nominal efficiency }\%}{100}\right)\left(6.0*10^{-8}\right)Q_i H_i \sum_{m=1}^{5}\left[HAP_{im} Fr_m\right]$$

where all terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

(C) If the Group 1 wastewater stream i is controlled using a treatment process or series of treatment processes with an approved nominal reduction efficiency in the total VOHAP concentration greater than that of the design steam stripper specified in § 63.138(g) of this subpart, and the vapor stream(s) vented from the treatment process are controlled using a device with an approved nominal efficiency greater than 95 percent, the following equation shall be used.

$$EWWI_{i,ACTUAL} = \left(6.0*10^{-8}\right)Q_i H_i \sum_{m=1}^{5}\left[Fe_m HAP_{im}\left(1-PR_{im}\right)\right] + \left(1-\frac{\text{Nominal efficiency }\%}{100}\right)\left(6.0*10^{-8}\right)Q_i H_i \sum_{m=1}^{5}\left[HAP_{im} PR_{im}\right]$$

where all terms other than nominal efficiency are as defined and determined in paragraph (g)(5) of this section.

(i) The following procedures shall be followed to establish nominal efficiencies. The procedures in paragraphs (i)(1) through (i)(6) of this section shall be followed for control technologies that are different in use or design from the reference control technologies and achieve greater percent reductions than the percent efficiencies assigned to the reference control technologies in § 63.111 of this subpart.

(1) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology, and the different control technology will be used in more than three applications at a single plant site, the owner or operator shall submit the information specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section to the Director of the EPA Office of Air Quality Planning and Standards in writing:

(i) Emission stream characteristics of each emission point to which the control technology is or will be applied including the kind of emission point, flow, organic HAP concentration, and all other stream characteristics necessary to design the control technology or determine its performance.

(ii) Description of the control technology including design specifications.

(iii) Documentation demonstrating to the Administrator's satisfaction the control efficiency of the control technology. This may include performance test data collected using an appropriate EPA method or any other method validated according to Method 301 of appendix A of this part. If it is infeasible to obtain test data, documentation may include a design evaluation and calculations. The engineering basis of the calculation procedures and all inputs and assumptions made in the calculations shall be documented.

(iv) A description of the parameter or parameters to be monitored to ensure that the control technology will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) The Administrator shall determine within 120 calendar days whether an application presents sufficient information to determine nominal efficiency. The Administrator reserves the right to request specific data in addition to the items listed in paragraph (i)(1) of this section.

(3) The Administrator shall determine within 120 calendar days of the submittal of sufficient data whether a control technology shall have a nominal efficiency and the level of that nominal efficiency. If, in the Administrator's judgment, the control technology achieves a level of emission reduction greater than the reference control technology for a particular kind of emission point, the Administrator will publish a **Federal Register** notice establishing a nominal efficiency for the control technology.

(4) The Administrator may condition permission to take emission credits for use of the control technology on requirements that may be necessary to ensure operation and maintenance to achieve the specified nominal efficiency.

(5) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology and the different control technology will be used in no more than three applications at a single plant site, the information listed in paragraphs (i)(1)(i) through (i)(1)(iv) can be submitted to the permitting authority for the source for approval instead of the ~~Administrator~~.

(i) In these instances, use and conditions for use of the control technology can be approved by the permitting authority as part of an operating permit application or modification. The permitting authority shall follow the procedures specified in paragraphs (i)(2) through (i)(4) of this section except that, in these instances, a **Federal Register** notice is not required to establish the nominal efficiency for the different technology.

(ii) If, in reviewing the application, the permitting authority believes the control technology has broad applicability for use by other sources, the permitting authority shall submit the information provided in the application to the Director of the EPA Office of Air Quality Planning and Standards. The ~~Administrator shall~~ review the technology for broad applicability and may publish a Federal Register notice; however, this review shall not affect the permitting authority's approval of the nominal

efficiency of the control technology for the specific application.

(6) If, in reviewing an application for a control technology for an emission point, the Administrator or permitting authority determines the control technology is not different in use or design from the reference control technology, the Administrator or permitting authority shall deny the application.

(j) The following procedures shall be used for calculating the efficiency (percent reduction) of pollution prevention measures:

(1) A pollution prevention measure is any practice which meets the criteria of paragraphs (j)(1)(i) and (j)(1)(ii) of this section.

(i) A pollution prevention measure is any practice that results in a lesser quantity of organic HAP emissions per unit of product released to the atmosphere prior to out-of-process recycling, treatment, or control of emissions, while the same product is produced.

(ii) Pollution prevention measures may include: substitution of feedstocks that reduce HAP emissions; alterations to the production process to reduce the volume of materials released to the environment; equipment modifications; housekeeping measures; and in-process recycling that returns waste materials directly to production as raw materials. Production cutbacks do not qualify as pollution prevention.

(2) The emission reduction efficiency of pollution prevention measures implemented after November 15, 1990, can be used in calculating the actual emissions from an emission point in the debit and credit equations in paragraphs (g) and (h) of this section.

(i) For pollution prevention measures, the percent reduction used in the equations in paragraphs (g)(2) through (g)(5) of this section and paragraphs (h)(2) through (h)(5) of this section is the percent difference between the monthly organic HAP emissions for each emission point after the pollution prevention measure for the most recent month versus monthly emissions from the same emission point before the pollution prevention measure, adjusted by the volume of product produced during the two monthly periods.

(ii) The following equation shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = \frac{E_B - \left(E_{pp} \times \frac{P_B}{P_{pp}}\right)}{E_B} \times 100\%$$

where:

Percent reduction=Efficiency of pollution prevention measure (percent organic HAP reduction).

E_B=Monthly emissions before the pollution prevention measure, megagrams per month, determined as specified in paragraphs (j)(2)(ii)(A), (j)(2)(ii)(B), and (j)(2)(ii)(C) of this section.

E_{pp}=Monthly emissions after the pollution prevention measure, megagrams per month, as determined for the most recent month, determined as specified in paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.

P_B=Monthly production before the pollution prevention measure, megagrams per month, during the same period over which E_B is calculated.

P_{pp}=Monthly production after the pollution prevention measure, megagrams per month, as determined for the most recent month.

(A) The monthly emissions before the pollution prevention measure, E_B, shall be determined in a manner consistent with the equations and procedures in paragraphs (g)(2), (g)(3), and (g)(4) of this section for process vents, storage vessels, and transfer operations.

(B) For wastewater, E_B shall be calculated as follows:

$$E_B = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{Bi}H_{Bi}\sum_{m=1}^{s}Fe_m HAP_{Bim}\right]$$

where:

n=Number of wastewater streams.

Q_{Bi}=Average flow rate for wastewater stream i before the pollution prevention measure, defined and determined according to paragraph (g)(5)(i) of this section, liters per minute, before implementation of the pollution prevention measure.

H_{Bi}=Number of hours per month that wastewater stream i was discharged before the pollution prevention measure, hours per month.

s=Total number of organic HAP's in wastewater stream i.

Fe_m=Fraction emitted of organic HAP m in wastewater from table 9 of this subpart, dimensionless.

HAP_{Bim}=Average concentration of organic HAP m in wastewater stream i, defined and determined according to paragraph (g)(5)(i) of this section, before the pollution prevention measure, parts per million by weight, as measured before the implementation of the pollution measure.

(C) If the pollution prevention measure was implemented prior to April 22, 1994, records may be used to determine E_B.

(D) The monthly emissions after the pollution prevention measure, E_{pp}, may be determined during a performance test or by a design evaluation and documented engineering calculations. Once an emissions-to-production ratio has been established, the ratio can be used to estimate monthly emissions from monthly production records.

(E) For wastewater, E_{pp} shall be calculated using the following equation:

$$E_{pp} = \sum_{i=1}^{n}\left[(6.0*10^{-6})Q_{ppi}H_{ppi}\sum_{m=1}^{s}Fe_{m}HAP_{ppim}\right]$$

where n, Q_{ppi}, H_{ppi}, s, Fe_m, and HAP_{ppim} are defined and determined as described in paragraph (j)(2)(ii)(B) of this section except that Q_{ppi}, H_{ppi}, and HAP_{ppim} shall be determined after the pollution prevention measure has been implemented.

(iii) All equations, calculations, test procedures, test results, and other information used to determine the percent reduction achieved by a pollution prevention measure for each emission point shall be fully documented.

(iv) The same pollution prevention measure may reduce emissions from multiple emission points. In such cases, the percent reduction in emissions for each emission point must be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(5) of this section, used to calculate credits for emission points controlled more stringently than the reference control technology, the nominal efficiency of a pollution prevention measure is equivalent to the percent reduction of the pollution prevention measure. When a pollution prevention measure is used, the owner or operator of a source is not required to apply to the Administrator for a nominal efficiency and is not subject to paragraph (i) of this section.

(k) The owner or operator must demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard, or at the option of the Administrator, greater risk to human health or the environment than if the emission points were controlled according to the provisions in §§ 63.113 through 63.148 of this subpart.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the Administrator.

(i) The Administrator may require owners and operators to use specific methodologies and procedures for making a hazard or risk determination.

(ii) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Administrator makes available for use.

(2) Owners and operators shall provide documentation demonstrating the hazard or risk equivalency of their proposed emissions average in their operating permit application or in their Implementation Plan if an operating permit application has not yet been submitted.

(3) An emissions averaging plan that does not demonstrate hazard or risk equivalency to the satisfaction of the Administrator shall not be approved. The Administrator may require such adjustments to the emissions averaging plan as are necessary in order to ensure that the average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to §§ 63.113 through 63.148 of this subpart.

(4) A hazard or risk equivalency demonstration must:

(i) be a quantitative, bona fide chemical hazard or risk assessment;

(ii) account for differences in chemical hazard or risk to human health or the environment; and

(iii) meet any requirements set by the Administrator for such demonstrations.

(l) For periods of excursions, an owner or operator may request that the provisions of paragraphs (l)(1) through (l)(4) of this section be followed instead of the procedures in paragraphs (f)(3)(i) and (f)(3)(ii) of this section.

(1) The owner or operator shall notify the Administrator of excursions in the Periodic Reports as required in § 63.152 of this subpart.

(2) The owner or operator shall demonstrate that other types of monitoring data or engineering calculations are appropriate to establish that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits. This demonstration shall be made to the Administrator's satisfaction, and the Administrator may establish procedures of demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other type of monitoring data or engineering calculations to be used to demonstrate that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits.

(4) The Administrator may assign full or partial credit and debits upon review of the information provided.

(m) For each Group 1 or Group 2 emission point included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for Group 1 emission points complying with §§ 63.113 through 63.148 of this subpart. The specific requirements for process vents, storage vessels, transfer racks, and wastewater are identified in paragraphs (m)(1) through (m)(6) of this section.

(1) The source shall implement the following testing, monitoring, recordkeeping, and reporting procedures for each process vent equipped with a flare, incinerator, boiler, or process heater:

(i) Determine whether the process vent is Group 1 or Group 2 according to the procedures in § 63.115 of this subpart.

(ii) Conduct initial performance tests to determine percent reduction as specified in § 63.116 of this subpart.

(iii) Monitor the operating parameters, keep records, and submit reports specified in § 63.114, § 63.117(a), and § 63.118 (a), (f), and (g) of this subpart, as appropriate for the specific control device.

(2) The source shall implement the following procedures for each process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device:

(i) Determine the flow rate, organic HAP concentration, and TRE index value using the methods specified in § 63.115 of this subpart;

(ii) Monitor the operating parameters, keep records, and submit reports specified in § 63.114, § 63.117(a), and § 63.118(b), (f), and (g) of this subpart, as appropriate for the specific recovery device.

(3) The source shall implement the following procedures for each storage vessel controlled with an internal floating roof, external roof, or a closed vent system with a control device, as appropriate to the control technique:

(i) Perform the monitoring or inspection procedures in § 63.120 of this subpart,

(ii) Perform the reporting and recordkeeping procedures in §§ 63.122 and 63.123 of this subpart, and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan as specified in § 63.120(d) and § 63.122(a)(2) and (b) of this subpart.

(4) The source shall implement the following procedures for each transfer rack controlled with a vapor balancing system, or a vapor collection system and an incinerator, flare, boiler, process heater, adsorber, condenser, or absorber, as appropriate to the control technique:

(i) The monitoring and inspection procedures in § 63.127 of this subpart.

(ii) The testing and compliance procedures in § 63.128 of this subpart, and

(iii) The reporting and recordkeeping procedures in § 63.129 and § 63.130 of this subpart.

(5) The source shall implement the following procedures for wastewater emission points, as appropriate to the control techniques:

(i) For wastewater treatment processes, conduct tests as specified in § 63.138(i) and (j) of this subpart.

(ii) Conduct inspections and monitoring as specified in § 63.143 of this subpart.

(iii) A recordkeeping program as specified in § 63.147 of this subpart.

(iv) A reporting program as specified in § 63.146 of this subpart.

(6) If an emission point in an emissions average is controlled using a pollution prevention measure or a device or technique for which no monitoring parameters or inspection procedures are specified in § 63.114, § 63.120, § 63.127, or § 63.143 of this subpart, the owner or operator shall submit the information specified in § 63.151(f) of this subpart in the Implementation Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for five years.

(o) Initial Notifications, Implementation Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.151 and § 63.152 of this subpart.

§ 63.151 Initial notification and implementation plan.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) An Implementation Plan, unless an operating permit application has been submitted prior to the date the Implementation Plan is due.

(i) The submittal date and contents of the Implementation Plan for emission points to be included in an emissions average are specified in paragraphs (c) and (d) of this section.

(ii) The submittal date and contents of the Implementation Plan for emission points that will not be included in an emissions average are specified in paragraph (c) and (e) of this section,

(3) A Notification of Compliance Status described in § 63.152 of this subpart,

(4) Periodic Reports described in § 63.152 of this subpart, and

(5) Other reports described in § 63.152 of this subpart.

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing source up to 1 additional year to comply with section 112(d) standards.

(i) For purposes of this subpart, a request for an extension shall be submitted to the operating permit authority as part of the operating permit application. If the State in which the source is located does not have an approved operating permit program, a request for an extension shall be submitted to the Administrator as part of the Initial Notification or as a separate submittal. Requests for extensions shall be submitted no later than the date the Implementation Plan is required to be submitted. The dates specified in § 63.6(i) of subpart A for submittal of requests for extensions shall not apply to sources subject to subpart G.

(ii) A request for an extension of compliance must include the data described in § 63.6(i)(6)(i) of subpart A.

(iii) The requirements in § 63.6(i)(8) through (i)(14) of subpart A will govern the review and approval of requests for extensions of compliance with this subpart.

(b) Each owner or operator of an existing or new source subject to subpart G shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1) of this section, according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in § 63.9(b)(2), (b)(3), and (b)(6) of subpart A shall not apply to owners or operators of sources subject to subpart G.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the kinds of emission points within the chemical manufacturing process units that are subject to subpart G;

(iv) An identification of the chemical manufacturing processes subject to subpart G; and

(v) A statement of whether the source can achieve compliance by the relevant compliance date specified in § 63.100 of subpart F.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

(i) For an existing source, the Initial Notification shall be submitted within 120 calendar days after the date of promulgation.

(ii) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by § 63.5(d) of subpart A shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before construction or reconstruction is planned to commence (but it need not be sooner than 90 calendar days after the date of promulgation of this subpart).

(iii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Initial Notification shall be submitted within 90 calendar days after the date of promulgation of this subpart. The application for approval of construction or reconstruction described in § 63.5(d) of subpart A is not required for these sources.

(c) Each owner or operator of an existing or new source subject to this subpart who has not submitted an operating permit application must submit an Implementation Plan to the Administrator by the dates specified in paragraphs (c)(1) and (c)(2) of this section. The Implementation Plan for emissions averaging is subject to Administrator approval.

(1) For existing sources, an Implementation Plan shall be submitted as specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) Each owner or operator of an existing source subject to this subpart who elects to comply with § 63.112 by using emissions averaging for any emission points, and who has not submitted an operating permit application at least 18 months prior to the compliance dates specified in § 63.100 of subpart F, shall develop an Implementation Plan for emissions averaging. For existing sources, the Implementation Plan for those emission points to be included in an emissions average shall be submitted no later than 18 months prior to the compliance dates in § 63.100 of subpart F.

(ii) Each owner or operator of an existing source subject to this subpart who elects to comply with § 63.112 of this subpart by complying with the provisions of §§ 63.113 to 63.148 of this subpart, rather than emissions averaging, for any emission points, and

who has not submitted an operating permit application at least 12 months prior to the compliance dates specified in § 63.100 of subpart F, shall develop an Implementation Plan. For an existing source, the Implementation Plan for those emission points that are not to be included in an emissions average shall be submitted to the Administrator no later than 12 months prior to the compliance dates in § 63.100 of subpart F.

(2) Each owner or operator of a new source shall submit an Implementation Plan by the date specified in paragraphs (c)(2)(i) or (c)(2)(ii) of this section, as applicable, unless an operating permit application containing the information in paragraph (e) of this section has been submitted by that date.

(i) For a new source that has an initial start-up 90 calendar days after the date of promulgation of this subpart or later, the Implementation Plan shall be submitted with the application for approval of construction or reconstruction by the date specified in paragraph (b)(2)(ii) of this section.

(ii) For a new source that has an initial start-up prior to 90 calendar days after the date of promulgation, the Implementation Plan shall be submitted within 90 calendar days after the date of promulgation of this subpart.

(3) The Administrator shall determine within 120 calendar days whether the Implementation Plan submitted by sources using emissions averaging presents sufficient information. The Administrator shall either approve the implementation Plan, request changes, or request that the owner or operator submit additional information. Once the Administrator receives sufficient information, the Administrator shall approve, disapprove, or request changes to the plan within 120 calendar days.

(d) Each owner or operator required to submit an Implementation Plan for emissions averaging shall include in the plan, for all emission points included in the emissions average, the information listed in paragraphs (d)(1) through (d)(8) of this section.

(1) The identification of all emission points in the planned emissions average and notation of whether each point is a Group 1 or Group 2 emission point as defined in § 63.111 of this subpart.

(2) The projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.150 of this subpart. The projected credits must be greater than the projected debits, as required under § 63.150(e)(3) of this subpart.

(3) The specific control technology or pollution prevention measure that will be used for each emission point included in the average and date of application or expected date of application.

(4) The specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.150(j)(1) of this subpart must be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator must identify each of these emission points.

(5) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.150(m), (n), and (o) of this subpart that are applicable to each emission point in the emissions average will be implemented beginning on the date of compliance.

(6) Documentation of the information listed in paragraph (d)(6)(i) through (d)(6)(v) of this section for each process vent, storage vessel, or transfer rack included in the average.

(i) The values of the parameters used to determine whether the emission point is Group 1 or Group 2. Where TRE index value is used for process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) of this subpart (flow rate, organic HAP emission rate, TOC emission rate, and net heating value) and the resulting TRE index value shall be submitted.

(ii) The estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.150 (g) and (h) of this subpart. These parameter values, or as appropriate, limited ranges for the parameter values, shall be specified in the source's Implementation Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (i)(2)(ii) of this section.

(iii) The estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the reference control technology, as defined in § 63.111 of this subpart, is or will be applied to the emission point.

(iv) The anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.150(i) of this subpart shall be followed to apply for a nominal efficiency.

(v) The operating plan required in § 63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a closed-vent system with a control device other than a flare.

(7) The information specified in § 63.151(f) of this subpart shall be included in the Implementation Plan for:

(i) Each process vent or transfer rack controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114, § 63.126(b)(3), or § 63.127 of this subpart, and

(ii) each storage vessel controlled by pollution prevention or a control technique other than an internal or external floating roof or a closed vent system with a control device.

(8) Documentation of the information listed in paragraph (d)(8)(i) through (d)(8)(iv) for each process wastewater stream included in the average.

(i) The information used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream. This shall include the information specified in table 14a for wastewater streams at new sources and in table 14b for wastewater streams at new and existing sources.

(ii) The estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.150 (g)(5) and (h)(5) of this subpart.

(iii) The estimated percent reduction if:

(A) A control technology that achieves an emission reduction less than or equal to the emission reduction achieved by the design steam stripper, as specified in § 63.138(g) of this subpart, is or will be applied to the wastewater stream, or

(B) A control technology achieving less than or equal to 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes, or

(C) A pollution prevention measure is or will be applied.

(iv) The anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.150(i) of this subpart. A nominal efficiency shall be applied for if:

(A) A control technology is or will be applied to the wastewater stream and achieves an emission reduction greater than the emission reduction achieved by the design steam stripper as specified in § 63.138(g) of this subpart, or

(B) A control technology achieving greater than 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes.

(v) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP's from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143 of this subpart, the information specified in § 63.151(f) of this subpart shall be included in the Implementation Plan.

(e) An owner or operator required to submit an Implementation Plan shall include in the Implementation Plan the information listed in paragraphs (e)(1) through (e)(5) of this section for emission points that are not included in an emissions average.

(1) A list designating each emission point complying with §§ 63.113 through 63.148 of this subpart.

(i) Whether each emission point is Group 1 or Group 2, as defined in § 63.111 of this subpart.

(ii) For process wastewater, the information specified in table 14a for wastewater streams at new sources and in table 14b for wastewater streams at new and existing sources.

(2) The control technology or method of compliance that will be applied to each Group 1 emission point.

(3) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in §§ 63.113 through 63.148 of this subpart that are applicable to each emission point will be implemented beginning on the date of compliance.

(4) The operating plan required in § 63.122(a)(2) and (b) of this subpart for each storage vessel controlled with a closed vent system with a control device other than a flare.

(5) The monitoring information in § 63.151(f) of this subpart if, for any emission point, the owner or operator of a source seeks to comply through use of a control technique other than those for which monitoring parameters are specified in § 63.114 for process vents, § 63.127 for transfer, and § 63.143 for process wastewater.

(f) The owner or operator who has been directed by any section of this subpart to set unique monitoring parameters or who requests approval to monitor a different parameter than those listed in § 63.114 for process vents, § 63.127 for transfer, or § 63.143 for process wastewater shall submit the information specified in paragraphs (f)(1), (f)(2), and (f)(3) of this section with the Implementation Plan required in paragraphs (c), (d), and (e) of this section. An owner or operator who submits an operating permit application instead of an Implementation Plan shall submit the information specified in § 63.152(e) with the operating permit application.

(1) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(2) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in § 63.152(b) of this subpart, unless this information has already been included in the operating permit application.

(3) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the range established in the operating permit or Notification of Compliance Status will not be included in Periodic Reports required under § 63.152(c) of this subpart. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(g) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in §§ 63.114, 63.117, and 63.118 for process vents, §§ 63.127, 63.129, and 63.130 for transfer operations, and §§ 63.143, 63.146, and 63.147 for wastewater.

(1) Requests shall be submitted in the Implementation Plan, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(3) through (g)(5) of this section, as applicable.

(2) The provisions in § 63.8(f)(5)(i) of subpart A shall govern the review and approval of requests.

(3) An owner or operator of a source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and generating continuous records may request approval to use a non-automated system with less frequent monitoring.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily average values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent control device operating conditions considering typical variability of the specific process and control device operating parameter being monitored.

(4) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes.

(B) Record at least four values each hour during periods of operation.

(C) Record the date and time when monitors are turned off or on.

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(E) Compute daily average values of the monitored operating parameter based on recorded data.

(F) If the daily average is not an excursion, as defined in § 63.152(c)(2)(ii), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain a description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria in paragraph (g)(4)(i) of this section.

(5) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f) of subpart A of this part.

(h) The owner or operator required to prepare an Implementation Plan under paragraph (c), (d), or (e) of this section shall also prepare a supplement to the Implementation Plan for any alternative

controls or operating scenarios that may be used to achieve compliance.

(i) The owner or operator of a source required to submit an Implementation Plan for emissions averaging under paragraphs (c) and (d) of this section shall also submit written updates of the Implementation Plan to the Administrator for approval under the circumstances described in paragraphs (i)(1) and (i)(2) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(1) The owner or operator who plans to make a change listed in paragraph (i)(1)(i) or (i)(1)(ii) of this section shall submit an Implementation Plan update at least 120 calendar days prior to making the change.

(i) Whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.150 of this subpart by using a control technique other than that specified in the Implementation Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Implementation Plan.

(ii) Whenever an emission point or a chemical manufacturing process unit is added to an existing source and is planned to be included in an emissions average, or whenever an emission point not included in the emissions average described in the Implementation Plan is to be added to an emissions average. The information in paragraph (d) of this section shall be updated to include the additional emission point.

(2) The owner or operator who has made a change listed in paragraph (i)(2)(i) or (i)(2)(ii) of this section shall submit an Implementation Plan update within 90 calendar days after the information regarding the change is known to the source. The update may be submitted in the next quarterly Periodic Report if the change is made after the date the Notification of Compliance status is due.

(i) Whenever a process change is made such that the group status of any emission point in an emissions average changes.

(ii) Whenever a value of a parameter in the emission credit or debit equations in § 63.150(g) or (h) changes such that it is outside the range specified in the Implementation Plan and causes a decrease in the projected credits or an increase in the projected debits.

(3) The Administrator shall approve or request changes to the Implementation Plan update within 120 calendar days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(j) The owner or operator of a source required to submit an Implementation Plan under paragraphs (c) and (e) of this section, for emission points that are not included in an emissions average, shall also submit written updates of the Implementation Plan to the Administrator under the circumstances described in paragraphs (j)(1), (j)(2), and (j)(3) of this section unless the relevant information has been included and submitted in an operating permit application or amendment. The information shall be submitted within 180 calendar days after the change is made or the information regarding the change is known to the source. The update may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance status is due.

(1) Whenever a process change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule as specified in § 63.100 of subpart F if the emission point becomes Group 1.

(2) Whenever an owner or operator elects to achieve compliance with this subpart by using a control technique other than that specified in the Implementation Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Implementation Plan.

(3) Whenever an emission point or a chemical manufacturing process unit is added to a source, a written addendum to the Implementation Plan containing information in paragraph (e) of this section on the new emission point shall be submitted.

§ 63.152 General reporting and continuous records.

(a) The owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section and keep continuous records of monitored parameters as specified in paragraph (f) of this section. Owners or operators requesting an extension of compliance shall also submit the report described in § 63.151(a)(6) of this subpart.

(1) An Initial Notification described in § 63.151(b) of this subpart.

(2) An Implementation Plan described in § 63.151 (c), (d), and (e) of this subpart, unless an operating permit application has been submitted prior to the date the Implementation Plan is due.

(3) A Notification of Compliance Status described in paragraph (b) of this section.

(4) Periodic Reports described in paragraph (c) of this section.

(5) Other reports described in paragraphs (d) and (e) of this section.

(b) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 150 calendar days after the compliance dates specified in § 63.100 of subpart F of this part.

(1) The notification shall include the results of any emission point group determinations, performance tests, inspections, continuous monitoring system performance evaluations, values of monitored parameters established during performance tests, and any other information used to demonstrate compliance or required to be included in the Notification of Compliance Status under § 63.117 for process vents, § 63.122 for storage vessels, § 63.129 for transfer operations, § 63.146 for process wastewater, and § 63.150 for emission points included in an emissions average.

(i) For performance tests and group determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in § 63.117 for process vents, § 63.129 for transfer, and § 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(2) For each monitored parameter for which a range is required to be established under § 63.114 for process vents, § 63.120(d) for storage, § 63.127 for transfer, § 63.143 for process wastewater, § 63.150(m) for emission points in emissions averages; or § 63.151(f), or § 63.152(e) of this subpart, the Notification of Compliance Status shall include the information in paragraphs (b)(2)(i), (b)(2)(ii), and (b)(2)(iii) of this section, unless the range and the operating day definition have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control device.

(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values measured during the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by this subpart for a control device, the range may be based solely on engineering assessments and manufacturer's recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(3) For emission points included in an emissions average, the Notification of Compliance Status shall include the values of all parameters needed for input to the emission credit and debit equations in § 63.150 (g) and (h), calculated or measured according to the procedures in § 63.150 (g) and (h) of this subpart, and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in § 63.100 of subpart F.

(4) If any emission point is subject to this subpart and to other standards as specified in § 63.110 of this subpart and if the provisions of § 63.110 of this subpart allow the owner or operator to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(c) The owner or operator of a source subject to this subpart shall submit Periodic Reports.

(1) Except as specified under paragraphs (c)(5) and (c)(6) of this section, a report containing the information in paragraphs (c)(2), (c)(3), and (c)(4) of this section shall be submitted semiannually no later than 60 calendar days after the end of each 6-month period. The first report shall be submitted no later than 8 months after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due.

(2) For an owner or operator of a source complying with the provisions of §§ 63.113 through 63.147 of this subpart for any emission points, Periodic Reports shall include all information specified in §§ 63.117 and 63.118 for process vents, § 63.122 for storage vessels, §§ 63.129 and 63.130 for transfer operations, and § 63.146 for process wastewater, including reports of periods when monitored parameters are outside their established ranges.

(i) For each parameter or parameters required to be monitored for a control device, the owner or operator shall establish a range of parameter values to ensure that the device is being applied, operated and maintained properly. As specified in paragraph (b)(2) of this section, these parameter values and the definition of an operating day shall be approved as part of and incorporated into the source's Notification of Compliance Status or operating permit, as appropriate.

(ii) The parameter monitoring data for Group 1 emission points and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance with the required operating conditions for the monitored control devices. For each excursion, except for excused excursions, the owner or operator shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions.

(A) An excursion means any of the three cases listed in paragraphs (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*), this is considered a single excursion for the control device.

(*1*) When the daily average value of one or more monitored parameters is outside the permitted range.

(*2*) When the period of control device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(*3*) When the period of control device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(*4*) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (c)(2)(ii)(A)(*2*) and (c)(2)(ii)(A)(*3*) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.151(g)(4), monitoring data are insufficient to calculate a valid hour of data if there are less than 4 data values recorded during the hour.

(B) The number of excused excursions for each control device for each semiannual period is specified in paragraphs (c)(2)(ii)(B)(*1*) through (c)(2)(ii)(B)(*6*) of this section. This paragraph applies to sources required to submit Periodic Reports semiannually or quarterly. The first semiannual period is the 6-month period starting the date the Notification of Compliance Status is due.

(*1*) For the first semiannual period—six excused excursions.

(*2*) For the second semiannual period—five excused excursions.

(*3*) For the third semiannual period—four excused excursions.

(*4*) For the fourth semiannual period—three excused excursions.

(*5*) For the fifth semiannual period—two excused excursions.

(*6*) For the sixth and all subsequent semiannual periods—one excused excursion.

(C) If a monitored parameter is outside its established range or monitoring data are not collected during start-up, shutdown, or malfunction, and the source is operated during such periods in accordance with the source's start-up, shutdown, and malfunction plan as required by § 63.6(e)(3) of subpart A, then the monitoring parameter excursion does not count toward the number of excused excursions for determining compliance and is not a violation.

(D) Nothing in paragraph (c)(2)(ii) of this section shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of subparts A, F, or G of this part.

(E) Paragraph (c)(2)(ii) of this section shall apply only to emission points and control devices for which continuous monitoring is required by §§ 63.113 through 63.150 of this subpart.

(iii) Periodic Reports shall include the daily average values of monitored parameters for both excused and unexcused excursions, as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(3) If any performance tests are reported in a Periodic Report, the following information shall be included:

(i) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (b)(1)(ii) of this section.

(ii) For additional tests performed for the same kind of emission point using the same method, results and any other information required in § 63.117 for process vents, § 63.129 for transfer, and § 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(4) Periodic Reports shall include the information in paragraphs (c)(4)(i) through (c)(4)(iv) of this section, as applicable:

(i) For process vents, reports of process changes as required under § 63.118 (g), (h), (i), and (j) of this subpart.

(ii) Any supplements to the Implementation Plan required under § 63.151 (i) and (j) of this subpart.

(iii) Notification if any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in § 63.100 of subpart F.

(5) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 5 months after the compliance date specified in § 63.100 of subpart F.

(ii) The quarterly reports shall include the information specified in this paragraph for all emission points included in an emissions average.

(A) The credits and debits calculated each month during the quarter;

(B) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.150(e)(4) of this subpart.

(C) The values of any inputs to the credit and debit equations in § 63.150 (g) and (h) of this subpart that change from month to month during the quarter or that have changed since the previous quarter;

(D) Results of any performance tests conducted during the reporting period including one complete report for each test method used for a particular kind of emission point as described in paragraph (c)(3) of this section;

(E) Reports of daily average values of monitored parameters for both excused and unexcused excursions as defined in paragraph (c)(2)(ii)(A) of this section. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(F) Any other information the source is required to report under the operating permit or Implementation Plan for the source.

(iii) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 points included in emissions averages.

(iv) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.150(e)(3) of this subpart; and

(B) A certification of compliance with all the emissions averaging provisions in § 63.150 of this subpart.

(6) The owner or operator of a source shall submit reports quarterly for particular emission points not included in an emissions average under the circumstances described in paragraphs (c)(6)(i) through (c)(6)(iv) of this section.

(i) The owner or operator of a source subject to this subpart shall submit quarterly reports for a period of one year for an emission point that is not included in an emissions average if:

(A) The emission point has more excursions, as defined in paragraph (c)(2)(ii) of this section, than the number of excused excursions allowed under paragraph (c)(2)(ii)(B) of this section for a semiannual reporting period; and

(B) The Administrator requests the owner or operator to submit quarterly reports for the emission point.

(ii) The quarterly reports shall include all information in paragraphs (c)(2), (c)(3), and (c)(4) of this section applicable to the emission point(s) for which quarterly reporting is required under paragraph (c)(6)(i) of this section. Information applicable to other emission points within the source shall be submitted in the semiannual reports required under paragraph (c)(1) of this section.

(iii) Quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter.

(iv) After quarterly reports have been submitted for an emission point for one year, the owner or operator may return to semiannual reporting for the emission point unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(v) Paragraphs (c)(2)(i) through (c)(2)(iii) of this section shall govern the use of monitoring data to determine compliance for Group 1 emission points.

(d) Other reports shall be submitted as specified in subpart A of this part or in §§ 63.113 through 63.151 of this subpart. These reports are:

(1) Reports of start-up, shutdown, and malfunction required by § 63.10(d)(5) of subpart A. The semi-annual start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under paragraph (c) of this section instead of the schedule specified in § 63.10(d)(5)(i) of subpart A.

(2) For storage vessels, the notifications of inspections required by § 63.122 (h)(1) and (h)(2) of this subpart.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.150(i) of this subpart.

(e) An owner or operator who submits an operating permit application instead of an Implementation Plan shall submit the following information with the operating permit application:

(1) The information specified in § 63.151 (f) or (g) of this subpart for any emission points for which the owner or operator requests approval to monitor a unique parameter or use an alternative monitoring and recording system, and

(2) The information specified in § 63.151(d) of this subpart for points included in an emissions average.

(3) The information specified in § 63.151(e) of this subpart for points not included in an emissions average.

(4) The information specified in § 63.151(h) as applicable.

(f) Owners or operators required to keep continuous records by §§ 63.118, 63.130, 63.147, 63.150, or other sections of this subpart shall keep records as specified in paragraphs (f)(1) through (f)(7) of this section, unless an alternative recordkeeping system has been requested and approved under § 63.151 (f) or (g) or § 63.152(e) of this subpart or under § 63.8(f) of subpart A of this part.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either:

(i) Each measured data value; or

(ii) Block average values for 15-minute or shorter periods calculated from all measured data values during each period.

(3) If the daily average value of a monitored parameter for a given operating day is within the range established in the Notification of

Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block hourly average values for that operating day for 5 years and discard, at or after the end of that operating day, the 15-minute or more frequent average values and readings recorded under paragraph (f)(2) of this section; or

(ii) Retain the data recorded in paragraph (f)(2) of this section for 5 years.

(4) If the daily average value of a monitored parameter for a given operating day is outside the range established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (f)(2) of this section for 5 years.

(5) Daily average values of each continuously monitored parameter shall be calculated for each operating day, and retained for 5 years, except as specified in paragraph (f)(6) of this section.

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(6) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. For these operating days, the records required in paragraph (f)(3) of this section shall also be retained for 5 years.

(7) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

Appendix to Subpart G—Tables and Figures

TABLE 1.—PROCESS VENTS—COEFFICIENTS FOR TOTAL RESOURCE EFFECTIVENESS FOR EXISTING SOURCE NONHALOGENATED AND HALOGENATED VENT STREAMS

Type of Stream	Control Device Basis	Values of Coefficients			
		a	b	c	d
Nonhalogenated ..	Flare	1.935	3.660×10^{-1}	-7.687×10^{-3}	-7.333×10^{-4}
	Thermal Incinerator 0 Percent Heat Recovery	1.492	6.267×10^{-2}	3.177×10^{-3}	-1.159×10^{-1}
	Thermal Incinerator 70 Percent Heat Recovery	2.519	1.183×10^{-2}	1.300×10^{-2}	4.790×10^{-2}
Halogenated	Thermal Incinerator and Scrubber	3.995	5.200×10^{-2}	-1.769×10^{-3}	9.700×10^{-4}

TABLE 2.—PROCESS VENTS—COEFFICIENTS FOR TOTAL RESOURCE EFFECTIVENESS FOR NEW SOURCE NONHALOGENATED AND HALOGENATED VENT STREAMS

Type of stream	Control device basis	Values of Coefficients			
		a	b	c	d
Nonhalogenated ..	Flare	0.5276	0.0998	-2.096×10^{-3}	-2.000×10^{-4}
	Thermal Incinerator 0 Percent Heat Recovery	0.4068	0.0171	8.664×10^{-5}	-3.162×10^{-4}
	Thermal Incinerator 70 Percent Heat Recovery	0.6868	3.209×10^{-3}	3.546×10^{-3}	1.306×10^{-2}
Halogenated	Thermal Incinerator and Scrubber	1.0895	1.417×10^{-2}	-4.822×10^{-4}	2.645×10^{-4}

TABLE 3.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAP EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME

Control device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature[b] [63.114(a)(1)(i)].	1. Continuous records[c]. 2. Record and report the firebox temperature averaged over the full period of the performance test NCS[d]. 3. Record the daily average firebox temperature for each operating day[e]. 4. Report all daily average temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR[g].
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed [63.114(a)(1)(ii)]	1. Continuous records 2. Record and report the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test—NCS. 3. Record the daily average upstream temperature and temperature difference across catalyst bed for each operating day[e]. 4. Report all daily average upstream temperatures that are outside the range established in the NCS or operating permit—PR.

TABLE 3.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAP EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME—Continued

Control device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
		5. Report all daily average temperature differences across the catalyst bed that are outside the range established in the NCS or operating permit—PR. 6. Report all operating days when insufficient monitoring data are collected[f].
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and Vent Stream is *not* introduced with or as the primary fuel.	Firebox temperature[b], [63.114(a)(3)].	1. Continuous records. 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS 3. Record the daily average firebox temperature for each operating day[c]. 4. Report all daily average firebox temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
Flare	Presence of a flame at the pilot light [63.114(a)(2)].	1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS. 3. Record the times and durations of all periods when a pilot flame is absent or the monitor is not operating. 4. Report the times and durations of all periods when all pilot flames of a flare are absent—PR
Scrubber for Halogenated Vent Streams (Note: Controlled by a combustion device other than a flare).	pH of scrubber effluent [63.114(a)(4)(i)], and.	1. Continuous records. 2. Record and report the pH of the scrubber effluent averaged over the full period of the performance test—NCS. 3. Record the daily average pH of the scrubber effluent for each operating day[c]. 4. Report all daily average pH values of the scrubber effluent that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
Scrubber for Halogenated Vent Streams (Note: Controlled by a combustion device other than a flare) (Continued).	Scrubber liquid and gas flow rates [63.114(a)(4)(ii)].	1. Continuous records. 2. Record and report the scrubber liquid/gas ratio averaged over the full period of the performance test—NCS. 3. Record the daily average scrubber liquid/gas ratio for each operating day[c]. 4. Report all daily average scrubber liquid/gas ratios that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.
All Control Devices	Presence of flow diverted to the atmosphere from the control device [63.114(d)(1)] *or*.	1. Hourly records of whether the flow indicator was operating and whether flow was detected at any time during each hour. 2. Record and report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating—PR.
	Monthly inspections of sealed valves [63.114(d)(2)].	1. Records that monthly inspections were performed. 2. Record and report all monthly inspections that show the valves are not closed or the seal has been changed—PR.

[a] Regulatory citations are listed in brackets.
[b] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.
[c] "Continuous records" is defined in § 63.111 of this subpart.
[d] NCS=Notification of Compliance Status described in § 63.152 of this subpart.
[e] The daily average is the average of all recorded parameter values for the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.
[f] The periodic reports shall include the duration of periods when monitoring data is not collected for each excursion as defined in § 63.152(c)(2)(ii)(A) of this subpart.
[g] PR=Periodic Reports described in § 63.152 of this subpart.

TABLE 4.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR MAINTAINING A TRE INDEX VALUE >1.0 AND ≤4.0

Final recovery device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Absorber[b]	Exit temperature of the absorbing liquid [63.114(b)(1)], and	1. Continuous records.[c] 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the TRE determination—NCS.[d] 3. Record the daily average exit temperature of the absorbing liquid for each operating day.[e] 4. Report all the daily average exit temperatures of the absorbing liquid that are outside the range established in the NCS or operating permit—PR.[f]
	Exit specific gravity [63.114(b)(1)]	1. Continuous records. 2. Record and report the exit specific gravity averaged over the full period of the TRE determination—NCS. 3. Record the daily average exit specific gravity for each operating day.[e] 4. Report all daily average exit specific gravity values that are outside the range established in the NCS or operating permit—PR.
Condenser[b]	Exit (product side) temperature [63.114(b)(2)]	1. Continuous records. 2. Record and report the exit temperature averaged over the full period of the TRE determination—NCS. 3. Record the daily average exit temperature for each operating day.[e] 4. Report all daily average exit temperatures that are outside the range established in the NCS or operating permit—PR.
Carbon Adsorber[b]	Total regeneration stream mass flow during carbon bed regeneration cycle(s) [63.114(b)(3)], and	1. Record of total regeneration stream mass flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass flow during each carbon bed regeneration cycle during the period of the TRE determination—NCS. 3. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is outside the range established in the NCS or operating permit—PR.
	Temperature of the carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)] [63.114(b)(3)].	1. Records of the temperature of the carbon bed after each regeneration. 2. Record and report the temperature of the carbon bed after each regeneration during the period of the TRE determination—NCS. 3. Report all carbon bed regeneration cycles during which temperature of the carbon bed after regeneration is outside the range established in the NCS or operating permit—PR.
All Recovery Devices (as an alternative to the above)..	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	1. Continuous records. 2. Record and report the concentration level or reading averaged over the full period of the TRE determination—NCS. 3. Record the daily average concentration level or reading for each operating day.[e] 4. Report all daily average concentration levels or readings that are outside the range established in the NCS or operating permit—PR.

[a] Regulatory citations are listed in brackets.
[b] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table under "All Recovery Devices."
[c] "Continuous records" is defined in § 63.111 of this subpart.
[d] NCS=Notification of Compliance Status described in § 63.152 of this subpart.
[e] The daily average is the average of all values recorded during the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.
[f] PR=Periodic Reports described in § 63.152 of this subpart.

TABLE 5.—GROUP 1 STORAGE VESSELS AT EXISTING SOURCES

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
75≤capacity<151	Reserved.

TABLE 5.—Group 1 STORAGE VESSELS AT EXISTING SOURCES—Continued

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
151≤capacity	≥5.2

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 6.—GROUP 1 STORAGE VESSELS AT NEW SOURCES

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
38≤capacity<151	13.1
151≤capacity	≥0.7

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAP EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME

Control device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature[b] [63.127(a)(1)(i)].	1. Continuous records[c] during loading. 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS.[d] 3. Record the daily average firebox temperature for each operating day.[c] 4. Report daily average temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected[f]—PR.[e]
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed [63.127(a)(1)(ii)].	1. Continuous records during loading. 2. Record and report the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test—NCS. 3. Record the daily average upstream temperature and temperature difference across catalyst bed for each operating day.[c] 4. Report all daily average upstream temperatures that are outside the range established in the NCS or operating permit—PR. 5. Report all daily average temperature differences across the catalyst bed that are outside the range established in the NCS or operating permit—PR. 6. Report all operating days when insufficient monitoring data are collected.[f]
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and vent stream is *not* introduced with or as the primary fuel.	Firebox temperature[b] [63.127(a)(3)].	1. Continuous records during loading. 2. Record and report the firebox temperature averaged over the full period of the performance test—NCS. 3. Record the daily average firebox temperature for each operating day.[c] 4. Report all daily average firebox temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient data are collected[f]—PR.
Flare	Presence of a flame at the pilot light [63.127(a)(2)]..	1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS. 3. Record the times and durations of all periods when a pilot flame is absent or the monitor is not operating. 4. Report the duration of all periods when all pilot flames of a flare are absent—PR.
Scrubber for Halogenated Vent Streams (Note: Controlled by a combustion device other than a flare).	pH of scrubber effluent [63.127(a)(4)(i)], and.	1. Continuous records during loading. 2. Record and report the pH of the scrubber effluent averaged over the full period of the performance test—NCS. 3. Record the daily average pH of the scrubber effluent for each operating day.[c]

TABLE 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAP EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME—Continued

Control device	Parameters to be monitored [a]	Recordkeeping and reporting requirements for monitored parameters
		4. Report all daily average pH values of the scrubber effluent that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
Scrubber for Halogenated Vent Streams (Note: Controlled by a combustion device other than a flare) (Continued).	Scrubber liquid and gas flow rates [63.127(a)(4)(ii)].	1. Continuous records during loading. 2. Record and report the scrubber liquid/gas ratio averaged over the full period of the performance test—NCS. 3. Record the daily average scrubber liquid/gas ratio for each operating day.[e] 4. Report all daily average scrubber liquid/gas ratios that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
Absorber [h]	Exit temperature of the absorbing liquid [63.127(b)(1)], and	1. Continuous records during loading. 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the performance test—NCS. 3. Record the daily average exit temperature of the absorbing liquid for each operating day.[e] 4. Report all daily average exit temperatures of the absorbing liquid that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
	Exit specific gravity [63.127(b)(1)]	1. Continuous records during loading. 2. Record and report the exit specific gravity averaged over the full period of the performance test—NCS. 3. Record the daily average exit specific gravity for each operating day.[e]
Absorber [h] (Continued)	Exit specific gravity [63.127(b)(1)] (continued).	4. Report all daily average exit specific gravity values that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
Condenser [h]	Exit (product side) temperature [63.127(b)(2)].	1. Continuous records during loading. 2. Record and report the exit temperature averaged over the full period of the performance test—NCS. 3. Record the daily average exit temperature for each operating day.[e] 4. Report all daily average exit temperatures that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
Carbon Adsorber [h]	Total regeneration stream mass flow during carbon bed regeneration cycle(s) [63.127(b)(3)], and	1. Record of total regeneration stream mass flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass flow during each carbon bed regeneration cycle during the period of the performance test—NCS. 3. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
Carbon Adsorber [h] (Continued)	Temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)) [63.127(b)(3)].	1. Records of the temperature of the carbon bed after each regeneration. 2. Record and report the temperature of the carbon bed after each regeneration during the period of the performance test—NCS. 3. Report all the carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration is outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
All Recovery Devices (as an alternative to the above).	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device [63.127(b)].	1. Continuous records during loading. 2. Record and report the concentration level or reading averaged over the full period of the performance test—NCS. 3. Record the daily average concentration level or reading for each operating day.[e] 4. Report all daily average concentration levels or readings that are outside the range established in the NCS or operating permit and all operating days when insufficient monitoring data are collected [f]—PR.
All Control Devices and Vapor Balancing Systems.	Presence of flow diverted to the atmosphere from the control device [63.127(d)(1)] or	1. Hourly records of whether the flow indicator was operating and whether flow was detected at any time during each hour. 2. Record and report the duration of all periods when the vent stream is diverted through a bypass line or the monitor is not operating—PR.

TABLE 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAP EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME—Continued

Control device	Parameters to be monitored [a]	Recordkeeping and reporting requirements for monitored parameters
All Control Devices and Vapor Balancing Systems (Continued).	Monthly inspections of sealed valves [63.127(d)(2)].	1. Records that monthly inspections were performed. 2. Record and report all monthly inspections that show the valves are not sealed closed or the seal has been changed.

[a] Regulatory citations are listed in brackets.
[b] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.
[c] "Continuous records" is defined in § 63.111 of this subpart.
[d] NCS=Notification of Compliance Status described in § 63.152 of this subpart.
[e] The daily average is the average of all recorded parameter values for the operating day. If all recorded values during an operating day are within the range established in the NCS or operating permit, a statement to this effect can be recorded instead of the daily average.
[f] The periodic reports shall include the duration of periods when monitoring data are not collected for each excursion as defined in § 63.152(c)(2)(ii)(A) of this subpart.
[g] PR=Periodic Reports described in § 63.152 of this subpart.
[h] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table under "All Recovery Devices."

TABLE 8.—ORGANIC HAP'S SUBJECT TO THE WASTEWATER PROVISIONS FOR PROCESS UNITS AT NEW SOURCES

Chemical name	CAS No.[a]
Allyl chloride	107051
Benzene	71432
Butadiene (1,3-)	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Cumene	98828
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylidene dichloride (1,1-Dichloroethane)	75343
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	100543
Methyl bromide (Bromomethane)	74839
Methyl chloride (Chloromethane)	74873
Phosgene	75445
Tetrachloroethylene (Perchloroethylene)	127184
Toluene	108883
Trichloroethane (1,1,1-) (Methyl chloroform)	71556
Trichloroethylene	79016
Trimethylpentane (2,2,4-)	540841
Vinyl chloride (chloroethylene)	75014
Vinylidene chloride (1,1-Dichloroethylene)	75354
Xylene (m-)	108383
Xylene (p-)	106423

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

Note.—The list of organic HAP's on table 8 is a subset of the list of organic HAP's on table 9 of this subpart.

TABLE 9.—ORGANIC HAP'S SUBJECT TO THE WASTEWATER PROVISIONS FOR PROCESS UNITS AT NEW AND EXISTING SOURCES AND CORRESPONDING FRACTION REMOVED (FR) VALUES

Chemical name	CAS No.[a]	Fr
Acetaldehyde	75070	0.95
Acetonitrile	75058	0.62
Acetophenone	98862	0.72
Acrolein	107028	0.96
Acrylonitrile	107131	0.96
Allyl chloride	107051	0.99
Benzene	71432	0.99
Benzyl chloride	100447	0.99
Biphenyl	92524	0.99
Bromoform	75252	0.99
Butadiene (1,3-)	106990	0.99
Carbon disulfide	75150	0.99
Carbon tetrachloride	56235	0.99
Chlorobenzene	108907	0.99
Chloroform	67663	0.99
Chloroprene (2-Chloro-1,3-butadiene)	126998	0.99
Cumene	98828	0.99
Dichlorobenzene (p-)	106467	0.99
Dichloroethane (1,2-) (Ethylene dichloride)	107062	0.99
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444	0.87
Dichloropropene (1,3-)	542756	0.99
Diethyl sulfate	64675	0.90
Dimethyl sulfate	77781	0.53
Dimethylaniline (N,N-)	121697	0.99
Dimethylhydrazine (1,1-)	57147	0.57
Dinitrophenol (2,4-)	51285	0.99
Dinitrotoluene (2,4-)	121142	0.38

TABLE 9.—ORGANIC HAP'S SUBJECT TO THE WASTEWATER PROVISIONS FOR PROCESS UNITS AT NEW AND EXISTING SOURCES AND CORRESPONDING FRACTION REMOVED (FR) VALUES—Continued

Chemical name	CAS No.[a]	Fr
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911	0.37
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898	0.91
Ethyl acrylate	140885	0.99
Ethylbenzene	100414	0.99
Ethyl chloride (Chloroethane)	75003	0.99
Ethylene dibromide (Dibromomethane)	106934	0.99
Ethylene glycol dimethyl ether	110714	0.00
Ethylene glycol monobutyl ether acetate	112072	0.76
Ethylene glycol monomethyl ether acetate	110496	0.28
Ethylene oxide	75218	0.98
Ethylidene dichloride (1,1-Dichloroethane)	75343	0.99
Hexachlorobenzene	118741	0.99
Hexachlorobutadiene	87683	0.99
Hexachloroethane	67721	0.99
Hexane	110543	0.99
Isophorone	78591	0.60
Methanol	67561	0.31
Methyl bromide (Bromomethane)	74839	0.99
Methyl chloride (Chloromethane)	74873	0.99
Methyl ethyl ketone (2-Butanone)	78933	0.95
Methyl isobutyl ketone (Hexone)	108101	0.99
Methyl methacrylate	80626	0.98
Methyl tert-butyl ether	1634044	0.99
Methylene chloride (Dichloromethane)	75092	0.99
Naphthalene	91203	0.99
Nitropropane (2-)	79469	0.98
Phosgene	75445	0.99
Propionaldehyde	123386	0.99
Propylene dichloride (1,2-Dichloropropane)	78875	0.99
Propylene oxide	75569	0.99
Styrene	100425	0.99
Tetrachloroethane (1,1,2,2-)	79345	0.99
Tetrachloroethylene (Perchloroethylene)	127184	0.99
Toluene	108883	0.99
Toluidine (o-)	95534	0.44
Trichlorobenzene (1,2,4-)	120821	0.99
Trichloroethane (1,1,1-) (Methyl chloroform)	71556	0.99
Trichloroethane (1,1,2-) (Vinyl trichloride)	79005	0.99
Trichloroethylene	79016	0.99
Trichlorophenol (2,4,5-)	95954	0.96
Triethylamine	121448	0.99
Trimethylpentane (2,2,4-)	540841	0.99
Vinyl acetate	108054	0.99
Vinyl chloride (Chloroethylene)	75014	0.99
Vinylidene chloride (1,1-Dichloroethylene)	75354	0.99
Xylene (m-)	108383	0.99
Xylene (o-)	95476	0.99
Xylene (p-)	106423	0.99

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

TABLE 10.—WASTEWATER—COMPLIANCE OPTIONS FOR WASTEWATER TANKS

Capacity (m3)	Vapor pressure (kPa)	Control requirements
<75		§63.133(a)(1)
≥75 and <151	<13.1	§63.133(a)(1)
	≥13.1	§63.133(a)(2)
≥151	<5.2	§63.133(a)(1)
	≥5.2	§63.133(a)(2)

TABLE 11.—WASTEWATER—INSPECTION AND MONITORING REQUIREMENTS FOR WASTE MANAGEMENT UNITS

To comply with	Inspection or monitoring requirement	Frequency	Method
Tanks:			
63.133(b)(1)	Inspect fixed roof and all openings for leaks[a]	Initially Semi-annually	Method 21[b] Visual.
63.133(c)	Inspect floating roof in accordance with §§ 63.120(a)(2) and (a)(3).	See § 63.120(a)(2) and (a)(3).	Visual.
63.133(d)	Measure floating roof seal gaps in accordance with §§ 63.120(b)(2)(i) through (b)(4).		See § 63.120(b)(2)(i) through (b)(4).
	—Primary seal gaps	Once every 5 years.	
	—Secondary seal gaps	Annually.	
63.133(f), 63.133(g)	Inspect wastewater tank for control equipment failures and improper work practices.	Semi-annually	Visual.
Surface impoundments:			
63.134(b)(1)(i), 63.134(b)(1)(ii).	Inspect cover and all openings for leaks[a]	Initially Semi-annually	Method 21[b] Visual.
63.134(c)	Inspect surface impoundment for control equipment failures and improper work practices.	Semi-annually	Visual.
Containers:			
63.135(b)(1), 63.135(b)(2)(ii).	Inspect cover and all openings for leaks[a]	Initially	Method 21[b].
63.135(d)(1)	Inspect enclosure and all openings for leaks[a]	Initially Semi-annually	Method 21[b] Visual.
63.135(e)	Inspect container for control equipment failures and improper work practices.	Semi-annually	Visual.
Individual drain systems[c]:			
63.136(b)(1)	Inspect cover and all openings for leaks[a]	Initially Semi-annually	Method 21[b] Visual.
63.136(c)	Inspect individual drain system for control equipment failures and improper work practices.	Semi-annually	Visual.
63.136(e)(1)	Verify flow of water supply to all drains using water seals to ensure appropriate water levels and to prevent other conditions that reduce water seal control effectiveness.	Semi-annually	Visual.
63.136(f)(1)	Inspect all drains using tightly-sealed caps or plugs to ensure caps and plugs are in place and properly installed.	Semi-annually	Visual.
63.136(f)(2)	Inspect all junction boxes to ensure covers are in place and have tight seals around edges.	Semi-annually	Visual.
63.136(f)(3)	Inspect unburied portion of all sewer lines for cracks and gaps.	Semi-annually	Visual.
Oil-water separators:			
63.137(b)(1)	Inspect fixed roof and all openings for leaks[a]	Initially Semi-annually	Method 21[b] Visual.
63.137(c)	Measure floating roof seal gaps in accordance with 40 CFR 60.696(d)(1).		See 40 CFR 60.696(d)(1).
	—Primary seal gaps	Once every 5 years.	
63.137(c)	—Secondary seal gaps	Annually.	
63.137(d)	Inspect oil-water separator for control equipment failures and improper work practices.	Semi-annually	Visual.

[a] Leaks are detectable emissions of 500 parts per million by volume above background.
[b] Method 21 of 40 CFR part 60, appendix A. The owner or operator shall comply with the requirements of § 63.148.
[c] As specified in § 63.136(a), the owner or operator shall comply with the requirements of either § 63.136(b) or (c).

TABLE 12.—WASTEWATER—MONITORING REQUIREMENTS FOR TREATMENT PROCESSES

To comply with	Parameters to be monitored	Frequency	Methods
1. HAP mass removal of each organic HAP compound or total organic HAP compounds in a properly operated biological treatment unit. 63.138(b)(1)(iii)(C) 63.138(c)(1)(iii)(D)	Appropriate parameters may be monitored upon approval from the permitting authority in accordance with the requirements specified in § 63.143(c).	Continuous	Method 304, or any other method which has been approved by EPA during compliance demonstrations.
2. HAP mass removal of 95 percent of total organic HAP compounds in a properly operated biological treatment unit. 63.138(e)	Appropriate parameters may be monitored upon approval from the permitting authority in accordance with the requirements specified in § 63.143(c).	Continuous	Method 304, or any other method which has been approved by EPA during compliance demonstrations.
3. Design steam stripper 63.138(g) (3), (4), and (5)	Steam flow rate	Continuously	Integrating steam flow monitoring device equipped with a continuous recorder.

TABLE 12.—WASTEWATER—MONITORING REQUIREMENTS FOR TREATMENT PROCESSES—Continued

To comply with	Parameters to be monitored	Frequency	Methods
	Wastewater feed mass flow rate	Continuously	Liquid flow meter installed at stripper influent and equipped with a continuous recorder.
	Wastewater feed temperature	Continuously	Liquid temperature monitoring device installed at stripper influent and equipped with a continuous recorder.
4 Alternative monitoring parameters	Other parameters may be monitored upon approval from the Administrator in accordance with the requirements specified in § 63.143(d).		

[a] If method(s) are used to measure organic HAP concentrations in a waste or wastewater stream, rather than measuring VOHAP concentrations in an air stream purged from a waste or wastewater stream, the correction factors listed in table 34 may be used to adjust the results to provide a measure of the volatile portion (i.e., the VOHAP concentration) of the organic HAP compounds.

TABLE 13.—WASTEWATER—MONITORING REQUIREMENTS FOR CONTROL DEVICES

Control device	Monitoring equipment required	Parameters to be monitored	Frequency
All control devices	1. Flow indicator installed at all bypass lines to the atmosphere and equipped with continuous recorder[b] *or*.	1. Presence of flow diverted from the control device to the atmosphere *or*.	Hourly records of whether the flow indicator was operating and whether the flow was detected at any time during each hour.
	2. Valves sealed closed with car-seal or lock-and-key configuration.	2. Monthly inspections of sealed valves.	Monthly.
Thermal Incinerator	Temperature monitoring device installed in firebox or in ductwork immediately downstream of firebox[a] and equipped with a continuous recorder[b].	Firebox temperature	Continuous.
Catalytic Incinerator	Temperature monitoring device installed in gas stream immediately before and after catalyst bed and equipped with a continuous recorder[b].	1. Temperature upstream of catalyst bed *or*.	Continuous.
		2. Temperature difference across catalyst bed	
Flare	Heat sensing device installed at the pilot light and equipped with a continuous recorder[b].	Presence of a flame at the pilot light.	Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.
Boiler or process heater <44 megawatts and vent stream is not mixed with the primary fuel.	Temperature monitoring device installed in firebox[a] and equipped with continuous recorder[b].	Combustion temperature	Continuous.
Condenser	Temperature monitoring device installed at condenser exit and equipped with continuous recorder[b].	Condenser exit (product side) temperature.	Continuous.
Carbon Adsorber (Regenerative).	Integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, *and*.	Total regeneration stream mass flow during carbon bed regeneration cycle(s).	For each regeneration cycle, record the total regeneration stream mass flow.
	Carbon bed temperature monitoring device	Temperature of carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)].	For each regeneration cycle and within 15 minutes of completing any cooling cycle, record the carbon bed temperature.
Carbon Adsorber (Non-regenerative).	Organic compound concentration monitoring device[c].	Organic compound concentration of adsorber exhaust.	Daily or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater.
Alternative monitoring parameters.	Other parameters may be Monitored upon approval from the Administrator in accordance with the requirements in § 63.143(e)(3).		

[a] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

[b] "Continuous recorder" is defined in § 63.111 of this subpart.

[c] As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.

TABLE 14a.—WASTEWATER—INFORMATION ON TABLE 8 ORGANIC HAP'S TO BE SUBMITTED WITH IMPLEMENTATION PLAN FOR PROCESS UNITS AT NEW SOURCES [a,b]

Process unit identification [c]	Stream identification	VOHAP concentration (ppmw) [d,e] Average	Flow rate (lpm) [e,f]	Group 1 or group 2 [g]	Intend to control? [h] (Y or N)	Intended treatment technology [i]	Intended control device

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Implementation Plan are specified in § 63.151 of this Subpart.
[c] Also include a description of the chemical manufacturing process unit (e.g., storage tank).
[d] Except when § 63.132(c) is used, annual average VOHAP concentrations, at point of generation, of each HAP compound listed in table 8 of this subpart that is present in the wastewater stream, parts per million by weight (ppmw).
[e] If § 63.132(c) is used, include annual average VOHAP concentration and flow rate for the point where Group 1 streams are designated.
[f] Except when § 63.132(c) is used, annual average flow rate at point of generation, liters per minute (lpm).
[g] Is the stream Group 1 or Group 2 for table 8 compounds as determined by the procedures specified in § 63.132 (c) and (d) of this subpart?
[h] Does the owner or operator intend to control the stream in accordance with the requirements specified in § 63.138(b) of this Subpart, yes (Y) or no (N)?
[i] If the owner or operator intends to control the stream, what is the intended treatment technology (e.g., steam stripping, biological treatment, etc.)?

TABLE 14b.—WASTEWATER—INFORMATION ON TABLE 9 ORGANIC HAP'S TO BE SUBMITTED WITH IMPLEMENTATION PLAN FOR PROCESS UNITS AT NEW AND EXISTING SOURCES [a,b]

Chemical manufacturing process unit identification [c]	Stream identification	Total VOHAP concentration (ppmw) [d,e] Average	Flow rate (lpm) [e,f]	Group 1 or group 2 [g]	Intend to control [h] (Y or N)	Intended treatment technology [i]	Intended control device

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Implementation Plan are specified in § 63.151 of this subpart.
[c] Also include a description of the process unit (e.g., storage tank).
[d] Except when § 63.132(c) is used, annual average total VOHAP concentration and expected range of total VOHAP in wastewater stream at point of generation, parts per million by weight (ppmw).
[e] If § 63.132(c) is used, include annual average VOHAP concentration and flow rate for the point where Group 1 streams are designated.
[f] Except when § 63.132(c) is used, annual average flow rate at point of generation, liters per minute (lpm).
[g] Is the stream Group 1 or Group 2 for table 9 compounds as determined by the procedures specified in § 63.132(c) or (g) of this subpart?
[h] Does the owner or operator intend to control the stream in accordance with the requirements of § 63.138(c) or (d) of this Subpart, yes (Y) or no (N)?
[i] If the owner or operator intends to control the stream, what is the intended treatment technology (e.g., steam stripping, biological treatment, etc.)?

TABLE 15a.—WASTEWATER—INFORMATION ON TABLE 8 ORGANIC HAP'S TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS FOR PROCESS UNITS AT NEW SOURCES [a,b]

Process unit identification code [c]	Stream identification code	VOHAP concentration (ppmw) [d,e] Average	Flow rate (lpm) [e,f]	Group 1 or group 2 [g]	Compliance approach [h]	Treatment process(es) identification code [i]	Waste management unit(s) identification [j]	Intended control device

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this subpart.
[c] Also include a description of the process unit (e.g., storage tank).
[d] Except when § 63.132(c) is used, annual average VOHAP concentrations, at point of generation, of each HAP compound listed in table 8 of this subpart that is present in the wastewater stream, parts per million by weight (ppmw).
[e] When § 63.132(c) is used, include the annual average VOHAP concentration and flow rate for the point where the Group 1 stream is designated.
[f] Except when § 63.132(c) is used, annual average flow rate at point of generation, liters per minute (lpm).
[g] Is the stream Group 1 or Group 2 for table 8 compounds as determined by the procedures specified in § 63.132 (c) or (d) of this subpart?
[h] If stream is being controlled in accordance with the requirements of § 63.138(b), identify the subparagraph in § 63.138(b) with which the owner or operator has elected to comply. For example, if the owner or operator elects to recycle the stream to a production process, the appropriate subparagraph is § 63.138(b)(1)(i).

[i] If the stream is being treated in accordance with the requirements of § 63.138(b), give identification code of treatment unit(s) treating stream. Identification codes should correspond to entries in table 17a.
[j] For each Group 1 wastewater stream, identify the waste management unit(s) receiving or managing the stream. Identification codes should correspond to entries in table 18.

TABLE 15b.—WASTEWATER—INFORMATION ON TABLE 9 ORGANIC HAP'S TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS FOR PROCESS UNITS AT NEW AND EXISTING SOURCES [a,b]

Process unit identification [c]	Stream identification	Total VOHAP concentration (PPMW) [d,e] Average	Flow rate (lpm) [c,f]	Group 1 or group 2 [g]	Compliance approach [h]	Treatment process identification [i]	Waste management unit identification [j]	Intended control device

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this subpart.
[c] Also include a description of the process unit (e.g., storage tank).
[d] Except when § 63.132(c) is used, annual average total VOHAP concentration and expected range of total VOHAP concentration in wastewater stream at point of generation, parts per million by weight (ppmw).
[e] When § 63.132(c) is used, include the annual average VOHAP concentration and flow rate for the point where the Group 1 stream is designated.
[f] Except when § 63.132(c) is used, annual average flow rate at point of generation, liters per minute (lpm).
[g] Is the stream Group 1 or Group 2 for table 9 HAP compounds as determined by the procedures specified in § 63.132(c) or (g)?
[h] If the stream is being controlled in accordance with the requirements of § 63.138(c), identify the subparagraph in § 63.138(c) with which the owner or operator has elected to comply. For example, if the owner or operator elects to reduce the total VOHAP mass flow rate of an individual stream by 99 percent, the appropriate subparagraph is § 63.138(c)(1)(ii)(B).
[i] If stream is being treated in accordance with § 63.138(c), give identification code of treatment unit(s) treating stream. Identification codes should correspond to entries in table 17a.
[j] For each Group 1 wastewater stream, identify the waste management unit(s) receiving or managing the stream. Identification codes should correspond to entries in table 18.

TABLE 16.—WASTEWATER—INFORMATION TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS FOR PROCESS UNITS AT EXISTING SOURCES COMPLYING WITH PROCESS UNIT ALTERNATIVE IN § 63.138(d) [a,b,c]

Process unit identification [d]	Stream identification	Total VOHAP concentration [e] (ppmw) Average	Flow [f] rate (lpm)	Treatment process identification [g]	Waste management unit identification [h]

[a] The information specified in this table shall be provided for each wastewater stream generated by the process unit to which this alternative provision is being applied.
[b] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[c] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this Subpart.
[d] Also include a description of the process unit (e.g., storage tank).
[e] Flow-weighted annual average and expected range of total VOHAP concentration of individual or combined stream before exposure to the atmosphere and before combination with streams other than process wastewater from the specific process unit, parts per million by weight (ppmw).
[f] Annual average flow rate of combined or individual wastewater stream, liters per minute (lpm).
[g] If stream is being controlled, give identification code(s) of treatment unit(s) treating stream. Identification codes should correspond to entries in Table 17.
[h] For each wastewater stream generated within the process unit, identify the waste management unit(s) receiving or managing the stream. Identification codes should correspond to entries in Table 18.

TABLE 17.—WASTEWATER—INFORMATION FOR TREATMENT PROCESSES TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS [a,b]

Treatment process identification [c]	Description [d]	Wastewater stream(s) treated [e]	Monitoring parameters [f]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this Subpart.
[c] Identification codes should correspond to those listed in Tables 14a through 16.
[d] Description of treatment process.
[e] Stream identification code for each wastewater stream treated by each treatment unit. Identification codes should correspond to entries listed in Tables 14a through 16.
[f] Parameter(s) to be monitored or measured in accordance with Table 12 in § 63.143 of this Subpart.

TABLE 18.—WASTEWATER—INFORMATION FOR WASTE MANAGEMENT UNITS TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS[a,b]

Waste management unit identification[c]	Description[d]	Wastewater stream(s) received or managed[e]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this Subpart.
[c] Identification codes should correspond to those listed in Tables 14a through 16.
[d] Description of waste management unit.
[e] Stream identification code for each wastewater stream received or managed by each waste management unit. Identification codes should correspond to entries listed in Tables 14a through 16.

TABLE 19.—WASTEWATER—INFORMATION ON RESIDUALS TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS[a,b]

Residual identification[c]	Residual description[d]	Wastewater stream identification[e]	Treatment process[f]	Fate[g]	Control device identification code	Control device description[h]	Control device efficiency[i]

[a] The information specified in this table must be submitted; however, it may be submitted in any format. This table presents an example format.
[b] Other requirements for the Notification of Compliance Status are specified in § 63.152(b) of this subpart.
[c] Name or identification code of residual removed from Group 1 wastewater stream.
[d] Description of residual (e.g., steam stripper A–13 overhead condensates).
[e] Identification of stream from which residual is removed.
[f] Treatment process from which residual originates.
[g] Indicate whether residual is sold, returned to production process, or returned to waste management unit or treatment process; or whether HAP mass of residual is destroyed by 99 percent.
[h] If the fate of the residual is such that the HAP mass is destroyed by 99 percent, give description of device used for HAP destruction.
[i] If the fate of the residual is such that the HAP mass is destroyed by 99 percent, provide an estimate of control device efficiency and attach substantiation in accordance with § 63.146(b)(9) of this subpart.

TABLE 20.—WASTEWATER—PERIODIC REPORTING REQUIREMENTS FOR CONTROL DEVICES USED TO COMPLY WITH §§ 63.133–63.139

Control device	Reporting requirements
Thermal incinerator	1. Report all daily average[a] temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected[c]
Catalytic incinerator	1. Report all daily average[a] upstream temperatures that are outside the range established in the NCS[b] or operating permit 2. Report all daily average[a] temperature differences across the catalyst bed that are outside the range established in the NCS[b] or operating permit 3. Report all operating days when insufficient monitoring data are collected[c]
Boiler or process heater with a design heat input capacity less than 44 megawatts and vent stream is not mixed with the primary fuel.	1. Report all daily average[a] firebox temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected[c]
Flare	1. Report the duration of all periods when the pilot flame is absent
Condenser	1. Report all daily average[a] exit temperatures that are outside the range established in the NCS[b] or operating permit and all operating days when insufficient monitoring data are collected[c]
Carbon adsorber	1. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is outside the range established in the NCS[b] or operating permit 2. Report all carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration is outside the range established in the NCS[b] or operating permit 3. Report all operating days when insufficient monitoring data are collected[c]
All control devices	1. Report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating, or 2. Report all monthly inspections that show the valves are not sealed closed or the seal has been changed

[a] The daily average is the average of all values recorded during the operating day, as specified in § 63.147(e) of this subpart.
[b] NCS = Notification of Compliance Status described in § 63.152 of this subpart.
[c] The periodic reports shall include the duration of periods when monitoring data are not collected for each excursion as defined in § 63.152(c)(2)(ii)(A) of this subpart.

TABLE 21.—AVERAGE STORAGE TEMPERATURE (Ts) AS A FUNCTION OF TANK PAINT COLOR

Tank Color	Average Storage Temperature (Ts)
White	T_A + 0
Aluminum	T_A + 2.5
Gray	T_A + 3.5

TABLE 21.—AVERAGE STORAGE TEMPERATURE (Ts) AS A FUNCTION OF TANK PAINT COLOR—Continued

Tank Color	Average Storage Temperature (Ts)
Black	T_A + 5.0

*T_A is the average annual ambient temperature in degrees Fahrenheit.

TABLE 22.—PAINT FACTORS FOR FIXED ROOF TANKS

Tank color		Paint factors (F_p) Paint Condition	
Roof	Shell	Good	Poor
White	White	1.00	1.15
Aluminum (specular)	White	1.04	1.18
White	Aluminum (specular)	1.16	1.24
Aluminum (specular)	Aluminum (specular)	1.20	1.29
White	Aluminum (diffuse)	1.30	1.38
Aluminum (diffuse)	Aluminum (diffuse)	1.39	1.46
White	Gray	1.30	1.38
Light gray	Light gray	1.33	1.44
Medium gray	Medium gray	1.40	1.58

TABLE 23.—AVERAGE CLINGAGE FACTORS (C) [a]

Liquid	Shell condition		
	Light rust [b]	Dense rust	Gunite lined
Gasoline	0.0015	0.0075	0.15
Single component stocks	0.0015	0.0075	0.15
Crude oil	0.0060	0.030	0.60

[a] Units for average clingage factors are barrels per 1,000 square feet.
[b] If no specific information is available, these values can be assumed to represent the most common condition of tanks currently in use.

TABLE 24.—TYPICAL NUMBER OF COLUMNS AS A FUNCTION OF TANK DIAMETER FOR INTERNAL FLOATING ROOF TANKS WITH COLUMN SUPPORTED FIXED ROOFS [a]

Tank diameter range (D in feet)	Typical number of columns, (N_C)
0 < D ≤ 85	1
85 < D ≤ 100	6
100 < D ≤ 120	7
120 < D ≤ 135	8
135 < D ≤ 150	9
150 < D ≤ 170	16
170 < D ≤ 190	19
190 < D ≤ 220	22
220 < D ≤ 235	31
235 < D ≤ 270	37
270 < D ≤ 275	43
275 < D ≤ 290	49
290 < D ≤ 330	61
330 < D ≤ 360	71

TABLE 24.—TYPICAL NUMBER OF COLUMNS AS A FUNCTION OF TANK DIAMETER FOR INTERNAL FLOATING ROOF TANKS WITH COLUMN SUPPORTED FIXED ROOFS [a]—Continued

Tank diameter range (D in feet)	Typical number of columns, (N_C)
360 < D ≤ 400	81

[a] Data in this table should not supersede information on actual tanks.

TABLE 25.—EFFECTIVE COLUMN DIAMETER (F_c)

Column type	F_c (feet)
9-inch by 7-inch built-up columns	1.1
8-inch-diameter pipe columns	0.7
No construction details known	1.0

TABLE 26.—SEAL RELATED FACTORS FOR INTERNAL FLOATING ROOF VESSELS

Seal type	K_S	n
Liquid mounted resilient seal:		
Primary seal only	3.0	0
With rim-mounted secondary seal [a]	1.6	0
Vapor mounted resilient seal:		
Primary seal only	6.7	0
With rim-mounted secondary seal [a]	2.5	0

[a] If vessel-specific information is not available about the secondary seal, assume only a primary seal is present.

Table 27.—Summary of Internal Floating Deck Fitting Loss Factors (K_F) and Typical Number of Fittings (N_F)

Deck fitting type	Deck fitting loss factor (K_F)[a]	Typical number of fittings (N_F)
Access hatch	.....	1.
Bolted cover, gasketed	1.6	
Unbolted cover, gasketed	11	
Unbolted cover, ungasketed	[b]25	
Automatic gauge float well	.....	1.
Bolted cover, gasketed	5.1	
Unbolted cover, gasketed	15	
Unbolted cover, ungasketed	[b]28	
Column well	.....	(see Table 24).
Builtup column-sliding cover, gasketed	33	
Builtup column-sliding cover, ungasketed	[b]47	
	10	
Pipe column-flexible fabric sleeve seal	19	
Pipe column-sliding cover, gasketed	32	
Pipe column-sliding cover, ungasketed.		
Ladder well	.....	1.
Sliding cover, gasketed	56	
Sliding cover, ungasketed	[b]76	
Roof leg or hanger well	.....	(5+D/10+D[2]/600)[c].
Adjustable	[b]7.9	
Fixed	0	
Sample pipe or well	.....	1.
Slotted pipe-sliding cover, gasketed	44	
Slotted pipe-sliding cover, ungasketed	57	
Sample well-slit fabric seal, 10 percent open area	[b]12	
Stub drain, 1-in diameter[d]	1.2	(D[2]/125)[c].
Vacuum breaker	.....	1.
Weighted mechanical actuation, gasketed	[b]0.7	
Weighted mechanical actuation, ungasketed	0.9	

[a] Units for K_F are pound-moles per year.
[b] If no specific information is available, this value can be assumed to represent the most common/typical deck fittings currently used.
[c] D=Tank diameter (feet).
[d] Not used on welded contact internal floating decks.

Table 28.—Deck Seam Length Factors[a] (S_D) for Internal Floating Roof Tanks

Deck construction	Typical deck seam length factor
Continuous sheet construction[b]:	
5-feet wide sheets	0.2[c]
6-feet wide sheets	0.17
7-feet wide sheets	0.14
Panel construction[d]:	
5 x 7.5 feet rectangular	0.33
5 x 12 feet rectangular	0.26

[a] Deck seam loss applies to bolted decks only. Units for S_D are feet per square feet.
[b] S_D=1/W, where W = sheet width (feet).
[c] If no specific information is available, these factors can be assumed to represent the most common bolted decks currently in use.
[d] S_D=(L+W)/LW, where W = panel width (feet), and L = panel length (feet).

Table 29.—Seal Related Factors for External Floating Roof Vessels

Seal type	Welded vessels		Riveted vessels	
	K_S	N	K_S	N
Metallic shoe seal:				
Primary seal only	1.2	1.5	1.3	1.5
With shoe-mounted secondary seal	0.8	1.2	1.4	1.2
With rim-mounted secondary seal	0.2	1.0	0.2	1.6
Liquid mounted resilient seal:				
Primary seal only	1.1	1.0	[a]NA	NA
With weather shield	0.8	0.9	NA	NA
With rim-mounted secondary seal	0.7	0.4	NA	NA
Vapor mounted resilient seal:				
Primary seal only	1.2	2.3	NA	NA
With weather shield	0.9	2.2	NA	NA

TABLE 29.—SEAL RELATED FACTORS FOR EXTERNAL FLOATING ROOF VESSELS—Continued

Seal type	Welded vessels		Riveted vessels	
	K_S	N	K_S	N
With rim-mounted secondary seal	0.2	2.6	NA	NA

[a] NA=Not applicable.

TABLE 30.—ROOF FITTING LOSS FACTORS, K_{Fa}, K_{Fb}, AND M_f[a] AND TYPICAL NUMBER OF FITTINGS, N_T

Fitting type and construction details	Loss factors[b]			Typical number of fittings, N_T
	K_{Fa} (lb-mole/yr)	K_{Fb} (lb-mole/[mi/hr]^m-yr)	m (dimensionless)	
Access hatch (24-in-diameter well)				1.
Bolted cover, gasketed	0	0	[c] 0	
Unbolted cover, ungasketed	2.7	7.1	1.0	
Unbolted cover, gasketed	2.9	0.41	1.0	
Unslotted guide-pole well (8-in-diameter unslotted pole, 21-in-diameter well).				1.
Ungasketed sliding cover	0	67	[c] 0.98	
Gasketed sliding cover	0	3.0	1.4	
Slotted guide-pole/sample well (8-in-diameter unslotted pole, 21-in-diameter well).				[d].
Ungasketed sliding cover, without float	0	310	1.2	
Ungasketed sliding cover, with float	0	29	2.0	
Gasketed sliding cover, without float	0	260	1.2	
Gasketed sliding cover, with float	0	8.5	1.4	
Gauge-float well (20-inch diameter)				1.
Unbolted cover, ungasketed	2.3	5.9	[c] 1.0	
Unbolted cover, gasketed	2.4	0.34	1.0	
Bolted cover, gasketed	0	0	0	
Gauge-hatch/sample well (8-inch diameter)				1.
Weighted mechanical actuation, gasketed	0.95	0.14	[c] 1.0	
Weighted mechanical actuation, ungasketed	0.91	2.4	1.0	
Vacuum breaker (10-in-diameter well)				N_{F6} (Table 31).
Weighted mechanical actuation, gasketed	1.2	0.17	[c] 1.0	
Weighted mechanical actuation, ungasketed	1.2	3.0	1.0	
Roof drain (3-in-diameter)				N_{F7} (Table 31).
Open	0	7.0	[e] 1.4	N_{F8} (Table 32 f).
90 percent closed	0.51	0.81	1.0	
Roof leg (3-in-diameter)				N_{F9} (Table 32 f).
Adjustable, pontoon area	1.5	0.20	[c] 1.0	
Adjustable, center area	0.25	0.067	[c] 1.0	
Adjustable, double-deck roofs	0.25	0.067	1.0	
Fixed	0	0	0	
Roof leg (2½-in-diameter)				N_{F9} (Table 32 f).
Adjustable, pontoon area	1.7	0	0	
Adjustable, center area	0.41	0	0	
Adjustable, double-deck roofs	0.41	0	0	
Fixed	0	0	0	
Rim vent (6-in-diameter)				1 g.
Weighted mechanical actuation, gasketed	0.71	0.10	[c] 1.0	
Weighted mechanical actuation, ungasketed	0.68	1.8	1.0	

[a] The roof fitting loss factors, K_{Fa}, K_{Fb}, and m, may only be used for wind speeds from 2 to 15 miles per hour.
[b] Unit abbreviations are as follows: lb = pound; mi = miles; hr = hour; yr = year.
[c] If no specific information is available, this value can be assumed to represent the most common or typical roof fittings currently in use.
[d] A slotted guide-pole/sample well is an optional fitting and is not typically used.
[e] Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs and are typically left open.
[f] The most common roof leg diameter is 3 inches. The loss factors for 2½-inch diameter roof legs are provided for use if this smaller size roof is used on a particular floating roof.
[g] Rim vents are used only with mechanical-shoe primary seals.

TABLE 31.—TYPICAL NUMBER OF VACUUM BREAKERS, N_{F6} AND ROOF DRAINS,[a] N_{F7}

Tank diameter D (feet)[b]	No. of vacuum breakers, N_{F6}		No. of roof drains, N_{F7} double-deck roofs[c]
	Pontoon roof	Double-deck roof	
50	1	1	1

TABLE 31.—TYPICAL NUMBER OF VACUUM BREAKERS, N_{F6} AND ROOF DRAINS,[a] N_{F7}—Continued

Tank diameter D (feet)[b]	No. of vacuum breakers, N_{F6}		No. of roof drains, N_{F7} double-deck roof[c]
	Pontoon roof	Double-deck roof	
100	1	1	1
150	2	2	2
200	3	2	3
250	4	3	5
300	5	3	7
350	6	4	[d]
400	7	4	[d]

[a] This table should not supersede information based on actual tank data.

[b] If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

[c] Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs, and are typically left open.

[d] For tanks more than 300 feet in diameter, actual tank data or the manufacturer's recommendations may be needed for the number of roof drains.

TABLE 32.—TYPICAL NUMBER OF ROOF LEGS,[a] N_{F8}

Tank diameter D (feet)[b]	Pontoon roof		No. of legs on double-deck roof
	No. of pontoon legs	No. of center legs	
30	4	2	6
40	4	4	7
50	6	6	8
60	9	7	10
70	13	9	13
80	15	10	16
90	16	12	20
100	17	16	25
110	18	20	29
120	19	24	34
130	20	28	40
140	21	33	46
150	23	38	52
160	26	42	58
170	27	49	66
180	28	56	74
190	29	62	82
200	30	69	90
210	31	77	98
220	32	83	107
230	33	92	115
240	34	101	127
250	34	109	138
260	36	118	149
270	36	128	162
280	37	138	173
290	38	148	186
300	38	156	200
310	39	168	213
320	39	179	226
330	40	190	240
340	41	202	255
350	42	213	270
360	44	226	285
370	45	238	300
380	46	252	315
390	47	266	330
400	48	281	345

[a] This table should not supersede information based on actual tank data.

[b] If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

TABLE 33.—SATURATION FACTORS

Cargo carrier	Mode of operation	S factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00

TABLE 34. FRACTION MEASURED (F_m) AND FRACTION EMITTED (F_e) FOR HAP COMPOUNDS IN WASTEWATER STREAMS

Chemical name	CAS Number	F_m	F_e
Acetaldehyde	75070	1.00	0.48
Acetonitrile	75058	0.99	0.36
Acetophenone	98862	0.31	0.14
Acrolein	107028	1.00	0.43
Acrylonitrile	107131	1.00	0.43
Allyl chloride	107051	1.00	0.89
Benzene	71432	1.00	0.80
Benzyl chloride	100447	1.00	0.47
Biphenyl	92524	0.86	0.45
Bromoform	75252	1.00	0.49
Butadiene (1,3-)	106990	1.00	0.98
Carbon disulfide	75150	1.00	0.92
Carbon tetrachloride	56235	1.00	0.94
Chlorobenzene	108907	0.96	0.73
Chloroform	67663	1.00	0.78
Chloroprene (2-Chloro-1,3-butadiene)	126998	1.00	0.68
Cumene	98828	1.00	0.88
Dichlorobenzene (p-)	106467	1.00	0.72
Dichloroethane (1,2-) (Ethylene dichloride)	107062	1.00	0.64
Dichloroethyl ether (Bis(2-Chloroethyl ether))	111444	0.76	0.21
Dichloropropene (1,3-)	542756	1.00	0.76
Diethyl sulfate	64675	0.0025	0.11
Dimethyl sulfate	77781	0.085	0.079
Dimethylaniline (N,N-)	121697	0.00080	0.34
Dimethylhydrazine (1,1-)	57147	0.38	0.054
Dinitrophenol (2,4-)	51285	0.0077	0.050
Dinitrotoluene (2,4-)	121142	0.085	0.18
Dioxane (1,4-) (1,4-Diethyleneoxide)	123911	0.87	0.18
Epichlorohydrin(1-Chloro-2,3-epoxypropane)	106898	0.94	0.35
Ethyl acrylate	140885	1.00	0.46
Ethylbenzene	100414	1.00	0.83
Ethyl chloride (Chloroethane)	75003	1.00	0.90
Ethylene dibromide (Dibromomethane)	106934	1.00	0.57
Ethylene glycol dimethyl ether	110714	0.86	0.32
Ethylene glycol monobutyl ether acetate	112072	0.043	0.067
Ethylene glycol monomethyl ether acetate	110496	0.093	0.048
Ethylene oxide	75218	1.00	0.50
Ethylidene dichloride (1,1-Dichloroethane)	75343	1.00	0.79
Hexachlorobenzene	118741	0.97	0.64
Hexachlorobutadiene	87683	0.88	0.86
Hexachloroethane	67721	0.50	0.85
Hexane	110543	1.00	1.00
Isophorone	78591	0.47	0.11
Methanol	67561	0.85	0.17
Methyl bromide (Bromomethane)	74839	1.00	0.85
Methyl chloride (Chloromethane)	74873	1.00	0.84
Methyl ethyl ketone (2-Butanone)	78933	0.99	0.48
Methyl isobutyl ketone (Hexone)	108101	0.98	0.53
Methyl methacrylate	80626	1.00	0.37
Methyl tert-butyl ether	1634044	1.00	0.57
Methylene chloride (Dichloromethane)	75092	1.00	0.77
Naphthalene	91203	0.99	0.51
Nitrobenzene	98953	0.39	0.23
Nitropropane (2-)	79469	0.99	0.44
Phosgene	75445	1.00	0.87
Propionaldehyde	123386	1.00	0.41
Propylene dichloride (1,2-Dichloropropane)	78875	1.00	0.72
Propylene oxide	75569	1.00	0.60
Styrene	100425	1.00	0.80

TABLE 34. FRACTION MEASURED (F_m) AND FRACTION EMITTED (F_c) FOR HAP COMPOUNDS IN WASTEWATER STREAMS—Continued

Chemical name	CAS Number[a]	F_m	F_c
Tetrachloroethane (1,1,2,2-)	79345	1.00	0.46
Tetrachloroethylene (Perchloroethylene)	127184	1.00	0.92
Toluene	108883	1.00	0.80
Toluidine (o-)	95534	0.15	0.052
Trichlorobenzene (1,2,4-)	120821	1.00	0.64
Trichloroethane (1,1,1-) (Methyl chloroform)	71556	1.00	0.91
Trichloroethane (1,1,2-) (Vinyl Trichloride)	79005	0.98	0.60
Trichloroethylene	79016	1.00	0.87
Trichlorophenol (2,4,5-)	95954	1.00	0.086
Triethylamine	121448	1.00	0.38
Trimethylpentane (2,2,4-)	540841	1.00	1.00
Vinyl acetate	108054	1.00	0.59
Vinyl chloride (Chloroethylene)	75014	1.00	0.97
Vinylidene chloride (1,1-Dichloroethylene)	75354	1.00	0.94
Xylene (m-)	108383	1.00	0.82
Xylene (o-)	95476	1.00	0.79
Xylene (p-)	106423	1.00	0.82

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

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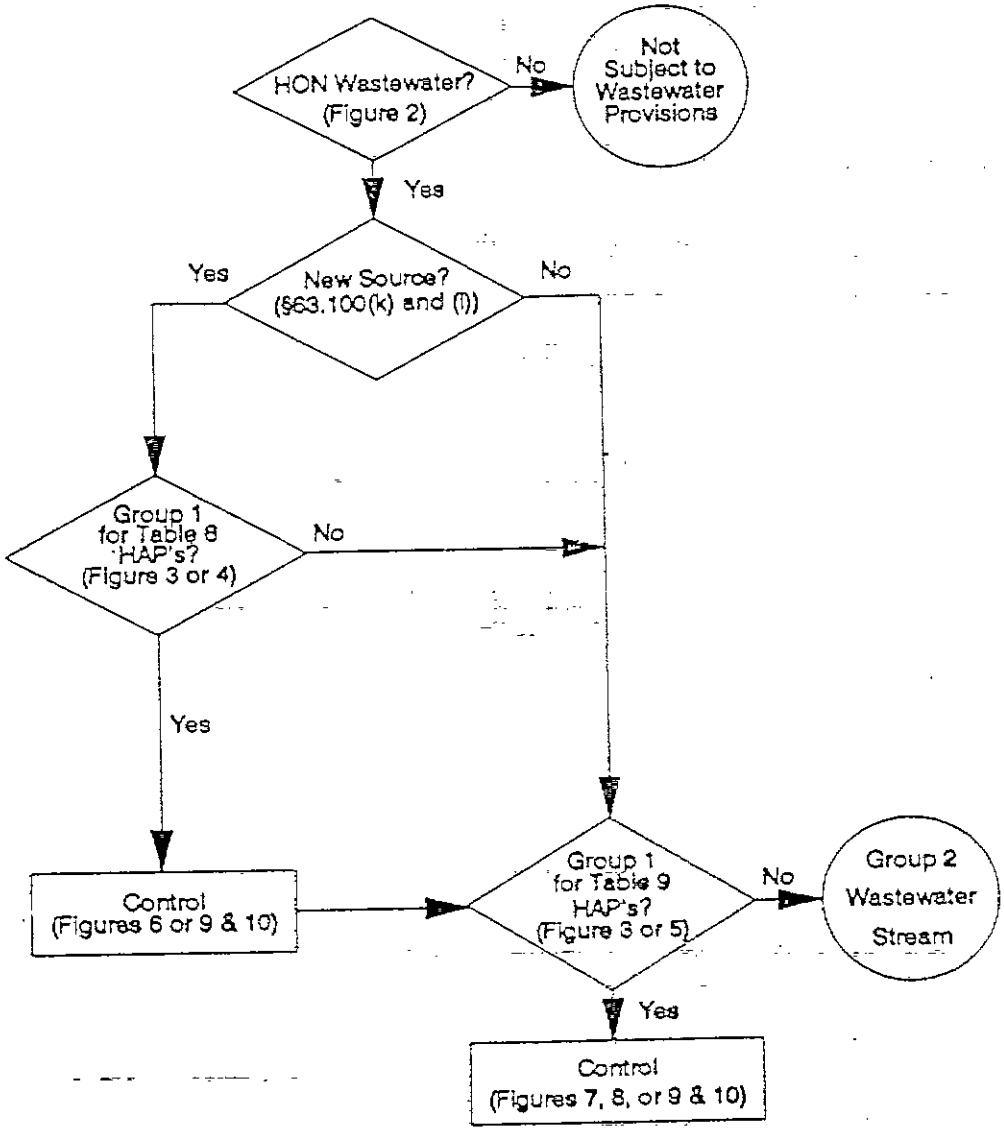
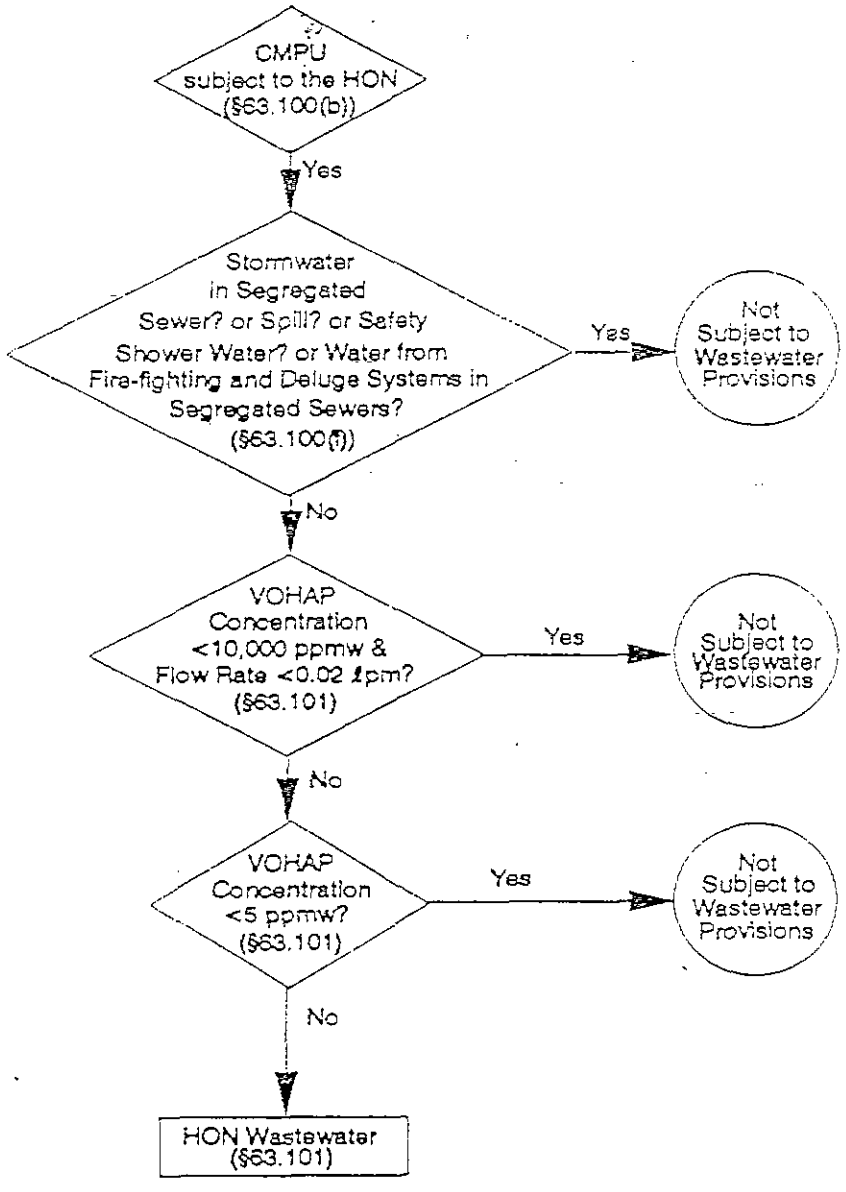


Figure 1. Overview of HON Wastewater Provisions



CMPU = Chemical Manufacturing Process Unit

Figure 2. HON Wastewater Determination

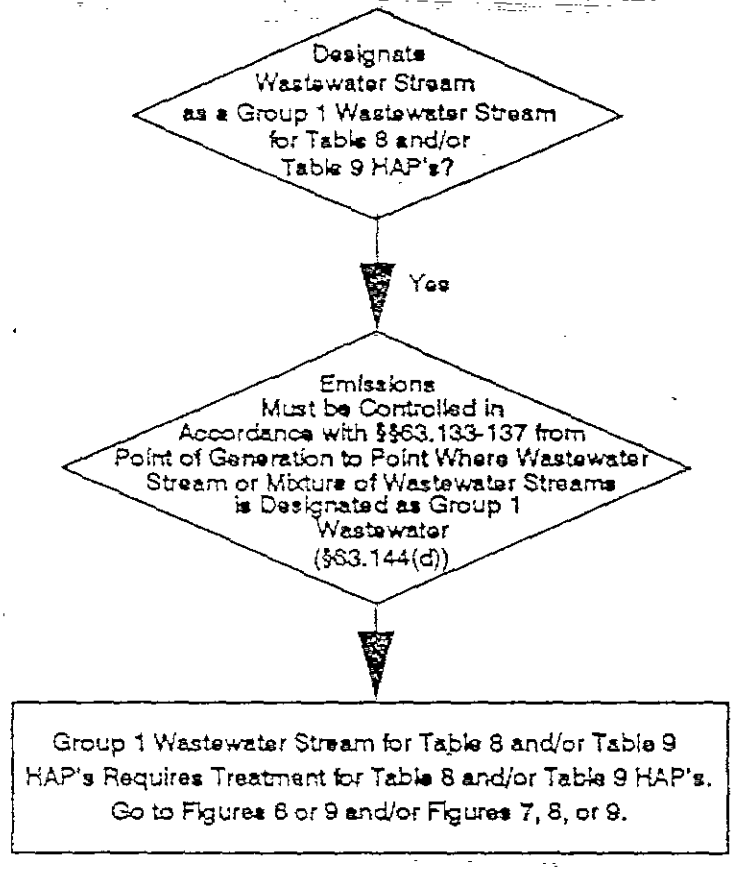


Figure 3. Designation of Group 1 Wastewater Streams (Refer to §§ 63.132(c) and 63.144(d))

Determine the VOHAP concentration and flow rate either (1) at the point of generation or (2) downstream of the point of generation.

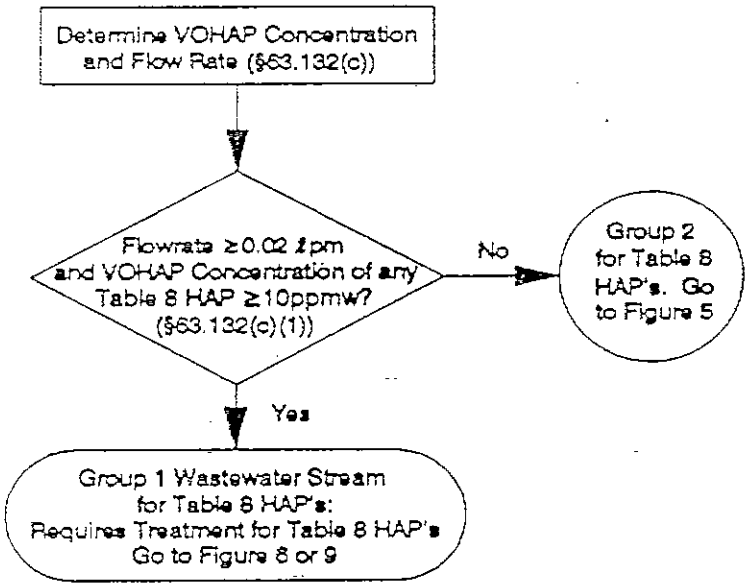


Figure 4. Group 1 and Group 2 Determinations for Wastewater Streams—Table 8 HAP's (Refer to §§ 63.132(d) and 63.138(b))

Determine the VOHAP concentration and flow rate either (1) at the point of generation or (2) downstream of the point of generation.

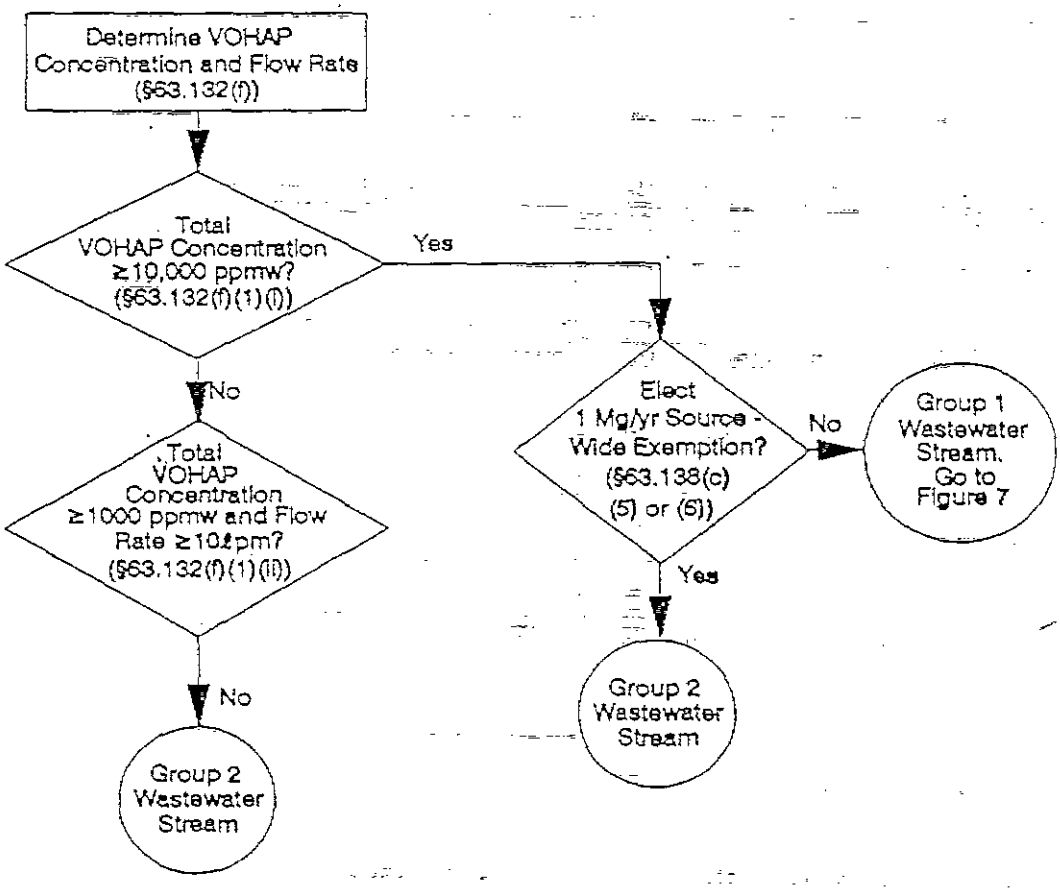


Figure 5. Group 1 and Group 2 Determinations for Wastewater Streams—Table 9 HAP's (Refer to §§ 63.132(f) and 63.138(c))

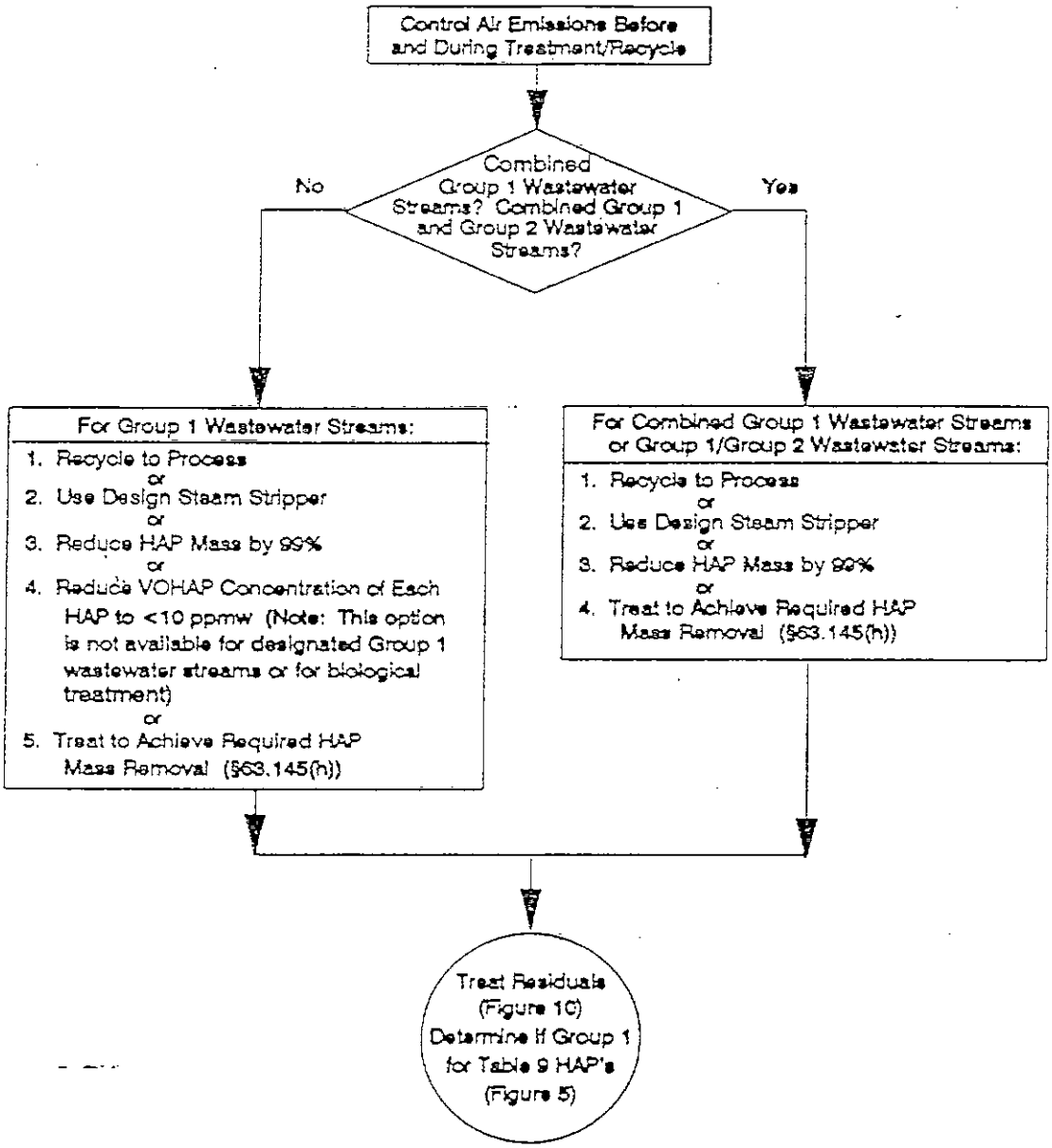


Figure 6. Compliance Options for Control of Table 8 HAP's [Refer to § 63.138(b)]

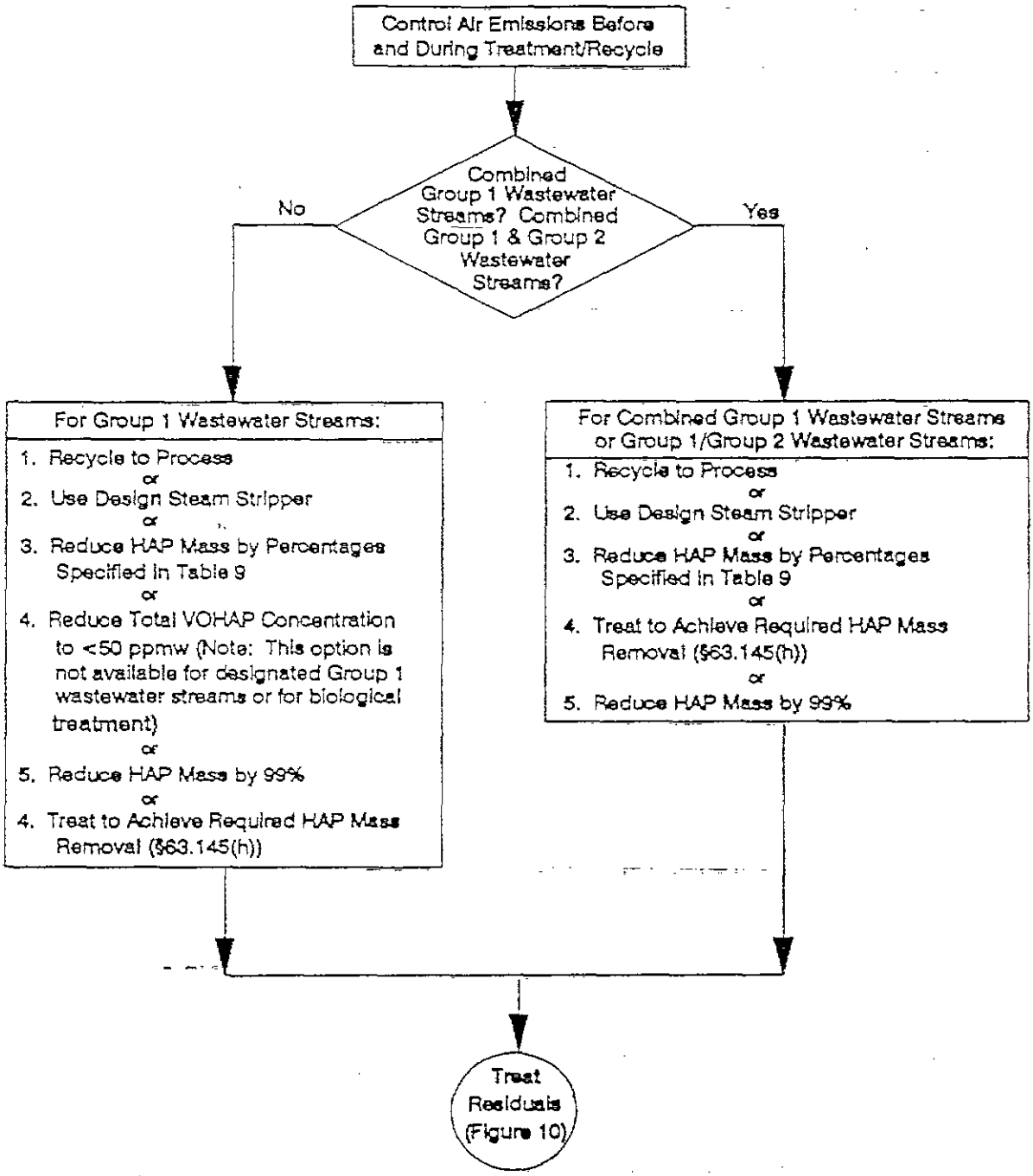


Figure 7. Compliance Options for Control of Table 9 HAP's (Refer to § 63.138(c))

Note: Non-process wastewater streams and wastewater streams from other chemical manufacturing process units cannot be combined when using this option. This option may not be used for designated Group 1 wastewater streams.

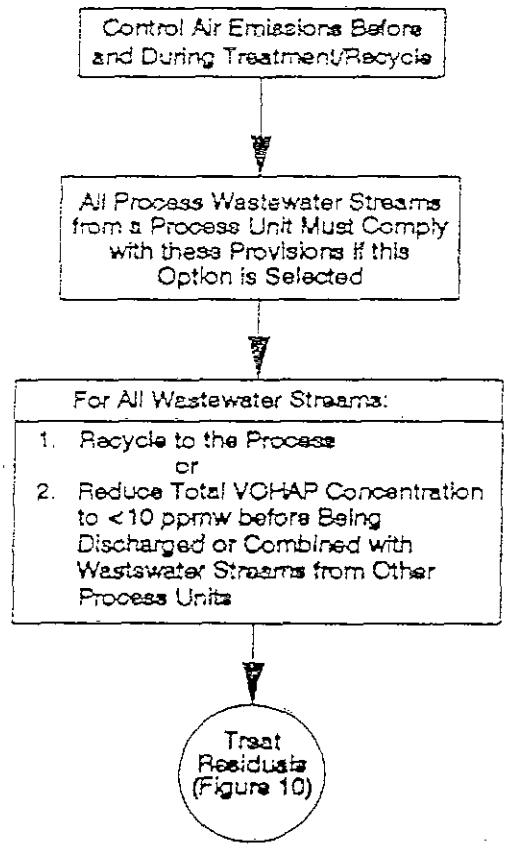


Figure 8. Process Unit Alternative Compliance Option (for existing sources only) (Refer to § 63.138[d])

For control of Table 8 and Table 9 HAP's:

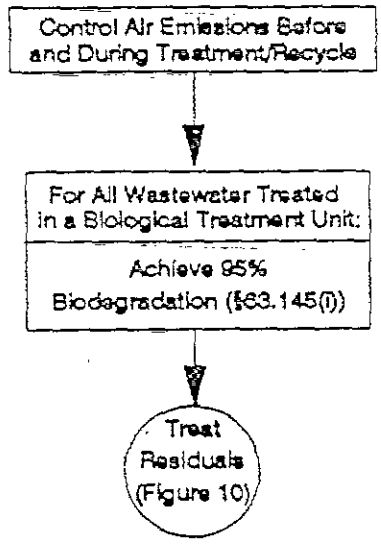


Figure 9. Biological Treatment Alternative Compliance Option (for new and existing sources) (Refer to §63.138(e))

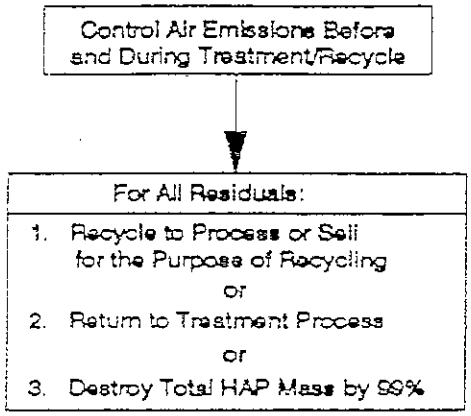


Figure 10. Compliance Options for Control of Residuals (Refer to § 63.138(h))

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Subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

§ 63.160 Applicability and designation of source.

(a) The provisions of this subpart apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or systems required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific subpart in 40 CFR part 63.

(b) While the provisions of this subpart are effective, equipment to which this subpart applies that are also subject to the provisions of:

(1) 40 CFR part 60 of this chapter, will be required to comply only with the provisions of this subpart.

(2) 40 CFR part 61 of this chapter, will be required to comply only with the provisions of this subpart.

(c) The provisions in § 63.1(a)(3) of subpart A of this part do not alter the provisions in paragraph (b) of this section.

§ 63.161 Definitions.

All terms used in this subpart shall have the meaning given them in the Act and in this section as follows, except as provided in any subpart that references this subpart.

Batch process means a process in which the equipment is fed intermittently or discontinuously. Processing then occurs in this equipment after which the equipment is generally emptied. Examples of industries that use batch processes include pharmaceutical production and pesticide production.

Batch product-process equipment train means the collection of equipment (e.g., connectors, reactors, valves, pumps, etc.) configured to produce a specific product or intermediate by a batch process.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

Closed-loop system means an enclosed system that returns process fluid to the process and is not vented to the atmosphere except through a closed-vent system.

Closed-vent system means a system that is not open to the atmosphere and that is composed of piping, ductwork, connections and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back into the process.

Compliance date means the dates specified in § 63.100(k) or § 63.100(l)(3) of subpart F of this part for process units subject to subpart F of this part; the dates specified in § 63.190(e) of subpart I of this part for process units subject to subpart I of this part. For sources subject to other subparts in 40 CFR part 63 that reference this subpart, compliance date will be defined in those subparts.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are not inaccessible, glass, or glass-lined as described in § 63.174(h) of this subpart.

Control device means any equipment used for recovering or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, flares, boilers, and process heaters.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system that does not meet the definition of hard-piping.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by this subpart.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere.

Hard-piping means tubing that is manufactured and properly installed using good engineering judgement and standards, such as ANSI B31–3.

In food/medical service means that a piece of equipment in organic hazardous air pollutant service contacts a process stream used to manufacture a Food and Drug Administration regulated product where leakage of a barrier fluid into the process stream would cause any of the following:

(1) A dilution of product quality so that the product would not meet written specifications,

(2) An exothermic reaction which is a safety hazard,

(3) The intended reaction to be slowed down or stopped, or

(4) An undesired side reaction to occur.

In gas/vapor service means that a piece of equipment in organic hazardous air pollutant service contains a gas or vapor at operating conditions.

In heavy liquid service means that a piece of equipment in organic hazardous air pollutant service is not in gas/vapor service or in light liquid service.

In light liquid service means that a piece of equipment in organic hazardous air pollutant service contains a liquid that meets the following conditions:

(1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 °C,

(2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 °C is equal to or greater than 20 percent by weight of the total process stream, and

(3) The fluid is a liquid at operating conditions.

(Note. Vapor pressures may be determined by the methods described in 40 CFR 60.485(e)(1).)

In liquid service means that a piece of equipment in organic hazardous air pollutant service is not in gas/vapor service.

In organic hazardous air pollutant or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of § 63.180(d) of this subpart. The provisions of § 63.180(d) of this subpart also specify how to determine that a piece of equipment is not in organic HAP service.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals below ambient pressure.

In volatile organic compound or *in VOC service* means, for the purposes of this subpart, that:

(1) The piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight (see 40 CFR 60.2 for the definition of VOC, and 40 CFR 60.485(d) to determine whether a piece of equipment is not in VOC service); and

(2) The piece of equipment is not in heavy liquid service as defined in 40 CFR 60.481.

In-situ sampling systems means nonextractive samplers or in-line samplers.

Initial start-up means the first time a new or reconstructed source begins production. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups (as defined in this section) of process units following malfunctions or process unit shutdowns.

Instrumentation system means a group of equipment components used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (e.g., composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in instrumentation systems; however, other types of equipment may also be included in these systems. Only valves nominally 0.5 inches and smaller, and connectors nominally 0.75 inches and smaller in diameter are considered instrumentation systems for the purposes of this subpart. Valves greater than nominally 0.5 inches and connectors greater than nominally 0.75 inches associated with instrumentation systems are not considered part of instrumentation systems and must be monitored individually.

Liquids dripping means any visible leakage from the seal including dripping, spraying, misting, clouding, and ice formation. Indications of liquid dripping include puddling or new stains that are indicative of an existing evaporated drip.

Nonrepairable means that it is technically infeasible to repair a piece of equipment from which a leak has been detected without a process unit shutdown.

Open-ended valve or line means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Polymerizing monomer means a molecule or compound usually containing carbon and of relatively low molecular weight and simple structure (e.g., hydrogen cyanide, acrylonitrile, styrene), which is capable of conversion to polymers, synthetic resins, or elastomers by combination with itself due to heat generation caused by a pump mechanical seal surface, contamination by a seal fluid (e.g., organic peroxides or chemicals that will form organic peroxides), or a combination of both with the resultant polymer buildup causing rapid mechanical seal failure.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device. This release can be one release or a series of releases over a short time period due to a malfunction in the process.

Process unit means a chemical manufacturing process unit as defined in subpart F of this part, a process subject to the provisions of subpart I of this part, or a process subject to another subpart in 40 CFR part 63 that references this subpart.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a process unit shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown, is not a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process unit shutdowns.

Repaired means that equipment is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart.

Screwed connector means a threaded pipe fitting where the threads are cut on the pipe wall and the fitting requires only two pieces to make the connection (i.e., the pipe and the fitting).

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Set pressure means the pressure at which a properly operating pressure relief device begins to open to relieve atypical process system operating pressure.

Start-up means the setting in operation of a piece of equipment or a control device that is subject to this subpart.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels serve several purposes including equalization of load, mixing, recycle, and emergency supply.

§ 63.162 Standards: General.

(a) Compliance with this subpart will be determined by review of the records required by § 63.181 of this subpart and the reports required by § 63.182 of this subpart, review of performance test results, and by inspections.

(b) (1) An owner or operator may request a determination of alternative means of emission limitation to the requirements of §§ 63.163 through 63.169, and §§ 63.172 through 63.174 of this subpart as provided in § 63.177.

(2) If the Administrator makes a determination that a means of emission limitation is a permissible alternative to the requirements of §§ 63.163 through 63.170, and §§ 63.172 through 63.174 of this subpart, the owner or operator shall comply with the alternative.

(c) Each piece of equipment in a process unit to which this subpart applies shall be identified such that it can be distinguished readily from equipment that is not subject to this subpart. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(d) Equipment that is in vacuum service is excluded from the requirements of this subpart.

(e) Equipment that is in organic HAP service less than 300 hours per calendar year is excluded from the requirements of §§ 63.163 through 63.174 of this subpart and § 63.178 of this subpart if it is identified as required in § 63.181(j) of this subpart.

(f) When each leak is detected as specified in §§ 63.163 and 63.164; §§ 63.168 and 63.169; and §§ 63.172 through 63.174 of this subpart, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve or connector may be removed after it has been monitored as specified in § 63.168(f)(3), § 63.174(e), and § 63.175(e)(7)(i)(D) of this subpart, and no leak has been detected during the follow-up monitoring.

(3) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

§ 63.163 Standards: Pumps in light liquid service.

(a) The provisions of this section apply to each pump that is in light liquid service.

(1) The provisions are to be implemented on the dates specified in the specific subpart in 40 CFR part 63 that references this subpart in the phases specified below:

(i) For each group of existing process units at existing sources subject to the provisions of subparts F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2½ years after the compliance date.

(ii) For new sources subject to the provisions of subparts F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(2) The owner or operator of a source subject to the provisions of subparts F or I of this part may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(b) (1) The owner or operator of a process unit subject to this subpart shall monitor each pump monthly to detect leaks by the method specified in § 63.180(b) of this subpart and shall comply with the requirements of paragraphs (a) through (d) of this section, except as provided in § 63.162(b) of this subpart and paragraphs (e) through (i) of this section.

(2) The instrument reading, as determined by the method as specified in § 63.180(b) of this subpart, that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 5,000 parts per million or greater.

(iii) For Phase III, an instrument reading of:

(A) 5,000 parts per million or greater for pumps handling polymerizing monomers;

(B) 2,000 parts per million or greater for pumps in food/medical service; and

(C) 1,000 parts per million or greater for all other pumps.

(3) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (c)(3) of this section or § 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(i) Tightening of packing gland nuts.

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(3) For pumps in Phase III to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.

(d) (1) The owner or operator shall decide no later than the first monitoring period whether to calculate percent leaking pumps on a process unit basis or on a source-wide basis. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.

(2) If, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the owner or operator shall implement a quality improvement program for pumps that complies with the requirements of § 63.176 of this subpart.

(3) The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process unit within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(4) Percent leaking pumps shall be determined by the following equation:

$$\%P_L=((P_L-P_S)/(P_T-P_S))\times 100$$

where:

$\%P_L$=Percent leaking pumps

P_L=Number of pumps found leaking as determined through monthly monitoring as required in paragraphs (b)(1) and (b)(2) of this section.

P_T=Total pumps in organic HAP service, including those meeting the criteria in paragraphs (e) and (f) of this section.

P_S=Number of pumps leaking within 1 month of start-up during the current monitoring period.

(e) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (a) through (d) of this section, provided the following requirements are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(i) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in § 63.180(b) of this subpart to determine if there is a leak of organic HAP in the barrier fluid.

(ii) If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (e)(3) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(6) (i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(6)(i) of this section, or if, based on the criteria established in paragraph (e)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(f) Any pump that is designed with no externally actuated shaft penetrating the pump housing shall comply with the requirements of paragraph (b)(3) of this section and is exempt from the other requirements in paragraphs (a) through (d) of this section.

(g) Any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of § 63.172 of this subpart is exempt from the requirements of paragraphs (b) through (e) of this section.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(3) and (e)(4) of this section, and the daily requirements of paragraph (e)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

(i) If more than 90 percent of the pumps at a process unit meet the criteria in either paragraph (e) or (f) of this section, the process unit is exempt from the requirements of paragraph (d) of this section.

§ 63.164 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in § 63.162(b) of this subpart and paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or

(3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(c) The barrier fluid shall not be in light liquid organic HAP service.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Each sensor as required in paragraph (d) of this section shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) through (f) of this section if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal back to the process or to a control device that complies with the requirements of § 63.172 of this subpart.

(i) Any compressor that is designated, as described in § 63.181(b)(2)(ii) of this subpart, to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in § 63.180(c) of this subpart; and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

§ 63.165 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in paragraph (b) of this section, as measured by the method specified in § 63.180(c) of this subpart.

(b) (1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 63.171 of this subpart.

(2) No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in § 63.180(c) of this subpart.

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in § 63.172 of this subpart is exempt from the requirements of paragraphs (a) and (b) of this section.

(d) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (e) of this section.

(e) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 63.171 of this subpart.

§ 63.166 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in § 63.162(b) of this subpart. This system shall collect or capture the sample purge for return to the process. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of § 63.172 of this subpart.

(c) *In-situ* sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 63.167 Standards: Open-ended valves or lines.

(a) (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §§ 63.162(b) of this subpart and paragraph (d) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the

open-ended valve or line, or during maintenance or repair.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

§ 63.168 Standards: Valves in gas/vapor service and in light liquid service.

(a) The provisions of this section apply to valves that are either in gas service or in light liquid service.

(1) The provisions are to be implemented on the dates set forth in the specific subpart in 40 CFR part 63 that references this subpart as specified in paragraphs (a)(1)(i), (a)(1)(ii), or (a)(1)(iii) of this section.

(i) For each group of existing process units at existing sources subject to the provisions of subpart F or I of this part, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2½ years after the compliance date.

(ii) For new sources subject to the provisions of subpart F or I of this part, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(iii) Sources subject to other subparts in 40 CFR part 63 that reference this subpart shall comply on the dates specified in the applicable subpart.

(2) The owner or operator of a source subject to this subpart may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(b) The owner or operator of a source subject to this subpart shall monitor all valves, except as provided in § 63.162(b) of this subpart and paragraphs (h) and (i) of this section, at the intervals specified in paragraphs (c) and (d) of this section and shall comply with all other provisions of this section, except as provided in § 63.171, § 63.177, § 63.178, and § 63.179 of this subpart.

(1) The valves shall be monitored to detect leaks by the method specified in § 63.180(b) of this subpart.

(2) The instrument reading that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 500 parts per million or greater.

(iii) For Phase III, an instrument reading of 500 parts per million or greater.

(c) In Phases I and II, each valve shall be monitored quarterly.

(d) In Phase III, the owner or operator shall monitor valves for leaks at the intervals specified below:

(1) At process units with 2 percent or greater leaking valves, calculated according to paragraph (e) of this section, the owner or operator shall either:

(i) Monitor each valve once per month; or

(ii) Within the first year after the onset of Phase III, implement a quality improvement program for valves that complies with the requirements of § 63.175 (d) or (e) of this subpart and monitor quarterly.

(2) At process units with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (d)(3) and (d)(4) of this section.

(3) At process units with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters.

(4) At process units with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.

(e)(1) Percent leaking valves at a process unit shall be determined by the following equation:

$$\%V_L=((V_L/(V_T+V_C))\times 100$$

where:

$\%V_L$=Percent leaking valves.

V_L=Number of valves found leaking excluding nonrepairables as provided in paragraph (e)(3)(i) of this section.

V_T=Total valves monitored, in a monitoring period excluding valves monitored as required by paragraph (f)(3) of this section.

V_C=Optional credit for removed valves = 0.67 × net number (i.e., total removed—total added) of valves in organic HAP service removed from process unit after the date set forth in § 63.100(k) of subpart F for existing process units, and after the date of initial start-up for new sources. If credits are not taken, then V_C=0.

(2) For use in determining monitoring frequency, as specified in paragraph (d) of this section, the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs.

(3) (i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(3)(ii) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process unit, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.

(f) (1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in § 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair.

(g) First attempts at repair include, but are not limited to, the following practices where practicable:

(1) Tightening of bonnet bolts,

(2) Replacement of bonnet bolts,

(3) Tightening of packing gland nuts, and

(4) Injection of lubricant into lubricated packing.

(h) Any valve that is designated, as described in § 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor valve is exempt from the requirements of paragraphs (b) through (f) of this section if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b) through (d) of this section; and

(2) The owner or operator of the valve has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(i) Any valve that is designated, as described in § 63.181(b)(7)(ii) of this subpart, as a difficult-to-monitor valve is exempt from the requirements of paragraphs (b) through (d) of this section if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the valve is located is an existing source or the owner or operator designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(j) Any equipment located at a plant site with fewer than 250 valves in organic HAP service is exempt from the requirements for monthly monitoring and a quality improvement program specified in paragraph (d)(1) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraphs (d)(3) or (d)(4) of this section except as provided in paragraphs (h) and (i) of this section.

§ 63.169 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

(a) Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in § 63.180(b) of this subpart if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, except as provided in § 63.162(b) of this subpart. If a potential leak in an instrumentation system is repaired as required in paragraphs (c) and (d) of this section, it is not necessary to monitor the system for leaks by the method specified in § 63.180(b) of this subpart.

(b) If an instrument reading of 10,000 parts per million or greater for agitators, 2,000 parts per million or greater for pumps, or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) For instrumentation systems that are not monitored by the method specified in § 63.180(b) of this subpart, repaired shall mean that the visual, audible, olfactory, or other indications of a leak have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(d) First attempts at repair include, but are not limited to, the best practices described under § 63.168(g) of this subpart.

§ 63.170 Standards: Surge control vessels and bottoms receivers.

Each surge control vessel and bottoms receiver that is not routed back to the process shall be equipped with a closed-vent system that routes the organic vapors vented from the vessel back to the process or to a control device that complies with the requirements in § 63.172 of this subpart, except as provided in § 63.162(b) of this subpart.

§ 63.171 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.

(c) Delay of repair for valves, connectors, and agitators is also allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with § 63.172 of this subpart.

(d) Delay of repair for pumps is also allowed if:

(1) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of § 63.176(d) of this subpart will provide better performance on:

(i) A dual mechanical seal system that meets the requirements of § 63.163(e) of this subpart,

(ii) a pump that meets the requirements of § 63.163(f) of this subpart, or

(iii) a closed-vent system and control device that meets the requirements of § 63.163(g) of this subpart; and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

§ 63.172 Standards: Closed-vent systems and control devices.

(a) Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in § 63.162(b) of this subpart.

(b) Vapor recovery systems (e.g., condensers and adsorbers) shall be designed and operated to recover the organic emissions vented to them with an efficiency of 95 percent or greater.

(c) Enclosed combustion devices shall be designed and operated to reduce the organic HAP emissions or VOC emissions vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of § 63.11(b) of subpart A of this part.

(e) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.

(Note: The intent of this provision is to ensure proper operation and maintenance of the control device.)

(f) Except as provided in paragraphs (k) and (l) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the closed-vent system is constructed of hard-piping, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed-vent system is constructed of duct work, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and

(ii) Conduct annual inspections according to the procedures in paragraph (g) of this section.

(g) Each closed-vent system shall be inspected according to the procedures in § 63.180(b) of this subpart.

(h) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (i) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(i) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (j)(1) or (j)(2) of this section, except as provided in paragraph (j)(3) of this section.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. Records shall be generated as specified in § 63.118(a)(3) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(3) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(k) Any parts of the closed-vent system that are designated, as described in paragraph 63.181(b)(7)(i), as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(l) Any parts of the closed-vent system that are designated, as described in § 63.181 (b)(7)(i) of this subpart, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1) and (f)(2) of this section if:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(m) Whenever organic-HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating.

§ 63.173 Standards: Agitators in gas/vapor service and in light liquid service.

(a) (1) Each agitator shall be monitored monthly to detect leaks by the methods specified in § 63.180(b) of this subpart, except as provided in § 63.162(b) of this subpart.

(2) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(b) (1) Each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator.

(2) If there are indications of liquids dripping from the agitator, a leak is detected.

(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (d)(6) of this section are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid organic HAP service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each agitator is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal.

(i) If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the agitator shall be monitored as specified in § 63.180(b) of this subpart to determine the presence of organic HAP in the barrier fluid.

(ii) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in paragraph (d)(3) of this section is observed daily or is equipped with an alarm unless the agitator is located within the boundary of an unmanned plant site.

(6) (i) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the agitator seal exceed the criteria established in paragraph (d)(6)(i) of this section, or if, based on the criteria established in paragraph (d)(6)(i) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from paragraphs (a) through (c) of this section.

(f) Any agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of § 63.172 of this subpart is exempt from the requirements of paragraphs (a) through (c) of this section.

(g) Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(1) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each agitator is visually inspected as often as practicable and at least monthly.

§ 63.174 Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in § 63.162(b) of this subpart, and in paragraphs (f) through (h) of this section, at the intervals specified in paragraph (b) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in § 63.180(b) of this subpart.

(2) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(b) The owner or operator shall monitor for leaks at the intervals specified in either paragraph (b)(1) or (b)(2) of this section and in paragraph (b)(3) of this section.

(1) For each group of existing process units within an existing source, within the first 12 months after the compliance date, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(2) For new sources, within the first 12 months after initial start-up or within 12 months after the date of promulgation of a specific subpart that references this subpart, whichever is later, the owner or operator shall monitor all connectors, except as provided in paragraphs (f) through (h) of this section.

(3) After conducting the initial survey required in paragraph (b)(1) or (b)(2) of this section, the owner or operator shall perform all subsequent monitoring of connectors at the frequencies specified in paragraphs (b)(3)(i) through (b)(3)(v) of this section, except as provided in paragraph (c)(2) of this section:

(i) Once per calendar year, if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period.

(ii) Once every 2 calendar years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. An owner or operator may comply with this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period.

(iii) If the owner or operator of a process unit in a biennial leak detection and repair program calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the owner or operator may monitor the connectors one time every 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years.

(iv) If a process unit complying with the requirements of paragraph (b) of this section using a 4-year monitoring interval program has greater than or equal to 0.5 percent but less than 1 percent leaking connectors, the owner or operator shall increase the monitoring frequency to one time every 2 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(v) If a process unit complying with requirements of paragraph (b)(3)(iii) of this section using a 4-year monitoring interval program has 1 percent or greater leaking connectors, the owner or operator shall increase the monitoring frequency to one time per year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii) of this section when the percent leaking connectors decreases to less than 0.5 percent.

(c)(1)(i) Except as provided in paragraph (c)(1)(ii) of this section, each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks within the first 3 months after being returned to organic HAP service, including those determined to be nonrepairable prior to process unit shutdown. If the follow-up monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section, unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable for the purposes of paragraph (i)(2) of this section.

(ii) As an alternative to the requirements in paragraph (c)(1)(i) of this section, an owner or operator may choose to calculate percent leaking connectors for the monitoring periods described in paragraph (b) of this section, by setting the nonrepairable component, C_{AN}, in the equation in paragraph (i)(2) of this section to zero for all monitoring periods.

(iii) An owner or operator may switch alternatives described in paragraphs (c)(1) (i) and (ii) of this section at the end of the current monitoring period he is in, provided that it is reported as required in § 63.182 of this subpart and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.

(2) As an alternative to the requirements of paragraph (b)(3) of this section, each screwed connector 5.08 centimeters or less in nominal diameter installed in a process unit before December 31, 1992 for sources subject to subparts F and I of this part and before proposal of a subpart that references this subpart may:

(i) Comply with the requirements of § 63.169 of this subpart, and

(ii) Be monitored for leaks within the first 3 months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If the follow-up monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (g) of this section and in § 63.171 of this subpart. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(e) If a leak is detected, the connector shall be monitored for leaks within the first 3 months after its repair.

(f) Any connector that is designated, as described in § 63.181(b)(7)(i) of this subpart, as an unsafe-to-monitor connector is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with paragraphs (a) through (e) of this section; and

(2) The owner or operator has a written plan that requires monitoring of the connector as frequent as practicable during safe to monitor periods.

(g) Any connector that is designated, as described in § 63.181(b)(7)(iii) of this subpart, as an unsafe-to-repair connector is exempt from the requirements of paragraphs (a), (d), and (e) of this section if:

(1) The owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraph (d) of this section; and

(2) The connector will be repaired before the end of the next scheduled process unit shutdown.

(h) (1) Any connector that is inaccessible or is glass or glass-lined, is exempt from the monitoring requirements of paragraph (a) of this section and from the recordkeeping and reporting requirements of § 63.181 and § 63.182 of this subpart. An inaccessible connector is one that is:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible or glass or glass-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in § 63.171 of this subpart and paragraph (g) of this section.

(3) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(i) For use in determining the monitoring frequency, as specified in paragraph (b) of this section, the percent leaking connectors shall be calculated as specified in paragraphs (i)(1) and (i)(2) of this section.

(1) For the first monitoring period, use the following equation:

$$\%C_L = C_L/(C_t+C_C)\times 100$$

where:

$\%C_L$=Percent leaking connectors.

C_L=Number of connectors measured at 500 parts per million or greater, by the method specified in § 63.180(b) of this subpart.

C_t=Total number of monitored connectors in the process unit.

C_C=Optional credit for removed connectors=0.67×net (i.e., total removed − total added) number of connectors in organic HAP service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C=0.

(2) For subsequent monitoring periods, use the following equation:

$$\%C_L = [(C_L - C_{AN})/(C_t+C_C)]\times 100$$

where:

$\%C_L$=Percent leaking connectors.

C_L=Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in § 63.180(b) of this subpart.

C_{AN}=Number of allowable nonrepairable connectors, as determined by monitoring required in paragraphs (b)(3) and (c) of this section, not to exceed 2 percent of the total connector population, C_t.

C_t=Total number of monitored connectors, including nonrepairables, in the process unit.

C_C=Optional credit for removed connectors=0.67×net number (i.e., total removed − total added) of connectors in organic HAP service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then C_C=0.

(j) Optional credit for removed connectors. If an owner or operator eliminates a connector subject to monitoring under paragraph (b) of this section, the owner or operator may receive credit for elimination of the connector, as described in paragraph (i) of this section, provided the requirements in paragraphs (j)(1) through (j)(4) are met.

(1) The connector was welded after the date of proposal of the specific subpart that references this subpart.

(2) The integrity of the weld is demonstrated by monitoring it according to the procedures in § 63.180(b) of this subpart or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method.

(3) Welds created after the date of proposal but before the date of promulgation of a specific subpart that references this subpart are monitored or tested by 3 months after the compliance date specified in the applicable subpart.

(4) Welds created after promulgation of the subpart that references this subpart are monitored or tested within 3 months after being welded.

(5) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of this subpart.

§ 63.175 Quality improvement program for valves.

(a) In Phase III, an owner or operator may elect to comply with one of the alternative quality improvement programs specified in paragraphs (d) and (e) of this section. The decision to use one of these alternative provisions to comply with the requirements of § 63.168(d)(1)(ii) of this subpart must be made during the first year of Phase III for existing process units and for new process units.

(b) An owner or operator of a process unit subject to the requirements of paragraphs (d) or (e) of this section shall comply with those requirements until the process unit has fewer than 2 percent leaking valves, calculated as a rolling average of 2 consecutive quarters, as specified in § 63.168(e) of this subpart.

(c) After the process unit has fewer than 2 percent leaking valves, the owner or operator may elect to comply with the requirements in § 63.168 of this subpart, to continue to comply with the requirements in paragraph (e) [or (d), if appropriate] of this section, or comply with both the requirements in § 63.168 and § 63.175.

(1) If the owner or operator elects to continue the quality improvement program, the owner or operator is exempt from the requirements for performance trials as specified in paragraph (e)(6) of this section, or further progress as specified in

paragraph (d)(4) of this section, as long as the process unit has fewer than 2 percent leaking valves calculated according to § 63.168(e).

(2) If the owner or operator elects to comply with both paragraph (e) of this section and § 63.168 of this subpart, he may also take advantage of the lower monitoring frequencies associated with lower leak rates in § 63.168 (d)(2), (d)(3), and (d)(4) of this subpart.

(3) If the owner or operator elects not to continue the quality improvement program, the program is no longer an option if the process unit again exceeds 2 percent leaking valves, and in such case, monthly monitoring will be required.

(d) The following requirements shall be met if an owner or operator elects to use a quality improvement program to demonstrate further progress:

(1) The owner or operator shall continue to comply with the requirements in § 63.168 of this subpart except each valve shall be monitored quarterly.

(2) The owner or operator shall collect the following data, and maintain records as required in § 63.181(h)(1) of this subpart, for each valve in each process unit subject to the quality improvement program:

(i) The maximum instrument reading observed in each monitoring observation before repair, the response factor for the stream if appropriate, the instrument model number, and date of the observation.

(ii) Whether the valve is in gas or light liquid service.

(iii) If a leak is detected, the repair methods used and the instrument readings after repair.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(4) The owner or operator must demonstrate progress in reducing the percent leaking valves each quarter the process unit is subject to the requirements of paragraph (d) of this section, except as provided in paragraphs (d)(4)(ii) and (d)(5) of this section.

(i) Demonstration of progress shall mean that for each quarter there is at least a 10-percent reduction in the percent leaking valves from the percent leaking valves determined for the preceding monitoring period. The percent leaking valves shall be calculated as a rolling average of two consecutive quarters of monitoring data. The percent reduction shall be calculated using the rolling average percent leaking valves, according to the following:

$$\%LV_R = (\%LV_{AVG1} - \%LV_{AVG2} / \%LV_{AVG1} \times 100$$

where:

$\%LV_R$=Percent leaking valve reduction.

$\%LV_{AVG1}=(\%V_{Li} + \%V_{Li+1})/2$.

$\%LV_{AVG2}=(\%V_{Li-1} + \%V_{Li-2})/2$.

where:

$\%V_{Li}$, $\%V_{Li-1}$, $\%V_{Li-2}$

are percent leaking valves calculated for subsequent monitoring periods, i, i-1, i-2.

(ii) An owner or operator who fails for two consecutive rolling averages to demonstrate at least a 10-percent reduction per quarter in percent leaking valves, and whose overall average percent reduction based on two or more rolling averages is less than 10 percent per quarter, shall either comply with the requirements in § 63.168(d)(1)(i) of this subpart using monthly monitoring or shall comply using a quality improvement program for technology review as specified in paragraph (e) of this section. If the owner or operator elects to comply with the requirements of paragraph (e) of this section, the schedule for performance trials and valve replacements remains as specified in paragraph (e) of this section.

(iii) As an alternative to the provisions in paragraph (d)(4)(i), an owner or operator may use the procedure specified in paragraphs (d)(4)(iii)(A) and (d)(4)(iii)(B) of this section to demonstrate progress in reducing the percent leaking valves.

(A) The percent reduction that must be achieved each quarter shall be calculated as follows:

$$\%RR = \frac{\%V_L - 2\%}{0.10}$$

$\%RR$ = percent reduction required each quarter, as calculated according to § 63.168(e)

$\%V_L$ = percent leaking valves, calculated according to § 63.168(e), at the time elected to use provisions of § 63.168(d)(1)(ii)

(B) The owner or operator shall achieve less than 2 percent leaking valves no later than 2 years after electing to use the demonstration of progress provisions in § 63.175(d) of this subpart.

(e) The following requirements shall be met if an owner or operator elects to use a quality improvement program of technology review and improvement:

(1) The owner or operator shall comply with the requirements in § 63.168 of this subpart except the requirement for monthly monitoring in § 63.168(d)(1)(i) of this subpart does not apply.

(2) The owner or operator shall collect the data specified below, and maintain records as required in § 63.181(h)(2), for each valve in each process unit subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or group of process units basis. The data shall include the following:

(i) Valve type (e.g., ball, gate, check); valve manufacturer; valve design (e.g., external stem or actuating mechanism, flanged body); materials of construction; packing material; and year installed.

(ii) Service characteristics of the stream such as operating pressure, temperature, line diameter, and corrosivity.

(iii) Whether the valve is in gas or light liquid service.

(iv) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if adjusted, instrument model number, and date of the observation.

(v) If a leak is detected, the repair methods used and the instrument readings after repair.

(vi) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the valves as long as the process unit remains in the quality improvement program.

(4) The owner or operator shall inspect all valves removed from the process unit due to leaks. The inspection shall determine which parts of the valve have failed and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) (i) The owner or operator shall analyze the data collected to comply with the requirements of paragraph (e)(2) of this section to determine the services, operating or maintenance practices, and valve designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to identify any superior performing valve technologies that are applicable to the service(s), operating conditions, or valve designs associated with poorer than average emission performance. A

superior performing valve technology is one for which a group of such valves has a leak frequency of less than 2 percent for specific applications in such a process unit. A candidate superior performing valve technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 2 percent leaking valves in the process unit.

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of valves removed from the process unit due to leaks,

(B) Information from the available literature and from the experience of other plant sites that will identify valve designs or technologies and operating conditions associated with low emission performance for specific services, and

(C) Information on limitations on the service conditions for the valve design and operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of Phase III. The first analysis shall be performed using a minimum of two quarters of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify superior performing valve designs or technologies that can be applied to the operating conditions and services identified as having poorer than average performance, except as provided in paragraph (e)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit the valve designs or technologies that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of valves or operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 2 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing valve technologies is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in § 63.181(b)(5)(ii) of this subpart.

(ii) The number of valves in the trial evaluation program shall be the lesser of 1 percent or 20 valves for programs involving single process units and the lesser of 1 percent or 50 valves for programs involving groups of process units.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing valve designs or technologies to be evaluated, the stages for evaluating the identified candidate valve designs or technologies, including the estimated time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial valves.

(iv) The performance trials shall initially be conducted for, at least, a 6-month period beginning not later than 18 months after the start of Phase III. Not later than 24 months after the start of Phase III, the owner or operator shall have identified valve designs or technologies that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (e)(6)(vi) of this section. The compilation of candidate and demonstrated superior emission performance valve designs or technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 total employees shall be exempt from trial evaluations of valves. Plant sites exempt from the trial evaluations of valves shall begin the program at the start of the fourth year of Phase III.

(vi) An owner or operator who has conducted performance trials on all candidate superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible candidate superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator who elects to use a quality improvement program for technology review and improvement shall prepare and implement a valve quality assurance program that details purchasing specifications and maintenance procedures for all valves in the process unit. The quality assurance program may establish any number of categories, or classes, of valves as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (e)(5) of this section, if applicable, the findings of the trial evaluation required in paragraph (e)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be reviewed and, as appropriate, updated each year as long as the process unit has 2 percent or more leaking valves.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of valves. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the valve;

(C) Include a written procedure for bench testing of valves that specifies performance criteria for acceptance of valves and specifies criteria for the precision and accuracy of the test apparatus. All valves repaired off-line after preparation of the quality assurance plan shall be bench-tested for leaks. This testing may be conducted by the owner or operator of the process unit, by the vendor, or by a designated representative. The owner or operator shall install only those valves that have been documented through bench-testing to be nonleaking.

(D) Require that all valves repaired on-line be monitored using the method specified in § 63.180(b) of this subpart for leaks for 2 successive months, after repair.

(E) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the process unit or by a designated representative.

(F) Detail off-line valve maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished valves will meet the design specifications for the valve type and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees; and no later than the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees.

(8) Beginning at the start of the third year of Phase III for plant sites with 400 or more valves or owned by a corporation with 100 or more employees and at the start of the fourth year of Phase III for plant sites with less than 400 valves and owned by a corporation with less than 100 employees, each valve that is replaced for any reason shall be replaced with a new or modified valve that complies with the quality assurance standards for the valve category and that is identified as superior emission performance technology. Superior emission performance technology means valves or valve technologies identified with emission performance that, combined with appropriate process, operating, and maintenance practices, will result in less than 2 percent leaking valves for specific applications in a large population, except as provided in paragraph (e)(8)(ii) of this section.

(i) The valves shall be maintained as specified in the quality assurance program.

(ii) If a superior emission performance technology cannot be identified, then valve replacement shall be with one of (if several) the lowest emission performance technologies that has been identified for the specific application.

§ 63.176 Quality improvement program for pumps.

(a) In Phase III, if, on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit (or plant site) or three pumps in a process unit (or plant site) leak, the owner or operator shall comply with the requirements of this section as specified below:

(1) Pumps that are in food/medical service or in polymerizing monomer service shall comply with all requirements except for those specified in paragraph (d)(8) of this section.

(2) Pumps that are not in food/medical or polymerizing monomer service shall comply with all requirements of this section.

(b) The owner or operator shall comply with the requirements of this section until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit (or plant site). Once the performance level is achieved, the owner or operator shall comply with the requirements in § 63.163 of this subpart.

(c) If in a subsequent monitoring period, the process unit (or plant site) has greater than 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the owner or operator shall resume the quality improvement program starting at performance trials.

(d) The quality improvement program shall include the following:

(1) The owner or operator shall comply with the requirements in § 63.163 of this subpart.

(2) The owner or operator shall collect the following data, and maintain records as required in § 63.181(h)(3), for each pump in each process unit (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the pumps as long as the process unit (or plant site) remains in the quality improvement program.

(4) The owner or operator shall inspect all pumps or pump seals which exhibited frequent seal failures and were removed from the process unit due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) (i) The owner or operator shall analyze the data collected to comply with the requirements of paragraph (d)(2) of this section to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit (or plant site).

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance

procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using a minimum of 6 months of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in paragraph (d)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in § 63.181(h)(5)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process units. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the owner or operator shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (d)(6)(vi) of this section. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) An owner or operator who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each owner or operator shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (d)(5) of this section, if applicable, the findings of the trial evaluation required in paragraph (d)(6) of this section, and the operating conditions in the process unit. The quality assurance program shall be updated each year as long as the process unit has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the plant site or process unit or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Beginning at the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the owner or operator shall replace, as described in paragraphs

(d)(8)(i) and (d)(8)(ii) of this section, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance which, when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit or plant site. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of § 63.163 of this subpart are pumps determined to be superior performance technology.

(ii) The owner or operator may delay replacement of pump seals or pumps with superior technology until the next planned process unit shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

§ 63.177 Alternative means of emission limitation: General.

(a) Permission to use an alternative means of emission limitation under section 112(h)(3) of the Act shall be governed by the following procedures in paragraphs (b) through (e) of this section.

(b) Where the standard is an equipment, design, or operational requirement:

(1) Each owner or operator applying for permission to use an alternative means of emission limitation under § 63.6(g) of subpart A of this part shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(2) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Where the standard is a work practice:

(1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(2) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(3) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for permission shall commit, in writing, for each kind of equipment to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.

(5) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of this subpart.

(d) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.

(e) (1) Manufacturers of equipment used to control equipment leaks of an organic HAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the organic HAP achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will grant permission according to the provisions of paragraphs (b), (c), and (d) of this section.

§ 63.178 Alternative means of emission limitation: Batch processes.

(a) As an alternative to complying with the requirements of §§ 63.163 through 63.171 and §§ 63.173 through 63.176, an owner or operator of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in paragraphs (b) and (c) of this section, or the owner or operator may petition for approval of an alternative standard under the provisions of § 63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The owner or operator may switch among the alternatives provided the change is documented as specified in § 63.181.

(b) The following requirements shall be met if an owner or operator elects to use pressure testing of batch product-process equipment to demonstrate compliance with this subpart. An owner or operator who complies with the provisions of this paragraph is exempt from the monitoring provisions of § 63.163, §§ 63.168 and 63.169, and §§ 63.173 through 63.176 of this subpart.

(1) Each time equipment is reconfigured for production of a different product or intermediate, the batch product-process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service.

(i) When the batch product-process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment.

(ii) Each batch product process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calender year.

(iii) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate.

(2) The batch product process equipment shall be tested either using the procedures specified in § 63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in § 63.180(g) of this subpart.

(3) (i) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss.

(ii) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss.

(4) (i) If a leak is detected, it shall be repaired and the batch product-process

equipment shall be retested before start-up of the process.

(ii) If a batch product-process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in paragraph (d) of this section are met.

(c) The following requirements shall be met if an owner or operator elects to monitor the equipment to detect leaks by the method specified in § 63.180(b) of this subpart to demonstrate compliance with this subpart.

(1) The owner or operator shall comply with the requirements of §§ 63.163 through 63.170, and §§ 63.172 through 63.176 of this subpart.

(2) The equipment shall be monitored for leaks by the method specified in § 63.180(b) of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(3) The equipment shall be monitored for leaks as specified below:

(i) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit.

(ii) Connectors shall be monitored in accordance with the requirements in § 63.174 of this subpart.

(iii) Equipment other than connectors shall be monitored at the frequencies specified in table 1 of this subpart. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating.

(iv) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating.

(4) If a leak is detected, it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in paragraph (d) of this section.

(d) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met:

(1) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted.

(2) The repair is made no later than 10 calendar days after delivery of the replacement equipment.

§ 63.179 Alternative means of emission limitation: Enclosed-vented process units.

Process units enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device meeting the requirements of § 63.172 of this subpart are exempt from the requirements of § 63.163, through 63.171, and §§ 63.173 and 63.174 of this subpart. The enclosure shall be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to a control device.

§ 63.180 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Monitoring, as required under this subpart, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.

(2) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(4) Calibration gases shall be:

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and

(ii) (A) For Phase I, a mixture of methane in air at a concentration of approximately, but less than, 10,000 parts per million.

(B) For Phase II, a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million for agitators, 5,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(C) For Phase III, a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps in food/medical service; 5,000 parts per million for pumps in polymerizing monomer service; 1,000 parts per million for all other pumps; and 500 parts per million for all other equipment, except as provided in paragraph (b)(4)(iii) of this section.

(iii) The instrument may be calibrated at a higher methane concentration up to 2,000 parts per million than the leak definition concentration for a specific piece of equipment for monitoring that piece of equipment. If the monitoring instrument's design allows for multiple calibration gas concentrations, then the lower concentration calibration gas shall be no higher than 2,000 ppm methane and the higher concentration calibration gas shall be no higher than 10,000 ppm methane.

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(6) If no instrument is available that will meet the performance criteria specified in section 3.1.2(a) of Method 21 of 40 CFR Part 60, appendix A, the instrument leadings may be adjusted by multiplying by the average response factor for the stream.

(c) When equipment is monitored for compliance or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required in §§ 63.164(i) and 63.165(a) of this subpart, and § 63.172(f) of this subpart, the monitoring shall comply with the following requirements:

(1) The requirements of paragraphs (b)(1) through (4) of this section shall apply.

(2) The background level shall be determined, as set forth in Method 21 of 40 CFR part 60, appendix A.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance.

(d) (1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless an owner or operator demonstrates that the piece of equipment is not in organic HAP

service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR part 60, appendix A shall be used.

(2) (i) An owner or operator may use good engineering judgment rather than the procedures in paragraph (d)(1) of this section to determine that the percent organic HAP content does not exceed 5 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in paragraph (d)(1) of this section shall be used to resolve the disagreement.

(ii) Conversely, the owner or operator may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent.

(3) If an owner or operator determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in paragraph (d)(1) of this section, or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

(e) When a flare is used to comply with § 63.172(d) of this subpart, the compliance determination shall be conducted using Method 22 of 40 CFR part 60, appendix A to determine visible emissions.

(f) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of § 63.178(b)(3)(i) of this subpart.

(1) The batch product-process equipment train shall be pressurized with a gas to the operating pressure of the equipment or the systems shall be placed under a vacuum pressure.

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off.

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product process equipment shall be calculated using the following equation:

$$\frac{\Delta P}{t} = \frac{\left(|P_f - P_i|\right)}{\left(t_f - t_i\right)}$$

where:

$\Delta P/t$=Change in pressure, psig/hr

P_f=Final pressure, psig.

P_i=Initial pressure, psig.

$t_f - t_i$=Elapsed time, hours.

(4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ±2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device.

(5) An alternative procedure may be used for leak testing the equipment if the owner or operator demonstrates the alternative procedure is capable of detecting a pressure loss or rise.

(g) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of § 63.178(b)(3)(ii) of this subpart.

(1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off.

(2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure.

(3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected.

(4) An alternative procedure may be used for leak testing the equipment, if the owner or operator demonstrates the alternative procedure is capable of detecting losses of fluid.

§ 63.181 Recordkeeping requirements.

(a) An owner or operator of more than one process unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.

(b) Except as provided in paragraph (e) of this section, the following information pertaining to all equipment in each process unit subject to the requirements in §§ 63.162 through 63.174 of this subpart shall be recorded:

(1) (i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in § 63.174 of this subpart and instrumentation systems) subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

(ii) A schedule by process unit for monitoring connectors subject to the provisions of § 63.174(a) of this subpart and valves subject to the provisions of § 63.168(d) of this subpart.

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) (i) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of § 63.163(g), § 63.164(h), § 63.165(c), or § 63.173(f) of this subpart.

(ii) A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of § 63.164(i) of this subpart.

(iii) Identification of surge control vessels or bottoms receivers subject to the provisions of this subpart that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of § 63.170 of this subpart.

(3) (i) A list of identification numbers for pressure relief devices subject to the provisions in § 63.165(a) of this subpart.

(ii) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of § 63.165(d) of this subpart.

(4) Identification of instrumentation systems subject to the provisions of this subpart. Individual components in an instrumentation system need not be identified.

(5) Identification of screwed connectors subject to the requirements of § 63.174(c)(2) of this subpart. Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) The following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in §§ 63.163(e)(6)(i), 63.164(e)(2), and 63.173(d)(6)(i) of this subpart and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) The following information pertaining to all valves subject to the requirements of § 63.168(h) and (i) of this subpart, and all connectors subject to the requirements of § 63.174(f), (g), and (h) of this subpart shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for valves that are designated as difficult to monitor, an explanation why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) (i) A list of valves removed from and added to the process unit, as described in § 63.168(e)(1) of this subpart, if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in § 63.174(i)(1) of this subpart, and documentation of the integrity of the weld for any removed connectors, as required in § 63.174(j) of this subpart. This is not required unless the net credits for removed connectors is expected to be used.

(9) For batch process units that the owner or operator elects to monitor as provided under § 63.178(c) of this subpart, a list of equipment added to batch product process units since the last monitoring period required in § 63.178(c)(3)(ii) and (3)(iii) of this subpart.

(c) For visual inspections of equipment subject to the provisions of this subpart [e.g., § 63.163(b)(3), § 63.163(e)(4)(i)], the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (d) of this section for leaking equipment identified in this inspection, except as provided in paragraph (e) of this section. These records shall be retained for 2 years.

(d) When each leak is detected as specified in §§ 63.163 and 63.164; §§ 63.168 and 63.169; and §§ 63.172 through 63.174 of this subpart, the following information shall be recorded and kept for 2 years:

(1) The instrument and the equipment identification number and the operator name, initials, or identification number.

(2) The date the leak was detected and the date of first attempt to repair the leak.

(3) The date of successful repair of the leak.

(4) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) (i) Identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in § 63.174(b) of this subpart, as described in § 63.174(c)(1) of this subpart.

(ii) The date and results of follow-up monitoring as required in § 63.174(c) of this subpart. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored.

(8) The date and results of the monitoring required in § 63.178(c)(3)(i) of this subpart for equipment added to a batch process unit since the last monitoring period required in § 63.178 (c)(3)(ii) and (c)(3)(iii) of this subpart. If no leaking equipment is found in this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required.

(9) Copies of the periodic reports as specified in § 63.182(d) of this subpart, if records are not maintained on a computerized database capable of generating summary reports from the records.

(e) The owner or operator of a batch product process who elects to pressure test the batch product process equipment train to demonstrate compliance with this subpart is exempt from the requirements of paragraphs (b), (c), (d), and (f) of this section. Instead, the owner or operator shall maintain records of the following information:

(1) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in a batch product process equipment train.

(2) Records demonstrating the proportion of the time during the calendar year the equipment is in use in a batch process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in § 63.178(c)(3)(iii) of this subpart.

(3) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this subpart is not required. Equipment in a batch product process subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

(4) The dates of each pressure test required in § 63.178(b) of this subpart, the test pressure, and the pressure drop observed during the test.

(5) Records of any visible, audible, or olfactory evidence of fluid loss.

(6) When a batch product process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years:

(i) The date of each pressure test and the date of each leak repair attempt.

(ii) Repair methods applied in each attempt to repair the leak.

(iii) The reason for the delay of repair.

(iv) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment.

(v) The date of successful repair.

(f) The dates and results of each compliance test required for compressors subject to the provisions in § 63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in §§ 63.165 (a)

and (b) of this subpart. The results shall include:

(1) The background level measured during each compliance test.

(2) The maximum instrument reading measured at each piece of equipment during each compliance test.

(g) The owner or operator shall maintain records of the information specified in paragraphs (g)(1) through (g)(3) of this section for closed-vent systems and control devices subject to the provisions of § 63.172 of this subpart. The records specified in paragraph (g)(1) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(2) and (g)(3) of this section shall be retained for 2 years.

(1) The design specifications and performance demonstrations specified in paragraphs (g)(1)(i) through (g)(1)(iv) of this section.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by § 63.11(b) of subpart A of this part.

(iv) A description of the parameter or parameters monitored, as required in § 63.172(e) of this subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Records of operation of closed-vent systems and control devices.

(i) Dates and durations when the closed-vent systems and control devices required in §§ 63.163 through 63.166, and § 63.170 of this subpart are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.

(iii) Dates and durations of start-ups and shutdowns of control devices required in §§ 63.163 through 63.166, and § 63.170 of this subpart.

(3) Records of inspections of closed-vent systems subject to the provisions of § 63.172 of this subpart.

(i) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of this subpart during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(ii) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of this subpart during which leaks were detected, the information specified in paragraph (d) of this section shall be recorded.

(h) Each owner or operator of a process unit subject to the requirements of §§ 63.175 and 63.176 of this subpart shall maintain the records specified in paragraphs (h)(1) through (h)(9) of this section for the period of the quality improvement program for the process unit.

(1) For owners or operators who elect to use a reasonable further progress quality improvement program, as specified in § 63.175(d) of this subpart:

(i) All data required in § 63.175(d)(2) of this subpart.

(ii) The percent leaking valves observed each quarter and the rolling average percent reduction observed in each quarter.

(iii) The beginning and ending dates while meeting the requirements of § 63.175(d) of this subpart.

(2) For owners or operators who elect to use a quality improvement program of technology review and improvement, as specified in § 63.175(e) of this subpart:

(i) All data required in § 63.175(e)(2) of this subpart.

(ii) The percent leaking valves observed each quarter.

(iii) Documentation of all inspections conducted under the requirements of § 63.175(e)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of § 63.175(e) of this subpart.

(3) For owners or operators subject to the requirements of the pump quality improvement program as specified in § 63.176 of this subpart:

(i) All data required in § 63.176(d)(2) of this subpart.

(ii) The rolling average percent leaking pumps.

(iii) Documentation of all inspections conducted under the requirements of § 63.176(d)(4) of this subpart, and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of § 63.176(d) of this subpart.

(4) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.

(5) Records of all analyses required in §§ 63.175(e) and 63.176(d) of this subpart. The records will include the following:

(i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.

(ii) The reasons for rejecting specific candidate superior emission performing valve or pump technology from performance trials.

(iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under §§ 63.175(e)(6)(iii) and 63.176(d)(6)(iii) of this subpart.

(iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.

(6) All records documenting the quality assurance program for valves or pumps as specified in §§ 63.175(e)(7) and 63.176(d)(7) of this subpart.

(7) Records indicating that all valves or pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance requirements in § 63.175(e)(7) and § 63.176(d)(7) of this subpart.

(8) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in § 63.176(d)(8) of this subpart.

(9) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.

(i) Information, data, and analysis used to determine that a piece of equipment or process unit is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid or gas service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(j) Identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year within a process unit subject to the provisions of this subpart under § 63.160 of this subpart.

(k) Owners and operators choosing to comply with the requirements of § 63.179 of this subpart shall maintain the following records:

(1) Identification of the process unit(s) and the organic HAP's they handle.

(2) A schematic of the process unit, enclosure, and closed-vent system.

(3) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

§ 63.182 Reporting requirements.

(a) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (a)(1) through (a)(5) of this section. Owners or operators requesting an extension of compliance shall also submit the report listed in paragraph (a)(6) of this section.

(1) An Initial Notification described in paragraph (b) of this section, and

(2) A Notification of Compliance Status described in paragraph (c) of this section,

(3) Periodic Reports described in paragraph (d) of this section, and

(4) Reserved.

(5) Reserved.

(6) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing an existing source up to 1 additional year beyond the compliance date specified in the subpart that references this subpart.

(i) For purposes of this subpart, a request for an extension shall be submitted to the operating permit authority as part of the operating permit application. If the State in which the source is located does not have an approved operating permit program, a request for an extension shall be submitted to the Administrator as a separate submittal. The dates specified in § 63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart.

(ii) A request for an extension of compliance must include the data described in § 63.6(i)(6)(i) through (i)(6)(ii) of subpart A of this part.

(iii) The requirements in § 63.6(i)(8) through (i)(14) of subpart A of this part will govern the review and approval of requests for extensions of compliance with this subpart.

(b) Each owner or operator of an existing or new source subject to the provisions of this subpart shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (b)(1), according to the schedule in paragraph (b)(2) of this section. The Initial Notification provisions in § 63.9(b)(1) through (b)(3) of subpart A of this part shall not apply to owners or operators of sources subject to this subpart.

(1) The Initial Notification shall include the following information:

(i) The name and address of the owner or operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the chemical manufacturing processes subject to this subpart; and

(iv) A statement of whether the source can achieve compliance by the applicable compliance date specified in the subpart in 40 CFR part 63 that references this subpart.

(2) The Initial Notification shall be submitted according to the schedule in paragraph (b)(2)(i), (b)(2)(ii), or (b)(2)(iii) of this section, as applicable

(i) For an existing source, the Initial Notification shall be submitted within 120 days after the date of promulgation of the subpart that references this subpart.

(ii) For a new source that has an initial start-up 90 days after the date of promulgation of this subpart or later, the application for approval of construction or reconstruction required by § 63.5(d) of subpart A of this part shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references this subpart).

(iii) For a new source that has an initial start-up prior to 90 days after the date of promulgation of the applicable subpart, the Initial Notification shall be submitted within 90 days after the date of promulgation of the subpart that references this subpart.

(c) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status within 90 days of the compliance dates specified in the subpart in 40 CFR part 63 that references this subpart, except as provided in paragraph (c)(4) of this section.

(1) The notification shall provide the information listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this section for each process unit subject to the requirements of § 63.163 through § 63.174 of this subpart.

(i) Process unit identification.

(ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service.

(iii) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").

(iv) Planned schedule for each phase of the requirements in § 63.163 and § 63.168 of this subpart.

(2) The notification shall provide the information listed in paragraphs (c)(2)(i) and (c)(2)(ii) of this section for each process unit subject to the requirements of § 63.178(b) of this subpart.

(i) Batch products or product codes subject to the provisions of this subpart, and

(ii) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this subpart.

(3) The notification shall provide the information listed in paragraphs (c)(3)(i) and (c)(3)(ii) of this section for each process unit subject to the requirements in § 63.179 of this subpart.

(i) Process unit identification.

(ii) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of § 63.172 of this subpart.

(4) For existing sources subject to subpart F of this part, the Notification of Compliance Status shall be submitted for the group of process units with the earliest compliance date specified in § 63.100(k) of subpart F of this part. The Notification of Compliance Status for subsequent groups shall be submitted as part of the next periodic report.

(d) The owner or operator of a source subject to this subpart shall submit Periodic Reports.

(1) A report containing the information in paragraphs (d)(2), (d)(3), and (d)(4) of this section shall be submitted semiannually starting 6 months after the Notification of Compliance Status, as required in paragraph (c) of this section.

(2) For each process unit complying with the provisions of § 63.163 through § 63.174 of this subpart, the summary information listed in paragraphs (i) through (xvi) of this paragraph for each monitoring period during the 6-month period.

(i) The number of valves for which leaks were detected as described in § 63.168(b) of this subpart, the percent leakers, and the total number of valves monitored;

(ii) The number of valves for which leaks were not repaired as required in § 63.168(f) of this subpart, identifying the number of those that are determined nonrepairable;

(iii) The number of pumps for which leaks were detected as described in § 63.163(b) of this subpart, the percent leakers, and the total number of pumps monitored;

(iv) The number of pumps for which leaks were not repaired as required in § 63.163(c) of this subpart;

(v) The number of compressors for which leaks were detected as described in § 63.164(f) of this subpart;

(vi) The number of compressors for which leaks were not repaired as required in § 63.164(g) of this subpart;

(vii) The number of agitators for which leaks were detected as described in § 63.173(b) of this subpart;

(viii) The number of agitators for which leaks were not repaired as required in § 63.173(c) of this subpart;

(ix) The number of connectors for which leaks were detected as described in § 63.174(a) of this subpart, the percent of connectors leaking, and the total number of connectors monitored;

(x) The number of screwed connectors for which leaks were detected as described in § 63.174(a) of this subpart, the percent of screwed connectors leaking, and the total number of screwed connectors monitored;

(xi) The number of connectors for which leaks were not repaired as required in § 63.174(d) of this subpart, identifying the number of those that are determined nonrepairable;

(xii) The number of screwed connectors for which leaks were not repaired as required in § 63.174(d) of this subpart; and

(xiii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

(xiv) The results of all monitoring to show compliance with §§ 63.164(i), 63.165(a), and 63.172(f) of this subpart conducted within the semiannual reporting period.

(xv) If applicable, the initiation of a monthly monitoring program under § 63.168(d)(1)(i) of this subpart, or a quality improvement program under either §§ 63.175 or 63.176 of this subpart.

(xvi) If applicable, notification of a change in connector monitoring alternatives as described in § 63.174(c)(1) of this subpart.

(3) For owners or operators electing to meet the requirements of § 63.178(b) of this subpart, the report shall include the information listed in paragraphs (i) through (v) of this paragraph for each process unit.

(i) Batch product process equipment train identification;

(ii) The number of pressure tests conducted;

(iii) The number of pressure tests where the equipment train failed the pressure test;

(iv) The facts that explain any delay of repairs; and

(v) The results of all monitoring to determine compliance with § 63.172(f) of this subpart.

(4) The information listed in paragraph (c) of this section for the Notification of Compliance Status for process units with later compliance dates. Any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report.

TABLE 1 TO SUBPART H.—BATCH PROCESSES

Monitoring Frequency for Equipment Other than Connectors

Operating time (% of year)	Equivalent continuous process monitoring frequency time in use		
	Monthly	Quarterly	Semiannually
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three times	Semiannually.
75 to 100	Monthly	Quarterly	Semiannually.

Subpart I—National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks

§ 63.190 Applicability and designation of source.

(a) This subpart provides applicability provisions, definitions, and other general provisions that are applicable to sources subject to this subpart.

(b) The provisions of subparts I and H of this part apply to emissions of designated organic hazardous air pollutants from the processes specified in paragraphs (b)(1) through (b)(6) of this section that are located at a plant site that is a major source as defined in section 112(a) of the Act. The specified processes are further defined in § 63.191 of this subpart.

(1) Styrene-butadiene rubber production (butadiene and styrene emissions only).

(2) Polybutadiene rubber production (butadiene emissions only).

(3) The processes producing the agricultural chemicals listed in paragraphs (b)(3)(i) through (b)(3)(v) of this section (butadiene, carbon tetrachloride, methylene chloride, and ethylene dichloride emissions only).

(i) Captafol®,

(ii) Captan®,

(iii) Chlorothalonil,

(iv) Dacthal, and

(v) Tordon™ acid.

(4) Processes producing the polymers/resins or other chemical products listed in paragraphs (b)(4)(i) through (b)(4)(vi) of this section (carbon tetrachloride, methylene chloride, tetrachloroethylene, chloroform, and ethylene dichloride emissions only).

(i) Hypalon®,

(ii) Oxybisphenoxarsine/1,3-diisocyanate (OBPA®),

(iii) Polycarbonates,

(iv) Polysulfide rubber,

(v) Chlorinated paraffins, and

(vi) Symmetrical tetrachloropyridine.

(5) Pharmaceutical processes using carbon tetrachloride or methylene chloride (carbon tetrachloride and methylene chloride emissions only).

(6) Processes producing the polymers/resins or other chemical products listed in paragraphs (b)(6)(i) through (b)(6)(v) of this section (butadiene emissions only).

(i) Tetrahydrophthalic anhydride (THPA)

(ii) Methylmethacrylate-butadiene-styrene resins (MBS)

(iii) Butadiene-furfural cotrimer,

(iv) Methylmethacrylate-acrylonitrile-butadiene-styrene (MABS) resins, and

(v) Ethylidene norbornene.

(c) The owner or operator of a process listed in paragraph (b) of this section that does not use as a reactant or manufacture as a product, by-product or co-product the designated organic hazardous air pollutants shall comply only with the requirements of § 63.192(k) of this subpart. To comply with this subpart, such processes shall not be required to comply with the provisions of subpart A of this part.

(d) For the purposes of subparts I and H of this part, the source includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems that are associated with the processes identified in paragraph (b) of this section and are intended to operate in organic hazardous air pollutant service (as defined in § 63.191 of this subpart) for

300 hours or more during the calendar year.

(e) Sources subject to this subpart are required to comply with the provisions of subpart H of this part on or before the dates specified in paragraphs (e)(1) or (e)(2) of this section, unless the source eliminates the use or production of all HAP's that cause the source to be subject to this rule no later than 18 months after April 22, 1994.

(1) New sources that commence construction or reconstruction after December 31, 1992 shall comply upon initial start-up or April 22, 1994.

(2) Existing sources shall comply no later than October 24, 1994, unless an extension has been granted by the Administrator or operating permit authority as provided in § 63.6(i) of subpart A of this part.

(f) The provisions of subparts I and H of this part do not apply to research and development facilities, regardless of whether the facilities are located at the same plant site as a process subject to the provisions of subparts I and H of this part.

(g) (1) If an additional process specified in paragraph (b) of this section is added to a plant site that is a major source as defined in section 112(a) of the Act, the addition shall be subject to the requirements for a new source if:

(i) it is an addition that meets the definition of construction in § 63.2 of subpart A of this part;

(ii) such construction commenced after December 31, 1992; and

(iii) the addition has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP's, unless the Administrator establishes a lesser quantity.

(2) If any change is made to a process subject to this subpart, the change shall be subject to the requirements of a new source if:

(i) It is a change that meets the definition of reconstruction in § 63.2 of subpart A of this part;

(ii) Such reconstruction commenced after December 31, 1992.

§ 63.191 Definitions.

(a) The following terms as used in subparts I and H of this part shall have the meaning given them in subpart A of this part: Act, Administrator, affected source, approved permit program, commenced, compliance date, construction, effective date, EPA, equivalent emission limitation, existing source, Federally enforceable, hazardous air pollutant, lesser quantity, major source, malfunction, new source, owner or operator, performance evaluation, performance test, permit program, permitting authority, reconstruction, relevant standard, responsible official, run, standard conditions, State, and stationary source.

(b) All other terms used in this subpart and in subpart H of this part shall have the meaning given them in the Act and in this section. If the same term is defined in subpart A or H of this part and in this section, it shall have the meaning given in this section for purposes of subparts I and H of this part.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

Butadiene-furfural cotrimer (R-11) means the product of reaction of butadiene with excess furfural in a liquid phase reactor. R-11 is usually used as an insect repellant and as a delousing agent for cows in the dairy industry.

Captafol® means the fungicide Captafol ([cis-N(1,1,2,2-tetrachloroethyl)-thio]-4-cylcohexene-1,2-dicarboximide). The category includes any production process units that store, react, or otherwise process 1,3-butadiene in the production of Captafol.

Captan® means the fungicide Captan. The production process typically includes, but is not limited to, the reaction of tetrahydrophthalimide and perchloromethyl mercaptan with caustic.

Chlorinated paraffins means dry chlorinated paraffins, which are mainly straight-chain, saturated hydrocarbons. The category includes, but is not limited to, production of chlorinated paraffins by passing gaseous chlorine into a paraffin hydrocarbon or by chlorination by using solvents, such as carbon tetrachloride, under reflux.

Chlorothalonil means the agricultural fungicide, bactericide and nematocide Chlorothalonil (Daconil). The category includes any process units utilized to dissolve tetrachlorophthalic acid chloride in an organic solvent, typically carbon tetrachloride, with the subsequent addition of ammonia.

Dacthal™ means the pre-emergent herbicide Dacthal™, also known as DCPA, DAC, and dimethyl ester 2,3,5,6-tetrachloroterephthalic acid. The category includes, but is not limited to, chlorination processes and the following production process units: photochlorination reactors, thermal chlorination reactors, and condensers.

Ethylidene Norbornene means the diene with CAS number 16219-75-3. Ethylidene norbornene is used in the production of ethylene-propylene rubber products.

Hypalon™ (chlorosulfonated polyethylene) means a synthetic rubber produced by reacting polyethylene with chloric and sulfur dioxide, transforming the thermoplastic polyethylene into a vulcanized elastomer. The reaction is conducted in a solvent (carbon tetrachloride) reaction medium.

Initial start-up means the first time a new or reconstructed source begins production. Initial start-up does not include operation solely for testing equipment. For purposes of subpart H of this part, initial start-up does not include subsequent start-ups (as defined in § 63.161 of subpart H of this part) of process units (as defined in § 63.161 of subpart H of this part) following malfunctions or process unit shutdowns.

In organic hazardous air pollutant service or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of the designated organic HAP's listed in § 63.190(b) of this subpart.

Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene (MABS) Resins means styrenic polymers containing methyl methacrylate, acrylonitrile, 1,3-butadiene, and styrene. The MABS copolymers are prepared by dissolving or dispersing polybutadiene rubber in a mixture of methyl methacrylate-acrylonitrile-styrene and butadiene monomer. The graft polymerization is carried out by a bulk or a suspension process.

Methyl Methacrylate-Butadiene-Styrene (MBS) Resins means styrenic polymers containing methyl methacrylate, 1,3-butadiene, and styrene. Production of MBS terpolymers is achieved using an emulsion process in which methyl methacrylate and styrene are grafted onto a styrene-butadiene rubber.

Oxybisphenoxarsine (OBPA)/1,3-Diisocyanate means the chemical with CAS number 58-36-6. The chemical is primarily used for fungicidal and bactericidal protection of plastics. The process uses chloroform as a solvent.

Pharmaceutical production means a process that synthesizes pharmaceutical intermediate or final products using carbon tetrachloride or methlyene chloride as a reactant or process solvent.

Polybutadiene production means a process that produces polybutadiene through the polymerization of 1,3-butadiene.

Polycarbonates means a special class of polyester formed from any dihydroxy compound and any carbonate diester or by ester interchange. Polycarbonates may be produced by solution or emulsion polymerization, although

other methods may be used. A typical method for the manufacture of polycarbonates includes the reaction of bisphenol-A with phosgene in the presence of pyridine to form a polycarbonate. Methylene chloride is used as a solvent in this polymerization reaction.

Polysulfide rubber means a synthetic rubber produced by reaction of sodium sulfide and p-dichlorobenzene at an elevated temperature in a polar solvent. This rubber is resilient and has low temperature flexibility.

Styrene-butadiene rubber production means a process that produces styrene-butadiene copolymers, whether in solid (elastomer) or emulsion (latex) form.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels serve several purposes including equalization of load, mixing, recycle, and emergency supply.

Symmetrical tetrachloropyridine means the chemical with CAS number 2402–79–1.

Tordon acid™ means the synthetic herbicide 4-amino-3,5,6-trichloropicolinic acid, picloram. The category includes, but is not limited to, chlorination processes utilized in Tordon™ acid production.

§ 63.192 Standard.

(a) The owner or operator of a source subject to this subpart shall comply with the requirements of subpart H of this part for the processes and designated organic HAP's listed in § 63.190(b) of this subpart.

(b) All provisions in §§ 63.1 through 63.15 of subpart A of this part which apply to owners and operators of sources subject to subparts I and H of this part, are:

(1) The applicability provisions of § 63.1 (a)(1), (a)(2), (a)(10), (a)(12) through (a)(14);

(2) The definitions of § 63.2 unless changed or modified by specific entry in § 63.191 or § 63.161;

(3) The units and abbreviations in § 63.3;

(4) The prohibited activities and circumvention provisions of § 63.4;

(5) The construction and reconstruction provisions of § 63.5 (a), (b), (d) (except the review is limited to the equipment subject to the provisions of subpart H), (e), and (f);

(6) The compliance with standards and maintenance requirements of § 63.6 (a), (b)(3), (c)(5), (e), (i)(1), (i)(2), (i)(4)(i)(A), (i)(6)(i), (i)(8) through (i)(10), (i)(12) through (i)(16), and (j);

(7) The performance testing requirements of § 63.7(a)(3), (d), (e)(1), (e)(2), (e)(4), and (h);

(8) The notification requirements of § 63.9(a)(1), (a)(3), (a)(4), (b)(1)(i), (b)(4), (b)(5) (except, use the schedule specified in subpart H), (c), and (d);

(9) The recordkeeping and reporting requirements of § 63.10(a) and (f);

(10) The control device requirements of § 63.11(b); and

(11) The provisions of § 63.12 through § 63.15.

(c) Initial performance tests and initial compliance determinations shall be required only as specified in subpart H of this part.

(1) Performance tests and compliance determinations shall be conducted according to the applicable sections of subpart H.

(2) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present during the test.

[Note: This requirement does not apply to equipment subject to monitoring using Method 21 of part 60, appendix A.]

(3) Performance tests shall be conducted according to the provisions of § 63.7(e) of subpart A of this part, except that performance tests shall be conducted at maximum representative operating conditions for the process. During the performance test, an owner or operator may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(4) Data shall be reduced in accordance with the EPA-approved methods specified in the applicable subpart, or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

(d) An application for approval of construction or reconstruction, 40 CFR 63.5 of this chapter, will not be required if:

(1) The new process unit complies with the applicable standards in § 63.162 or § 63.178 of subpart H of this part; and

(2) In the next semiannual report required by § 63.182(d) of subpart H of this part, the information in § 63.182(c) of subpart H of this part is reported.

(e) If an owner or operator of a source plans to eliminate the use or production of all HAP's that cause the source to be subject to the provisions of subparts I and H of this part no later than 18 months after (insert date of publication in Federal Register), the owner or operator shall submit to the Administrator a brief description of the change, identify the HAP's eliminated, and the expected date of cessation of operation of the current process.

(f) Each owner or operator of a source subject to subparts I and H of this part shall keep copies of all applicable reports and records required by subpart H for at least 2 years, except as otherwise specified in subpart H.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. This could include hard-copy or computer records maintained on-site at the source or accessing the records from a central location by computer.

(2) The owner or operator subject to subparts I and H of this part shall keep the records specified in this paragraph, as well as records specified in subpart H of this part.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of a process subject to this subpart as specified in § 63.190(b) of this subpart.

(ii) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with subparts I and H of this part.

(iii) For each start-up, shutdown, and malfunction, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan.

(g) All reports required under subpart H shall be sent to the Administrator at the addresses listed in § 63.13 of subpart A of this part.

(1) Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier).

(i) Submittals sent by U.S. Mail shall be postmarked on or before the specified date.

(ii) Submittals sent by other methods shall be received by the Administrator on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(h) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in organic HAP emissions at least equivalent to the reduction in organic HAP emissions from that source achieved under any design, equipment, work practice, or operational standards in subpart H of this part, the Administrator will publish in the Federal Register a notice permitting the

use of the alternative means for purposes of compliance with that requirement.

(1) The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(2) Any notice under paragraph (h) of this section shall be published only after public notice and an opportunity for a hearing.

(3) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

(i) Each owner or operator of a source subject to this subpart shall obtain a permit under 40 CFR part 70 or part 71 from the appropriate permitting authority.

(1) If EPA has approved a State operating permit program under 40 CFR part 71, the permit shall be obtained from the State authority.

(2) If the State operating permit program has not been approved, the source shall apply to the EPA regional office pursuant to 40 CFR part 70.

(j) The requirements in subparts I and H of this part are Federally enforceable under section 112 of the Act on and after the dates specified in § 63.190(d) of this subpart.

(k) Information, data, and analyses used to determine that a process does not use as a reactant or manufacture as a product the designated organic hazardous air pollutant shall be recorded. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

§ 63.193 Delegation of authority.

In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authority for § 63.177 of subpart H of this part shall be retained by the Administrator and not transferred to a State.

4. Appendix A of part 63 is amended by adding Methods 304A, 304B, and 305 to read as follows:

Appendix A to Part 63—Test Methods

Method 304A: Determination of Biodegradation Rates of Organic Compounds (Vent Option)

1. Applicability and Principle

1.1 Applicability. This method is applicable for the determination of biodegradation rates of organic compounds in an activated sludge process. The test method is designed to evaluate the ability of an aerobic biological reaction system to degrade or destroy specific components in waste streams. The method may also be used to determine the effects of changes in wastewater composition on operation. The biodegradation rates determined by utilizing this method are not representative of a full-scale system. The rates measured by this method shall be used in conjunction with the procedures listed in Appendix C of this part to calculate the fraction emitted to the air versus the fraction biodegraded.

1.2 Principle. A self-contained benchtop bioreactor system is assembled in the laboratory. A sample of mixed liquor is added and the waste stream is then fed continuously. The bioreactor is operated under conditions identical to the target full-scale activated sludge process. Bioreactor temperature, dissolved oxygen concentration, average residence time in the reactor, waste composition, biomass concentration, and biomass composition of the full-scale process are the parameters which are duplicated in the laboratory system. If antifoaming agents are used in the full-scale system, they shall also be used in the bioreactor. The feed flowing into the reactor and the effluent exiting the reactor are analyzed to determine the biodegradation rates of the target compounds. The flow rate of the exit vent is used to calculate the concentration of target compounds (utilizing Henry's law) in the exit gas stream. If Henry's law constants for the compounds of interest are not known, this method cannot be used in the determination of the biodegradation rate and Method 304B is the suggested method. The choice of analytical methodology for measuring the compounds of interest at the inlet and outlet to the reactor are left to the discretion of the source, except where validated methods are available.

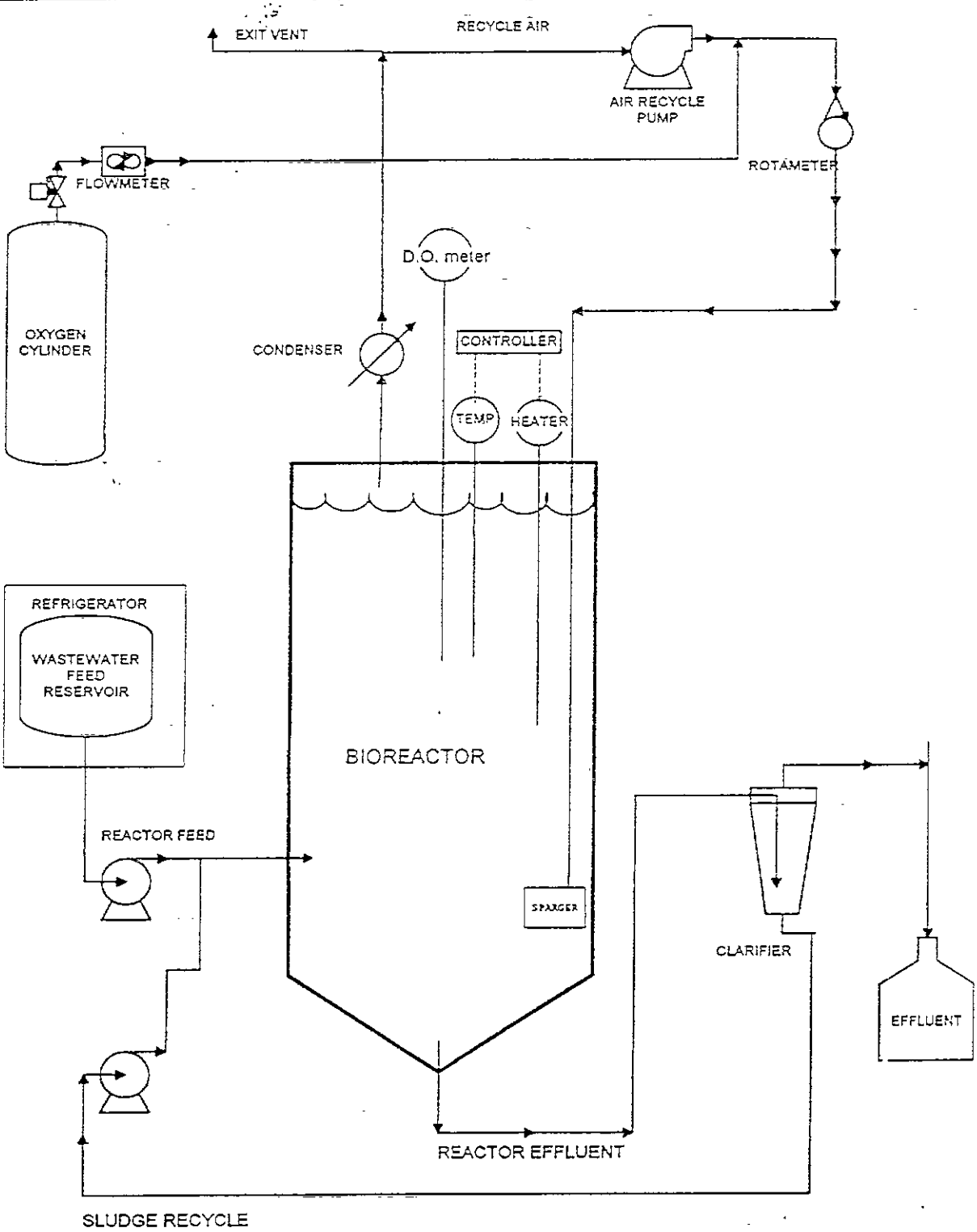
2. Apparatus

Figure 1 illustrates the typical laboratory apparatus used to measure biodegradation rates. Throughout the testing period, ensure that the bioreactor system is self-contained and isolated from the atmosphere (except for the exit vent stream) by leak-checking fittings, tubing, etc.

2.1 Laboratory apparatus.

2.1.1 Reactor. The biological reaction is conducted in a conical 6–L glass biological oxidation reactor. The reactor is sealed and equipped with internal probes to control and monitor dissolved oxygen and internal temperature. The top of the reactor is tapped for aerators, gas flow ports, and instrumentation (while ensuring that no leaks to the atmosphere exist around the fittings).

BILLING CODE 6560-50-P



EPA METHOD 304A VENT BIOREACTOR SYSTEM

BILLING CODE 6560-50-C

2.1.2 Aeration gas. Aeration gas is added to the reactor through three diffusers, which are glass tubes (4 mm O.D.) that extend to the bottom fifth of the reactor depth. A pure oxygen pressurized cylinder is recommended in order to maintain the specified oxygen concentration. Install a blower (Diaphragm Type, 15 SCFH capacity) to blow the aeration gas into the reactor diffusers. Measure the aeration gas flow rate with a rotameter (0–15 SCFH recommended). The aeration gas will rise through the reactor, dissolving oxygen into the mixture in the process. The aeration gas must provide sufficient agitation to keep the solids in suspension. Provide an exit for the aeration gas from the top flange of the reactor through a water-cooled Allihn-type condenser. Install the condenser through a gas-tight fitting in the reactor closure. Install a splitter which directs a portion of the gas to an exit vent and the rest of the gas through an air recycle pump back to the reactor. Monitor and record the flow rate through the exit vent at least 3 times per day throughout the day.

2.1.3 Wastewater Feed. Supply the wastewater feed to the reactor in a 20–L collapsible low-density polyethylene container equipped with a spigot cap (collapsible containers of other material may be required due to the permeability of some volatile compounds through polyethylene). Obtain the wastewater feed by sampling the wastewater feed in the target process. A representative sample of wastewater shall be obtained from the piping leading to the aeration tank. This sample may be obtained from existing sampling valves at the discharge of the wastewater feed pump, or collected from a pipe discharging to the aeration tank, or by pumping from a well-mixed equalization tank upstream from the aeration tank. Alternatively, wastewater can be pumped continuously to the laboratory apparatus from a bleed stream taken from the equalization tank of the full-scale treatment system.

2.1.3.1 Refrigeration System. Keep the wastewater feed cool by ice or by refrigeration to 4 °C. If using a bleed stream from the process, refrigeration is not required if the residence time in the bleed stream is less than five minutes.

2.1.3.2 Wastewater Feed Pump. The wastewater is pumped from the refrigerated container using a variable-speed peristaltic pump drive equipped with a peristaltic pump head. Add the feed solution to the reactor through a fitting on the top flange. Determine the rate of feed addition to provide a retention time in the bioreactor that is numerically equivalent to the retention time in the full-scale system. The wastewater shall be fed at a rate sufficient to achieve 90 to 100 percent of the full-scale system residence time.

2.1.3.3 Treated wastewater feed. The reactor effluent exits at the bottom of the reactor through a tube and proceeds to the clarifier.

2.1.4 Clarifier. The effluent flows to a clarifier constructed from a 2-liter pear-shaped glass separatory funnel, modified by removing the stopcock and adding a 25-mm OD glass tube at the bottom. Reactor effluent enters the clarifier through a tube inserted to a depth of 0.08 m (3 in.) through a stopper at the top of the clarifier. System effluent flows from a tube inserted through the stopper at the top of the clarifier to a drain (or sample bottle when sampling). The underflow from the clarifier leaves from the glass tube at the bottom of the clarifier through an o-ring fitting and a reducer. Flexible tubing connects this fitting to the sludge recycle pump. This pump is coupled to a variable speed pump drive. The discharge from this pump is returned through a tube inserted in a port on the side of the reactor. An additional port is provided near the bottom of the reactor for sampling the reactor contents. The mixed liquor from the reactor flows into the center of the clarifier. The clarified system effluent separates from the biomass and flows through an exit near the top of the clarifier. There shall be no headspace in the clarifier. Optional Clarifier Design: An internal clarifier may be used instead of the external clarifier described here as long as the biomass concentration is maintained to method specifications.

2.1.5 Temperature Control Apparatus. Capable of maintaining the system at a temperature equal to the temperature of the full-scale system, ±2 °C.

2.1.5.1 Temperature Monitoring Device. A resistance type temperature probe or a thermocouple connected to a temperature readout with a resolution of 0.1 °C.

2.1.5.2 Reactor Heater. The heater is connected to the temperature control device.

2.1.6 Oxygen Control System. Maintain the dissolved oxygen concentration at the levels present in the full-scale system, ±0.5 mg/L.

2.1.6.1 Dissolved Oxygen Monitor. Dissolved oxygen is monitored with a polarographic probe (gas permeable membrane) connected to a dissolved oxygen meter (0 to 15 mg/L, 0 to 50 °C).

2.1.6.2 Reactor Pressure Monitor. The reactor pressure is monitored through a port in the top flange of the reactor. This is connected to a gauge control with a span of 13-cm water vacuum to 13-cm water pressure. A relay is activated when the vacuum exceeds an adjustable setpoint which opens a solenoid valve (normally closed), admitting oxygen to the system. The vacuum setpoint controlling oxygen addition to the system shall be set at approximately 2.5 ± 0.5 cm water and maintained at this setting except during brief periods when the dissolved oxygen concentration is adjusted.

2.1.7 Connecting Tubing. All connecting tubing shall be Teflon or equivalent in impermeability. The only exception to this specification is the tubing directly inside the pump head of the wastewater feed pump, which may be Viton, Silicone or another type of flexible tubing.

2.2 Analysis. If the identity of the compounds of interest in the wastewater is not known to the source, a representative sample of the wastewater shall be analyzed in order to identify all of the compounds of interest present. A gas chromatography/mass spectrometry screening method is recommended.

2.2.1 After identifying the compounds of interest in the wastewater, develop an analytical technique capable of measuring all of those compounds (more than one analytical technique may be required, depending on the characteristics of the wastewater). Test Method 18, found in Appendix A of 40 CFR part 60, may be used as a guideline in developing the analytical technique. Purge and trap techniques may be used for analysis providing the target components are sufficiently volatile as to make this technique appropriate. The limit of quantitation for each compound shall be determined.[1] If the effluent concentration of any target compound is below the limit of quantitation determined for that compound, use the limit of quantitation concentration as the outlet concentration for that compound in the biodegradation calculations.

2.2.2 Calibration Standards. Prepare calibration standards from pure certified standards in an aqueous medium. Prepare and analyze three concentrations of calibration standards for each target component (or for a mixture of components) in triplicate daily throughout the analyses of the test samples. At each concentration level, a single calibration shall be within 5 percent of the average of the three calibration results. The low and medium calibration standards shall bracket the expected concentration of the effluent (treated) wastewater. The medium and high standards shall bracket the expected influent concentration.

2.3 Audit Analysis. Analyze a performance audit sample during every compliance test, if an audit sample is available. Audit availability information may be obtained by contacting the Emission Measurement Technical Information Center at (919) 541–2237. Use the same analytical equipment and analyst used in conducting the compliance test to conduct the audit analysis.

3. Reagents

3.1 Wastewater. Obtain a representative sample of wastewater at the inlet to the full-scale treatment plant if there is an existing full-scale treatment plant (See Section 2.1.3). If there is no existing full-scale treatment plant, obtain the wastewater sample as close to the point of generation as possible. Collect the sample by pumping the wastewater into the 20–L collapsible container. The loss of volatiles shall be minimized from the wastewater by collapsing the container before filling, by minimizing the time of filling, and by avoiding a headspace in the container after filling. If the wastewater requires the addition of nutrients to support the biomass growth and maintain biomass characteristics, those nutrients are added and mixed with the container contents after the container is filled.

3.2 Biomass. Obtain the biomass or activated sludge used for rate constant determination in the bench-scale process from the existing full-scale process or from a representative biomass culture that has been developed for a future full-scale process. This biomass is preferentially obtained from a thickened acclimated mixed liquor sample. Collect the sample either by bailing from the mixed liquor in the aeration tank with a weighted container, or by collecting aeration tank effluent at the effluent overflow weir. Transport the sample to the laboratory within

12 hours of collection. Maintain the biomass concentration in the reactor at the level of the full-scale system ±10 percent throughout the sampling period of the test method.

4. Procedure.

Safety Note: If explosive gases are produced as a byproduct of biodegradation, closely monitor headspace concentration of these gases to ensure laboratory safety. Placement of bioreactor system inside a laboratory hood is recommended regardless of byproducts produced.

4.1 Reactor Operation. Charge the mixed liquor to the reactor, minimizing headspace over the liquid surface to minimize entrainment of mixed liquor in the circulating gas. Fasten the reactor headplate to the reactor over the liquid surface. Maintain the temperature of the contents of the laboratory reactor system at the temperature of the full-scale system, ±2 °C, throughout the testing period. Monitor and record the temperature of the reactor contents to the nearest 0.1 °C.

4.1.1 Wastewater Storage. Collect the wastewater sample in the 20–L collapsible container. Store the container at 4 °C throughout the testing period. Connect the container to the reactor feed pump.

4.1.2 Wastewater Flow Rate. The hydraulic residence time of the aeration tank is calculated as the ratio of the volume of the tank (L) to the flow rate (L/min). At the beginning of a test the container shall be connected to the feed pump and solution pumped to the reactor at the required flow rate to achieve the calculated hydraulic residence time of the aeration tank.

$$Q_{test} = Q_{fs}\frac{L}{V_{fs}} \qquad \text{Eq. 304A-1}$$

where:

Q_{test}=wastewater flow rate (L/min)
Q_{fs}=average flow rate of full-scale process (L/min)
V_{fs}=volume of full-scale aeration tank (L)

The flow rate in the test apparatus is the same as the flow rate in the full-scale process multiplied by the ratio of bioreactor volume (6 L) to the volume of the full-scale aeration tank. The hydraulic residence time shall be maintained at 90 to 100 percent of the residence time maintained in the full-scale unit. A nominal flow rate is set on the pump based on a pump calibration. Changes in the elasticity of the tubing in the pump head and the accumulation of material in the tubing affect this calibration. The nominal pumping rate shall be changed as necessary based on volumetric flow measurements. Discharge the reactor effluent to a wastewater storage, treatment, or disposal facility, except during sampling or flow measurement periods.

4.1.3 Sludge Recycle Rate. Set the sludge recycle rate at a rate sufficient to prevent accumulation in the bottom of the clarifier. Set the air circulation rate sufficient to maintain the biomass in suspension.

4.1.4 Bioreactor Operation and Maintenance. Temperature, dissolved oxygen concentration, exit vent flow rate, reactor effluent flow rate, and air circulation rate shall be measured and recorded three times throughout each day of reactor operation. If other parameters (such as pH) are measured and maintained in the full-scale unit, these parameters shall be monitored and maintained to full-scale specifications in the bioreactor. At the beginning of each sampling period (Section 4.2), sample the reactor contents for suspended solids analysis. Take this sample by loosening a clamp on a length of tubing attached to the lower side port. Determine the suspended solids determination gravimetrically by the Gooch crucible/glass fiber filter method for total suspended solids, in accordance with Standard Methods [3] or equivalent. When necessary, sludge shall be wasted from the lower side port of the reactor, and the volume that is wasted shall be replaced with an equal volume of the reactor effluent. Add thickened activated sludge mixed liquor as necessary to the reactor to increase the suspended solids concentration to the desired level. Pump this mixed liquor to the reactor through the upper side port (Item 24 in Figure 1). Change the membrane on the dissolved oxygen probe before starting the test. Calibrate the oxygen probe immediately before the start of the test and each time the membrane is changed.

4.1.5 Inspection and Correction Procedures. If the feed line tubing becomes clogged, replace with new tubing. If the feed flow rate is not within 5 percent of target flow any time the flow rate is measured, reset pump and measure flow rate again until target flow rate is achieved.

4.2 Test Sampling. Two and one half hydraulic residence times after the system has reached the targeted specifications shall be permitted to elapse before the first sample is taken. Effluent samples of the clarifier discharge (Item 20 in Figure 1) and the influent wastewater feed are collected in 40-mL septum vials to which two drops of 1:10 hydrochloric acid (HCl) in water have been added. Sample the clarifier discharge directly from the drain line. These samples will be composed of the entire flow from the system for a period of several minutes. Feed samples shall be taken from the feed pump suction line after temporarily stopping the reactor feed, removing a connector, and squeezing the collapsible feed container. Store both influent and effluent samples at 4 °C immediately after collection and analyze within 8 hours of collection.

4.2.1 Frequency of Sampling. During the test, sample and analyze the wastewater feed and the clarifier effluent at least six times. The sampling intervals shall be separated by at least 8 hours. During any individual sampling interval, sample the wastewater feed simultaneously with or immediately after the effluent sample. Calculate the relative standard deviation (RSD) of both the influent and effluent sample concentrations. Both RSD values shall be ≤ 15 percent. If an RSD value is > 15 percent, continue sampling and analyzing influent and effluent sets of samples until the RSD values are within specifications.

4.2.2 Sampling After Exposure of System to Atmosphere. If, after starting sampling procedures, the bioreactor system is exposed to the atmosphere (due to leaks, maintenance, etc.), allow at least one hydraulic residence time to elapse before resuming sampling.

5. Operational Checks and Calibration

5.1 Dissolved Oxygen. Fluctuation in dissolved oxygen concentration may occur for numerous reasons, including undetected gas leaks, increases and decreases in mixed liquor suspended solids resulting from cell growth and solids loss in the effluent stream, changes in diffuser performance, cycling of effluent flow rate, and overcorrection due to faulty or sluggish dissolved oxygen probe response. Control the dissolved oxygen concentration in the reactor by changing the proportion of oxygen in the circulating aeration gas. Should the dissolved oxygen concentration drift below the designated experimental condition, bleed a small amount of aeration gas from the system on the pressure side (i.e., immediately upstream of one of the diffusers). This will create a vacuum in the system, triggering the pressure sensitive relay to open the solenoid valve and admit oxygen to the system. Should the dissolved oxygen concentration drift above the designated experimental condition, stop the oxygen input to the system until the dissolved oxygen concentration approaches the correct level.

5.2 Sludge Wasting. Determine the suspended solids concentration (Section 4.1.4) at the beginning of a test, and once per day thereafter during the test. If the test is completed within a two day period, determine the suspended solids concentration after the final sample set is taken. If the suspended solids concentration exceeds the specified concentration, remove a fraction of the sludge from the reactor. The required volume of mixed liquor to remove is determined as follows:

$$V_W = V_r\left(\frac{S_m - S_s}{S_m}\right) \qquad \text{Eq. 304A-2}$$

where

V_w is the wasted volume (Liters),
V_r is the volume of the reactor (6 Liters),
S_m is the measured solids (g/L), and
S_s is the specified solids (g/L).

Remove the mixed liquor from the reactor by loosening a clamp on the mixed liquor sampling tube and allowing the required volume to drain to a graduated flask. Clamp the tube when the correct volume has been wasted. Replace the volume of the liquid wasted by pouring the same volume of effluent back into the bioreactor. Dispose of the waste sludge properly.

5.3 Sludge Makeup. In the event that the suspended solids concentration is lower than the specifications, add makeup sludge back into the bioreactor. Determine the amount of sludge added by the following equation:

$$V_W = V_r\left(\frac{S_s - S_m}{S_w}\right) \qquad \text{Eq. 304A-3}$$

where

V_w is the volume of sludge to add (Liters),
V_r is the volume of the reactor (6 Liters),

S_u is the solids in the makeup sludge (g/L),

S_m is the measured solids (g/L), and

S_s is the specified solids (g/L).

5.4 Wastewater Pump Calibration. Determine the wastewater flow rate by collecting the system effluent for a time period of at least one hour, and measuring the volume with a graduated cylinder. Record the collection time period and volume collected. Determine flow rate. Adjust the pump speed to deliver the specified flow rate.

6. Calculations

6.1 Nomenclature. The following symbols are used in the calculations.

C_i=Average inlet feed concentration for a compound of interest, as analyzed (mg/L)

C_o=Average outlet (effluent) concentration for a compound of interest, as analyzed (mg/L)

X=Biomass concentration, mixed liquor suspended solids (g/L)

t=Hydraulic residence time in the reactor (hours)

V=Volume of the bioreactor (6L)

Q=Flow rate of wastewater into the reactor, average (L/hour)

6.2 Residence Time. The hydraulic residence time of the reactor is equal to the ratio of the volume of the reactor (L) to the flow rate (L/h)

$$t = \frac{V}{Q} \qquad \text{Eq. 304A-4}$$

6.3 Rate of Biodegradation. Calculate the rate of biodegradation for each component with the following equation:

$$\text{Rate}\left(\frac{mg}{L-h}\right) = \frac{C_i - C_o}{t} \qquad \text{Eq. 304A-5}$$

6.4 First-Order Biorate Constant. Calculate the first-order biorate constant (K1) for each component with the following equation:

$$K1\left(\frac{L}{g-h}\right) = \frac{C_i - C_o}{t\,C_o X} \qquad \text{Eq. 304A-6}$$

6.5 Relative Standard Deviation (RSD). Determine the standard deviation of both the influent and effluent sample concentrations (S) using the following equation:

$$RSD = \frac{100}{\bar{S}}\left(\frac{\sum_{i=1}^{n}(S_i - \bar{S})^2}{(n-1)}\right)^{1/2} \qquad \text{Eq. 304A-7}$$

6.6 Determination of Percent Air Emissions and Percent Biodegraded. Use the results from this test method and follow the applicable procedures in Appendix C of 40 CFR part 63, entitled, "Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit" to determine F_{bio}.

7. Bibliography

1. "Guidelines for data acquisition and data quality evaluation in Environmental Chemistry", Daniel MacDoughal, Analytical Chemistry, Volume 52, p. 2242, 1980.

2. Test Method 18, 40 CFR part 60, Appendix A.

3. Standard Methods for the Examination of Water and Wastewater, 16th Edition, Method 209C, Total Suspended Solids Dried at 103–105 °C. APHA, 1985.

4. Water7, Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)—Air Emission Models, U.S. Environmental Protection Agency, EPA–450/3–87–026, Review Draft, November 1989.

5. Chemdat7, Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)—Air Emission Models, U.S. Environmental Protection Agency, EPA–450/3–87–026, Review Draft, November 1989.

Method 304B: Determination of Biodegradation Rates of Organic Compounds (Scrubber Option)

1. Applicability and Principle

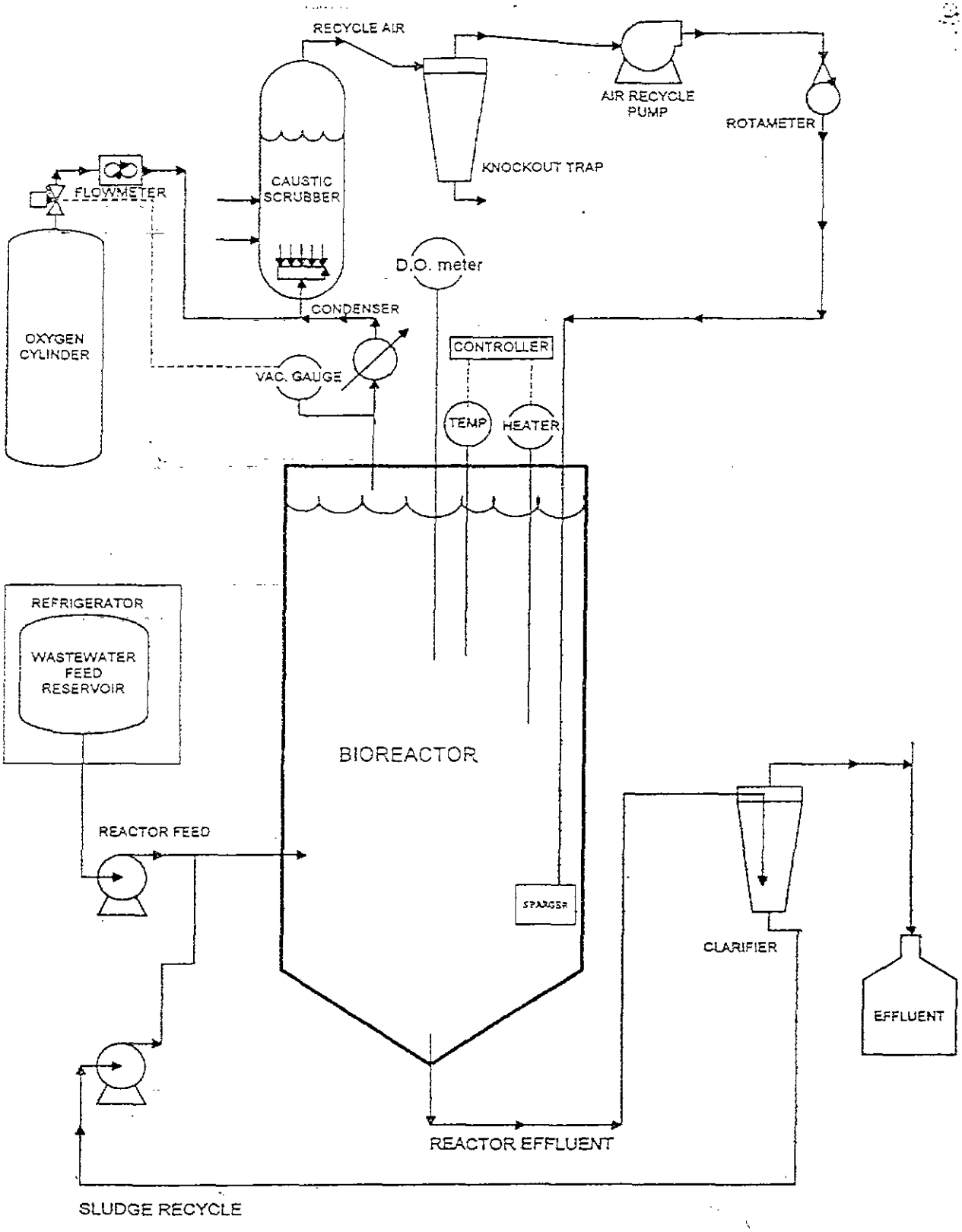
1.1 Applicability. This method is applicable for the determination of biodegradation rates of organic compounds in an activated sludge process. The test method is designed to evaluate the ability of an aerobic biological reaction system to degrade or destroy specific components in waste streams. The method may also be used to determine the effects of changes in wastewater composition on operation. The biodegradation rates determined by utilizing this method are not representative of a full-scale system. Full-scale systems embody biodegradation and air emissions in competing reactions. This method measures biodegradation in absence of air emissions. The rates measured by this method shall be used in conjunction with the procedures listed in appendix C of this part to calculate the fraction emitted to the air versus the fraction biodegraded.

1.2 Principle. A self-contained benchtop bioreactor system is assembled in the laboratory. A sample of mixed liquor is added and the waste stream is then fed continuously. The bioreactor is operated under conditions identical to the target full-scale activated sludge process, except that air emissions are not a factor. Bioreactor temperature, dissolved oxygen concentration, average residence time in the reactor, waste composition, biomass concentration, and biomass composition of the full-scale process are the parameters which are duplicated in the laboratory system. If antifoaming agents are used in the full-scale system, they shall also be used in the bioreactor. The feed flowing into the reactor and the effluent exiting the reactor are analyzed to determine the biodegradation rates of the target compounds. The choice of analytical methodology for measuring the compounds of interest at the inlet and outlet to the reactor are left to the discretion of the source, except where validated methods are available.

2. Apparatus

Figure 1 illustrates the typical laboratory apparatus used to measure biodegradation rates. Throughout the testing period, ensure that the bioreactor system is self-contained and isolated from the atmosphere by leak-checking fittings, tubing, etc.

BILLING CODE 6560–50–P



EPA METHOD 304B BIOREACTOR SYSTEM

BILLING CODE 6560-50-C

2.1 Laboratory apparatus.

2.1.1 Reactor. The biological reaction is conducted in a conical 6–L glass biological oxidation reactor. The reactor is sealed and equipped with internal probes to control and monitor dissolved oxygen and internal temperature. The top of the reactor is tapped for aerators, gas flow ports, and instrumentation (while ensuring that no leaks to the atmosphere exist around the fittings).

2.1.2 Aeration gas. Aeration gas is added to the reactor through three diffusers, which are glass tubes (4 mm O.D.) that extend to the bottom fifth of the reactor depth. A pure oxygen pressurized cylinder is recommended in order to maintain the specified oxygen concentration. Install a blower (Diaphragm Type, 15 SCFH capacity) to blow the aeration gas into the reactor diffusers. Measure the aeration gas flow rate with a rotameter (0–15 SCFH recommended). The aeration gas will rise through the reactor, dissolving oxygen into the mixture in the process. The aeration gas must provide sufficient agitation to keep the solids in suspension. Provide an exit for the aeration gas from the top flange of the reactor through a water-cooled Allihn-type condenser. Install the condenser through a gas-tight fitting in the reactor closure. Design the system so that at least 10 percent of the gas flows through an alkaline scrubber containing 175 mL of 45 percent by weight solution of potassium hydroxide (KOH) and 5 drops of 0.2 percent alizarin yellow dye. Route the balance of the gas through an adjustable scrubber bypass. Route all of the gas through a 1–L knock-out flask to remove entrained moisture and then to the intake of the blower. The blower recirculates the gas to the reactor.

2.1.3 Wastewater Feed. Supply the wastewater feed to the reactor in a 20–L collapsible low-density polyethylene container equipped with a spigot cap (collapsible containers of other material may be required due to the permeability of some volatile compounds through polyethylene). Obtain the wastewater feed by sampling the wastewater feed in the target process. A representative sample of wastewater shall be obtained from the piping leading to the aeration tank. This sample may be obtained from existing sampling valves at the discharge of the wastewater feed pump, or collected from a pipe discharging to the aeration tank, or by pumping from a well-mixed equalization tank upstream from the aeration tank. Alternatively, wastewater can be pumped continuously to the laboratory apparatus from a bleed stream taken from the equalization tank of the full-scale treatment system.

2.1.3.1 Refrigeration System. Keep the wastewater feed cool by ice or by refrigeration to 4 °C. If using a bleed stream from the process, refrigeration is not required if the residence time in the bleed stream is less than five minutes.

2.1.3.2 Wastewater Feed Pump. The wastewater is pumped from the refrigerated container using a variable-speed peristaltic pump drive equipped with a peristaltic pump head. Add the feed solution to the reactor through a fitting on the top flange. Determine the rate of feed addition to provide a retention time in the bioreactor that is numerically equivalent to the retention time in the full-scale system. The wastewater shall be fed at a rate sufficient to achieve 90 to 100 percent of the full-scale system residence time.

2.1.3.3 Treated wastewater feed. The reactor effluent exits at the bottom of the reactor through a tube and proceeds to the clarifier.

2.1.4 Clarifier. The effluent flows to a clarifier constructed from a 2-liter pear-shaped glass separatory funnel, modified by removing the stopcock and adding a 25-mm OD glass tube at the bottom. Reactor effluent enters the clarifier through a tube inserted to a depth of 0.09 m (3 in.) through a stopper at the top of the clarifier. System effluent flows from a tube inserted through the stopper at the top of the clarifier to a drain (or sample bottle when sampling). The underflow from the clarifier leaves from the glass tube at the bottom of the clarifier through an o-ring fitting and a reducer. Flexible tubing connects this fitting to the sludge recycle pump. This pump is coupled to a variable speed pump drive. The discharge from this pump is returned through a tube inserted in a port on the side of the reactor. An additional port is provided near the bottom of the reactor for sampling the reactor contents. The mixed liquor from the reactor flows into the center of the clarifier. The clarified system effluent separates from the biomass and flows through an exit near the top of the clarifier. There shall be no headspace in the clarifier. Optional Clarifier Design: An internal clarifier may be used instead of the external clarifier described here as long as the biomass concentration is maintained to method specifications.

2.1.5 Temperature Control Apparatus. Capable of maintaining the system at a temperature equal to the temperature of the full-scale system, ±2 °C.

2.1.5.1 Temperature Monitoring Device. A resistance type temperature probe or a thermocouple connected to a temperature readout with a resolution of 0.1 °C.

2.1.5.2 Reactor Heater. The heater is connected to the temperature control device.

2.1.6 Oxygen Control System. Maintain the dissolved oxygen concentration at the levels present in the full-scale system, ± 0.5 mg/L.

2.1.6.1 Dissolved Oxygen Monitor. Dissolved oxygen is monitored with a polarographic probe (gas permeable membrane) connected to a dissolved oxygen meter (0 to 15 mg/L, 0 to 50 °C).

2.1.6.2 Reactor Pressure Monitor. The reactor pressure is monitored through a port in the top flange of the reactor. This is connected to a gauge control with a span of 13-cm water vacuum to 13-cm water pressure. A relay is activated when the vacuum exceeds an adjustable setpoint which opens a solenoid valve (normally closed), admitting oxygen to the system. The vacuum setpoint controlling oxygen addition to the system shall be set at approximately 2.5 ± 0.5 cm water and maintained at this setting except during brief periods when the dissolved oxygen concentration is adjusted.

2.1.7 Connecting Tubing. All connecting tubing shall be Teflon or equivalent in impermeability. The only exception to this specification is the tubing directly inside the pump head of the wastewater feed pump, which may be Viton, Silicone or another type of flexible tubing.

2.2 Analysis. If the identity of the compounds of interest in the wastewater is not known to the source, a representative sample of the wastewater shall be analyzed in order to identify all of the compounds of interest present. A gas chromatography/mass spectrometry screening method is recommended.

2.2.1 After identifying the compounds of interest in the wastewater, develop an analytical technique capable of measuring all of those compounds (more than one analytical technique may be required, depending on the characteristics of the wastewater). Test Method 18, found in Appendix A of 40 CFR part 60, may be used as a guideline in developing the analytical technique. Purge and trap techniques may be used for analysis providing the target components are sufficiently volatile as to make this technique appropriate. The limit of quantitation for each compound shall be determined [1]. If the effluent concentration of any target compound is below the limit of quantitation determined for that compound, use the limit of quantitation concentration as the outlet concentration for that compound in the biodegradation calculations.

2.2.2 Calibration Standards. Prepare calibration standards from pure certified standards in an aqueous medium. Prepare and analyze three concentrations of calibration standards for each target component (or for a mixture of components) in triplicate daily throughout the analyses of the test samples. At each concentration level, a single calibration shall be within 5 percent of the average of the three calibration results. The low and medium calibration standards shall bracket the expected concentration of the effluent (treated) wastewater. The medium and high standards shall bracket the expected influent concentration.

2.3 Audit Analysis. Analyze a performance audit sample during every compliance test, if an audit sample is available. Audit availability information may be obtained by contacting the Emission Measurement Technical Information Center at (919) 541–2237. Use the same analytical equipment and analyst used in conducting the compliance test to conduct the audit analysis.

3. Reagents

3.1 Wastewater. Obtain a representative sample of wastewater at the inlet to the full-scale treatment plant if there is an existing full-scale treatment plant (See Section 2.1.3). If there is no existing full-scale treatment plant, obtain the wastewater sample as close to the point of generation as possible. Collect the sample by pumping the wastewater into the 20–L collapsible container. The loss of volatiles shall be minimized from the wastewater by collapsing the container before filling, by minimizing the time of filling, and by avoiding a headspace in the container after filling. If the wastewater requires the addition of nutrients to support the biomass growth and maintain biomass characteristics,

those nutrients are added and mixed with the container contents after the container is filled.

3.2 Biomass. Obtain the biomass or activated sludge used for rate constant determination in the bench-scale process from the existing full-scale process or from a representative biomass culture that has been developed for a future full-scale process. This biomass is preferentially obtained from a thickened acclimated mixed liquor sample. Collect the sample either by bailing from the mixed liquor in the aeration tank with a weighted container, or by collecting aeration tank effluent at the effluent overflow weir. Transport the sample to the laboratory within 12 hours of collection. Maintain the biomass concentration in the reactor at the level of the full-scale system ± 10 percent throughout the sampling period of the test method.

4. Procedure

Safety Note: If explosive gases are produced as a byproduct of biodegradation, closely monitor headspace concentration of these gases to ensure laboratory safety. Placement of bioreactor system inside a laboratory hood is recommended regardless of byproducts produced.

4.1 Reactor Operation. Charge the mixed liquor to the reactor, minimizing headspace over the liquid surface to minimize entrainment of mixed liquor in the circulating gas. Fasten the reactor headplate to the reactor over the liquid surface. Maintain the temperature of the contents of the laboratory reactor system at the temperature of the full-scale system, ± 2 °C, throughout the testing period. Monitor and record the temperature of the reactor contents to the nearest 0.1 °C.

4.1.1 Wastewater Storage. Collect the wastewater sample in the 20–L collapsible container. Store the container at 4 °C throughout the testing period. Connect the container to the reactor feed pump.

4.1.2 Wastewater Flow Rate. The hydraulic residence time of the aeration tank is calculated as the ratio of the volume of the tank (L) to the flow rate (L/min). At the beginning of a test the container shall be connected to the feed pump and solution pumped to the reactor at the required flow rate to achieve the calculated hydraulic residence time of the aeration tank.

$$Q_{test} = Q_{fs}\frac{L}{V_{fs}} \qquad \text{Eq. 304B-1}$$

where Q_{test}=wastewater flow rate (L/min)
Q_{fs}=average flow rate of full-scale process (L/min)
V_{fs}=volume of full-scale aeration tank (L)

The flow rate in the test apparatus is the same as the flow rate in the full-scale process multiplied by the ratio of bioreactor volume (6 L) to the volume of the full-scale aeration tank. The hydraulic residence time shall be maintained at 90 to 100 percent of the residence time maintained in the full-scale unit. A nominal flow rate is set on the pump based on a pump calibration. Changes in the elasticity of the tubing in the pump head and the accumulation of material in the tubing affect this calibration. The nominal pumping rate shall be changed as necessary based on volumetric flow measurements. Discharge the reactor effluent to a wastewater storage, treatment, or disposal facility, except during sampling or flow measurement periods.

4.1.3 Sludge Recycle Rate. Set the sludge recycle rate at a rate sufficient to prevent accumulation in the bottom of the clarifier. Set the air circulation rate sufficient to maintain the biomass in suspension.

4.1.4 Bioreactor Operation and Maintenance. Temperature, dissolved oxygen concentration, flow rate, and air circulation rate shall be measured and recorded three times throughout each day of testing. If other parameters (such as pH) are measured and maintained in the full-scale unit, these parameters shall be monitored and maintained to full-scale specifications in the bioreactor. At the beginning of each sampling period (Section 4.2), sample the reactor contents for suspended solids analysis. Take this sample by loosening a clamp on a length of tubing attached to the lower side port. Determine the suspended solids determination gravimetrically by the Gooch crucible/glass fiber filter method for total suspended solids, in accordance with Standard Methods[3] or equivalent. When necessary, sludge shall be wasted from the lower side port of the reactor, and the volume that is wasted shall be replaced with an equal volume of the reactor effluent. Add thickened activated sludge mixed liquor as necessary to the reactor to increase the suspended solids concentration to the desired level. Pump this mixed liquor to the reactor through the upper side port (Item 24 in Figure 1). Change the membrane on the dissolved oxygen probe before starting the test. Calibrate the oxygen probe immediately before the start of the test and each time the membrane is changed. The scrubber solution shall be replaced each weekday with 175 mL 45 percent W/W KOH solution to which five drops of 0.2 percent alizarin yellow indicator in water have been added. The potassium hydroxide solution in the alkaline scrubber shall be changed if the alizarin yellow dye color changes.

4.1.5 Inspection and Correction Procedures. If the feed line tubing becomes clogged, replace with new tubing. If the feed flow rate is not within 5 percent of target flow any time the flow rate is measured, reset pump and measure flow rate again until target flow rate is achieved.

4.2 Test Sampling. Two and one half hydraulic residence times after the system has reached the targeted specifications shall be permitted to elapse before the first sample is taken. Effluent samples of the clarifier discharge (Item 20 in Figure 1) and the influent wastewater feed are collected in 40–mL septum vials to which two drops of 1:10 hydrochloric acid (HCl) in water have been added. Sample the clarifier discharge directly from the drain line. These samples will be composed of the entire flow from the system for a period of several minutes. Feed samples shall be taken from the feed pump suction line after temporarily stopping the reactor feed, removing a connector, and squeezing the collapsible feed container. Store both influent and effluent samples at 4°C immediately after collection and analyze within 8 hours of collection.

4.2.1 Frequency of Sampling. During the test, sample and analyze the wastewater feed and the clarifier effluent at least six times. The sampling intervals shall be separated by at least 8 hours. During any individual sampling interval, sample the wastewater feed simultaneously with or immediately after the effluent sample. Calculate the relative standard deviation (RSD) of both the influent and effluent sample concentrations. Both RSD values shall be ≤ 15 percent. If an RSD value is > 15 percent, continue sampling and analyzing influent and effluent sets of samples until the RSD values are within specifications.

4.2.2 Sampling After Exposure of System to Atmosphere. If, after starting sampling procedures, the bioreactor system is exposed to the atmosphere (due to leaks, maintenance, etc.), allow at least one hydraulic residence time to elapse before resuming sampling.

5. Operational Checks and Calibration

5.1 Dissolved Oxygen. Fluctuation in dissolved oxygen concentration may occur for numerous reasons, including undetected gas leaks, increases and decreases in mixed liquor suspended solids resulting from cell growth and solids loss in the effluent stream, changes in diffuser performance, cycling of effluent flow rate, and overcorrection due to faulty or sluggish dissolved oxygen probe response. Control the dissolved oxygen concentration in the reactor by changing the proportion of oxygen in the circulating aeration gas. Should the dissolved oxygen concentration drift below the designated experimental condition, bleed a small amount of aeration gas from the system on the pressure side (i.e. immediately upstream of one of the diffusers). This will create a vacuum in the system, triggering the pressure sensitive relay to open the solenoid valve and admit oxygen to the system. Should the dissolved oxygen concentration drift above the designated experimental condition, stop the oxygen input to the system until the dissolved oxygen concentration approaches the correct level.

5.2 Sludge Wasting. Determine the suspended solids concentration (Section 4.1.4) at the beginning of a test, and once per day thereafter during the test. If the test is completed within a two day period, determine the suspended solids concentration after the final sample set is taken. If the suspended solids concentration exceeds the specified concentration, remove a fraction of the sludge from the reactor. The required volume of mixed liquor to remove is determined as follows:

$$V_W = V_r\left(\frac{S_m - S_s}{S_m}\right) \qquad \text{Eq. 304B-2}$$

where V_w is the wasted volume (Liters),
Vr is the volume of the reactor (6 Liters),
S_m is the measured solids (g/L), and
S_s is the specified solids (g/L).

Remove the mixed liquor from the reactor by loosening a clamp on the mixed liquor sampling tube and allowing the required volume to drain to a graduated flask. Clamp the tube when the correct volume has been wasted. Replace the volume of the liquid wasted by pouring the same volume of

effluent back into the bioreactor. Dispose of the waste sludge properly.

5.3 Sludge Makeup. In the event that the suspended solids concentration is lower than the specifications, add makeup sludge back into the bioreactor. Determine the amount of sludge added by the following equation:

$$V_m = V_r\left(\frac{S_s - S_m}{S_m}\right) \qquad \text{Eq. 304B-3}$$

Where V_m is the volume of sludge to add (Liters),
V_r is the volume of the reactor (6 Liters),
S_m is the solids in the makeup sludge (g/L),
S_m is the measured solids (g/L), and
S_s is the specified solids (g/L).

5.4 Wastewater Pump Calibration. Determine the wastewater flow rate by collecting the system effluent for a time period of at least one hour, and measuring the volume with a graduated cylinder. Record the collection time period and volume collected. Determine flow rate. Adjust the pump speed to deliver the specified flow rate.

6. Calculations

6.1 Nomenclature. The following symbols are used in the calculations.

C_o=Average inlet feed concentration for a compound of interest, as analyzed (mg/L)
C_e=Average outlet (effluent) concentration for a compound of interest, as analyzed (mg/L)
X=Biomass concentration, mixed liquor suspended solids (g/L)
t=Hydraulic residence time in the reactor (hours)
V=Volume of the bioreactor (6L)
Q=Flow rate of wastewater into the reactor, average (L/hour)

6.2 Residence Time. The hydraulic residence time of the reactor is equal to the ratio of the volume of the reactor (L) to the flow rate (L/h)

$$t = \frac{V}{Q} \qquad \text{Eq. 304B-4}$$

6.3 Rate of Biodegradation. Calculate the rate of biodegradation for each component with the following equation:

$$\text{Rate}\left(\frac{mg}{L-h}\right) = \frac{C_i - C_o}{t} \qquad \text{Eq. 304B-5}$$

6.4 First-Order Biorate Constant. Calculate the first-order biorate constant (K1) for each component with the following equation:

$$K1\left(\frac{L}{g-h}\right) = \frac{C_i - C_o}{t\,C_o X} \qquad \text{Eq. 304B-6}$$

6.5 Relative Standard Deviation (RSD). Determine the standard deviation of both the influent and effluent sample concentrations (S) using the following equation:

$$RSD = \frac{100}{\bar{S}}\left\{\sum_{i=1}^{n}\frac{(S_i - \bar{S})^2}{(n-1)}\right\}^{1/2} \qquad \text{Eq. 304B-7}$$

6.6 Determination of Percent Air Emissions and Percent Biodegraded. Use the results from this test method and follow the applicable procedures in Appendix C of 40 CFR Part 63, entitled, "Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit" to determine F_{bio}.

7. Bibliography

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Method 305: Measurement of Emission Potential of Individual Volatile Organic Compounds in Waste

1. Applicability and Principle

This procedure is used to determine the emission potential of individual volatile organics (VOs) in waste. The heated purge conditions established by Method 25D (40 CFR part 60, Appendix A) are used to remove VOs from a 10-g sample of waste suspended in a 50/50 solution of polyethylene glycol (PEG) and water. The purged VOs are quantified by using the sample collection and analytical techniques appropriate for the VOs present in the waste. The recovery efficiency of the sample collection and analytical technique is determined for each waste matrix. A correction factor is determined for each compound (if acceptable recovery criteria requirements are met of 70 to 130 percent recovery for every target compound), and the measured waste concentration is corrected with the correction factor for each compound. A minimum of three replicate waste samples shall be analyzed.

2. Apparatus and Materials

2.1 Method 25D Purge Apparatus.

2.1.1 Purge Chamber. The purge chamber shall accommodate the 10-g sample of waste suspended in a matrix of 50 mL of PEG and 50 mL of deionized, hydrocarbon-free water. Three fittings are used on the glass chamber top. Two #7 Ace-threads are used for the purge gas inlet and outlet connections. A #50 Ace-thread is used to connect the top of the chamber to the base (see Figure 1). The base of the chamber has a side-arm equipped with a #22 Sovirel fitting to allow for easy sample introductions into the chamber. The dimensions of the chamber are shown in Figure 1.

2.1.2 Flow Distribution Device (FDD). The FDD enhances the gas-to-liquid contact for improved purging efficiency. The FDD is a 6 mm OD by 30 cm long glass tube equipped with four arm bubblers as shown in Figure 1. Each arm shall have an opening of 1 mm in diameter.

2.1.3 Coalescing Filter. The coalescing filter serves to discourage aerosol formation of sample gas once it leaves the purge chamber. The glass filter has a fritted disc mounted 10 cm from the bottom. Two #7 Ace-threads are used for the inlet and outlet connections. The dimensions of the chamber are shown in Figure 2.

2.1.4 Oven. A forced convection airflow oven capable of maintaining the purge chamber and coalescing filter at 75±2°C.

2.1.5 Toggle Valve. An on/off valve constructed from brass or stainless steel rated to 100 psig. This valve is placed in line between the purge nitrogen source and the flow controller.

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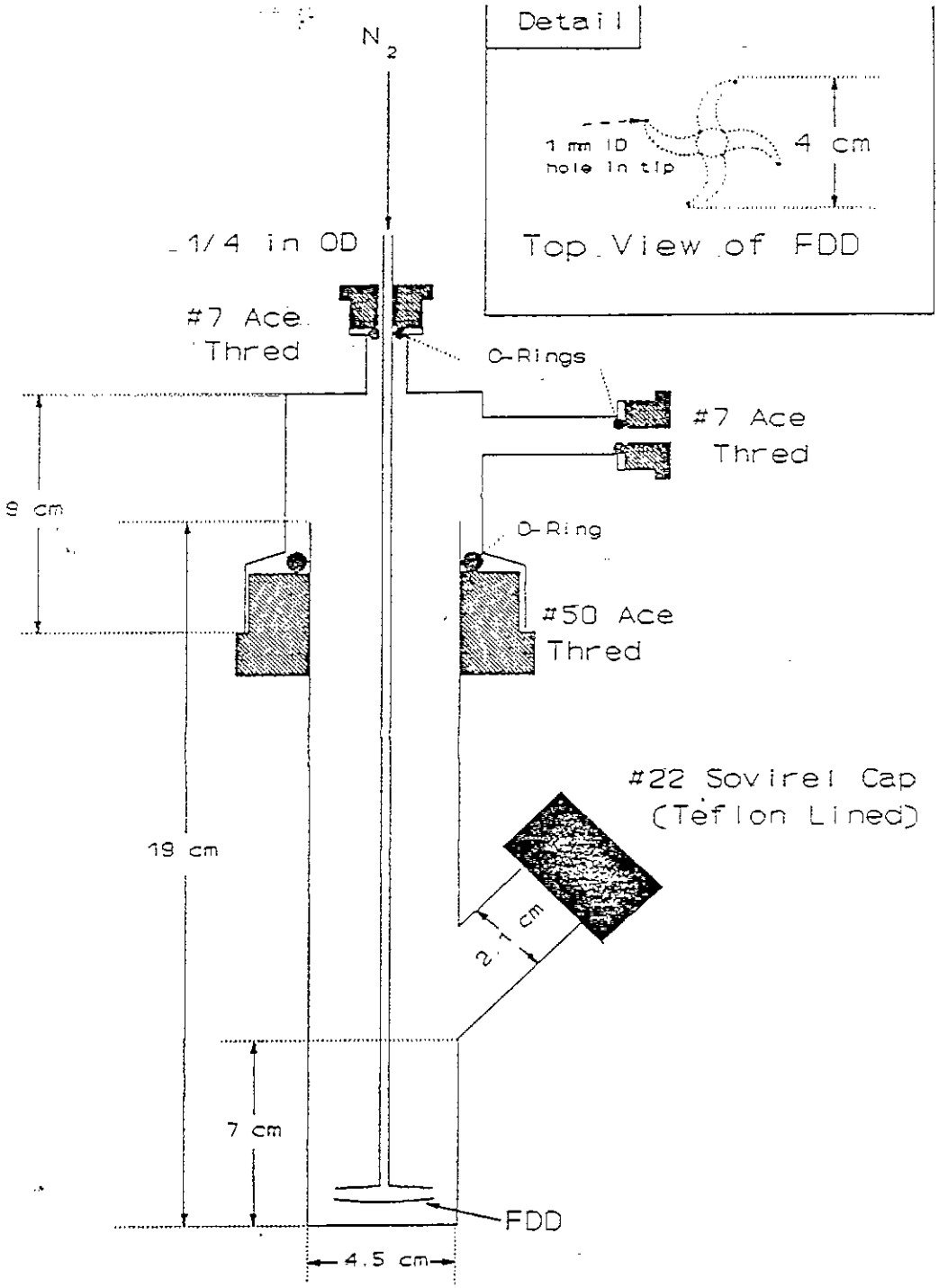

Figure 1 Schematic of Purge Chamber

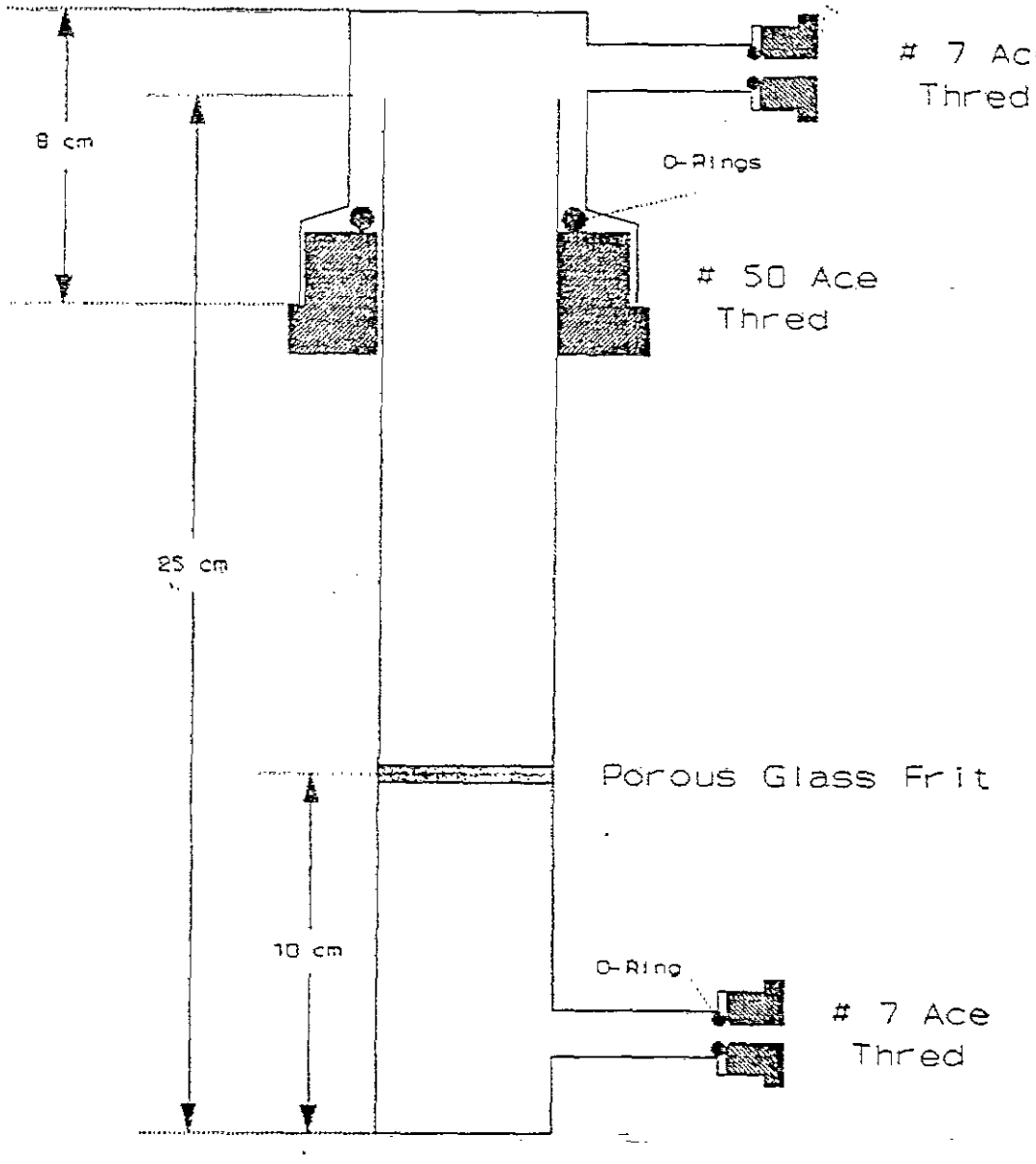

Figure 2. Schematic of Coalescing Filter

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2.1.6 Flow Controller. High-quality stainless steel flow controller capable of restricting a flow of nitrogen to 6±0.06 L/min at 40 psig.

2.1.7 Polyethylene Glycol Cleaning System.

2.1.7.1 Round-Bottom Flask. One liter, three-neck glass round-bottom flask for cleaning PEG. Standard taper 24/40 joints are mounted on each neck.

2.1.7.2 Heating Mantle. Capable of heating contents of the 1-L flask to 120°C.

2.1.7.3 Nitrogen Bubbler. Teflon or glass tube, 0.25 in. OD.

2.1.7.4 Thermometer. Partial immersion glass thermometer.

2.1.7.5 Hose Adapter. Glass with 24/40 standard tapered joint.

2.1.8 Reagents.

2.1.8.1 Polyethylene Glycol. Ninety-eight percent pure organic polymer with an average molecular weight of 400. Volatile organics are removed from the PEG prior to use by heating to 120±5°C and purging with pure nitrogen at 1 L/min for 2 hours. The PEG is stored at room temperature under a nitrogen purge maintained at 1 L/min until used. A typical apparatus used to clean the PEG is shown in Figure 3.

2.1.8.2 Water. Organic-free deionized water is required.

2.1.8.3 Nitrogen. High-purity nitrogen (less than 0.5 ppm total hydrocarbons) is used to remove test compounds from the purge matrix. The source of nitrogen shall be regulated continuously to 40 psig before the on/off toggle valve.

2.2 Volatile Organic Recovery System.

2.2.1 Splitter Valve (Optional). Stainless steel cross-pattern valve capable of splitting nominal flow rates from the purge flow of 6 L/min. The valve shall be maintained at 75±2°C in the heated zone and shall be placed downstream of the coalescing filter. It is recommended that 0.125 in. OD tubing be used to direct the split vent flow from the heated zone. The back pressure caused by the 0.125 in. OD tubing is critical for maintaining proper split valve operation. Note: The splitter valve design is optional; it may be used in cases where the concentration of a pollutant would saturate the adsorbents.

2.2.2 Injection Port. Stainless steel 1/4 in. OD compression fitting tee with a 6-mm septum fixed on the top port. The injection port is the point of entry for the recovery study solution. If using a gaseous standard to determine recovery efficiency, connect the gaseous standard to the injection port of the tee.

2.2.3 Knockout Trap (Optional but Recommended). A 25-mL capacity glass reservoir body with a full-stem impinger (to avoid leaks, a modified midget glass impinger with a screw cap and ball/socket clamps on the inlet and outlet is recommended). The empty impinger is placed in an ice water bath between the injection port and the sorbent cartridge. Its purpose is to reduce the water content of the purge gas (saturated at 75°C) before the sorbent cartridge.

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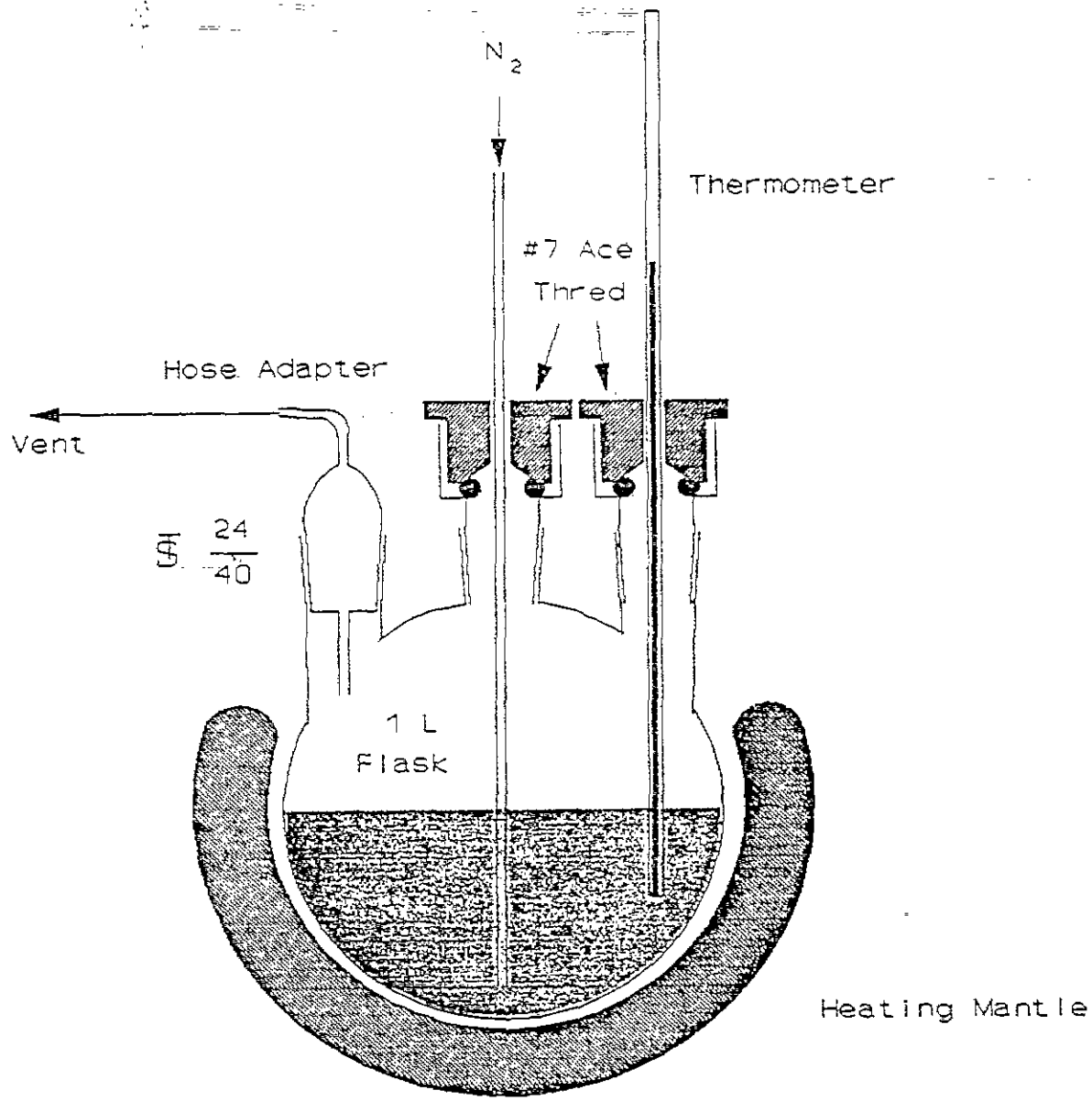

Figure 3. Schematic of PEG Cleaning System

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2.2.4 Insulated Ice Bath. A 350-mL dewar or other type of insulated bath is used to maintain ice water around the knockout trap.

2.2.5 Sorbent Cartridges. Commercially available glass or stainless steel cartridge packed with one or more appropriate sorbents. The amount of adsorbent packed in the cartridge depends on the breakthrough volume of the test compounds but is limited by back pressure caused by the packing (not to exceed 7 psig). More than one sorbent cartridge placed in series may be necessary depending upon the mixture of the measured components.

2.2.6 Volumetric Glassware. Type A glass 10-mL volumetric flasks for measuring a final volume from the water catch in the knockout trap.

2.2.7 Thermal Desorption Unit. A clam-shell type oven, used for the desorption of direct thermal desorption sorbent tubes. The oven shall be capable of increasing the temperature of the desorption tubes rapidly to recommended desorption temperature.

2.2.8 Ultrasonic Bath. Small bath used to agitate sorbent material and desorption solvent. Ice water shall be used in the bath because of heat transfer caused by operation of the bath.

2.2.9 Desorption Vials. Four-dram (15-mL) capacity borosilicate glass vials with Teflon-lined caps.

2.2.10 Reagents

2.2.10.1 Water. Same as specified in Section 2.1.8.2.

2.2.10.2 Desorption Solvent (when used). Appropriate high-purity (99.99 percent) solvent for desorption shall be used. Analysis shall be performed (utilizing the same analytical technique as that used in the analysis of the waste samples) on each lot to determine purity.

2.3 Analytical System. A gas chromatograph (GC) is commonly used to separate and quantify compounds from the sample collection and recovery procedure. Method 18 (40 CFR Part 60, Appendix A) may be used as a guideline for determining the appropriate GC column and GC detector based on the test compounds to be determined. Other types of analytical instrumentation may be used (i.e., HPLC) in lieu of GC systems as long as the recovery efficiency criteria of this method are met.

2.3.1 Gas Chromatograph. The GC shall be equipped with a constant-temperature liquid injection port or a heated sampling loop/valve system, as appropriate. The GC oven shall be temperature-programmable over the useful range of the GC column. The choice of detectors is based on the test compounds to be determined.

2.3.2 GC Column. Select the appropriate GC column based on (1) literature review or previous experience, (2) polarity of the analytes, (3) capacity of the column, or (4) resolving power (i.e., length, diameter, film thickness) required.

2.3.3 Data System. A programmable electronic integrator for recording, analyzing, and storing the signal generated by the detector.

2.3.4 Reagents. The gases required for GC operation shall be of the highest obtainable purity (hydrocarbon free). Consult the operating manual for recommended settings.

3. Procedure

Assemble the glassware and associated fittings (see Figures 4 or 5, as appropriate) and leak-check the system (approximately 7 psig is the target pressure). After an initial leak check, mark the pressure gauge and use the initial checkpoint to monitor for leaks throughout subsequent analyses. If the pressure in the system drops below the target pressure at any time during analysis, that analysis shall be considered invalid.

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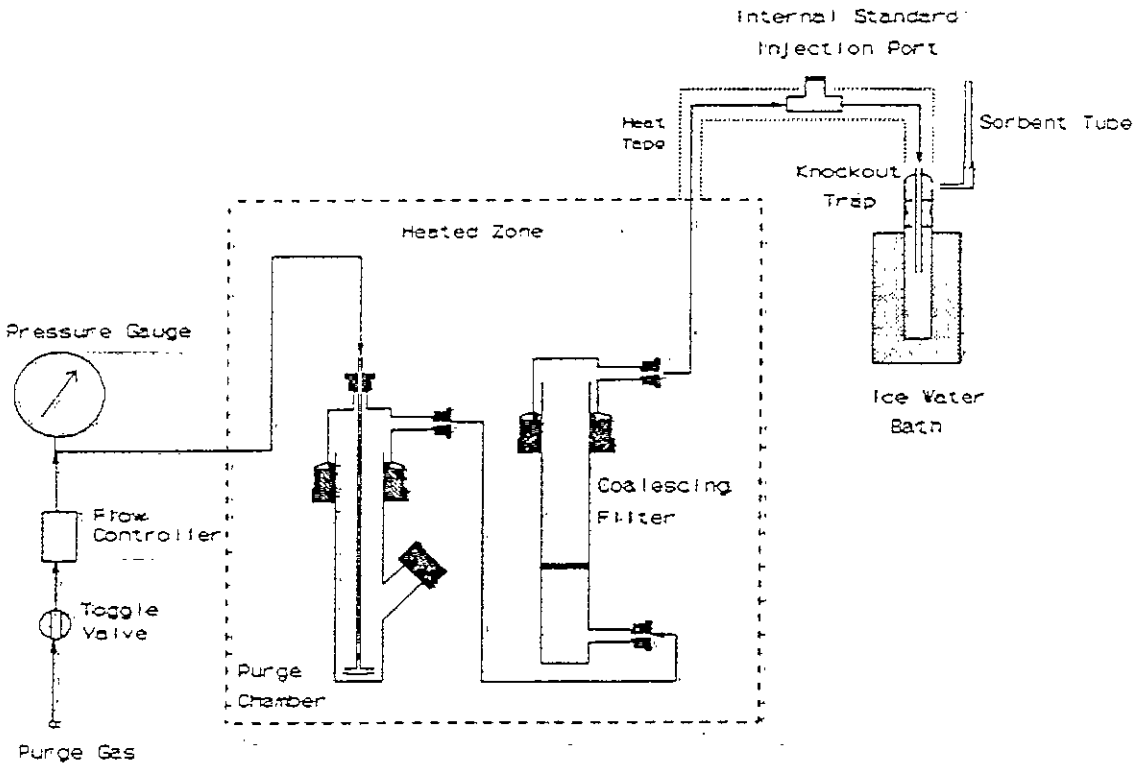

Figure 4. Schematic of Purge and Recovery Apparatus

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3.1 Recovery Efficiency Determination. Determine the individual recovery efficiency (RE) for each of the target compounds in duplicate before the waste samples are analyzed. To determine the RE, generate a water blank (Section 3.2.4) and use the injection port to introduce a known volume of spike solution (or certified gaseous standard) containing all of the target compounds at the levels expected in the waste sample. Introduce the spike solution immediately after the nitrogen purge has been started (Section 3.2.2). Follow the procedures outlined in Section 3.2.3. Analyze the recovery efficiency samples using the techniques described in Section 3.3. Determine the recovery efficiency (Equation 1, Section 4.2) by comparing the amount of compound recovered to the theoretical amount spiked. Determine the RE twice for each compound; the RSD shall be ≤ 10 percent for each compound. If the RSD for any compound is not ≤ 10 percent, modify the sampling/analytical procedure and complete an RE study in duplicate, or continue determining RE until the RSD meets the acceptable criteria. The average RE shall be $0.70 \leq RE \leq 1.30$ for each compound. If the average RE does not meet these criteria, an alternative sample collection and/or analysis technique shall be developed and the recovery efficiency determination shall be repeated for that compound until the criteria are met for every target compound. Example modifications of the sampling/analytical system include changing the adsorbent material, changing the desorption solvent, utilizing direct thermal desorption of test compounds from the sorbent tubes, utilizing another analytical technique.

3.2 Sample Collection and Recovery.

3.2.1 The sample collection procedure in Method 25D shall be used to collect (into a preweighed vial) 10 g of waste into PEG, cool, and ship to the laboratory. Remove the sample container from the cooler and wipe the exterior to remove any ice or water. Weigh the container and sample to the nearest 0.01 g and record the weight. Pour the sample from the container into the purge flask. Rinse the sample container three times with approximately 6 mL of PEG (or the volume needed to total 50 mL of PEG in the purge flask), transferring the rinses to the purge flask. Add 50 mL of organic-free deionized water to the purge flask. Cap the purge flask tightly in between each rinse and after adding all the components into the flask.

3.2.2 Allow the oven to equilibrate to 75± °C. Begin the sample recovery process by turning the toggle valve on, thus allowing a 6-L/min flow of pure nitrogen through the purge chamber.

3.2.3 Stop the purge after 30 min. Immediately remove the sorbent tube(s) from the apparatus and cap both ends. Remove the knockout trap and transfer the water catch to a 10-mL volumetric flask. Rinse the trap with organic-free deionized water and transfer the rinse to the volumetric flask. Dilute to the 10-mL mark with water. Transfer the water sample to a sample vial and store at 4°C with zero headspace. The analysis of the contents of the water knockout trap is optional for this method. If the target compounds are water soluble, analysis of the water is recommended; meeting the recovery efficiency criteria in these cases would be difficult without adding the amount captured in the knockout trap.

3.2.4 Water Blank. A water blank shall be analyzed daily to determine the cleanliness of the purge and recovery system. A water blank is generated by adding 50 mL of organic-free deionized water to 50 mL of PEG in the purge chamber. Treat the blank as described in Section 3.2.2 and 3.2.3. The purpose of the water blank is to insure that no contaminants exist in the sampling and analytical apparatus which would interfere with the quantitation of the target compounds. If contaminants are present, locate the source of contamination, remove it, and repeat the water blank analysis.

3.3 Sample Analysis. Sample analysis in the context of this method refers to techniques to remove the target compounds from the sorbent tubes, separate them using a chromatography technique, and quantify them with an appropriate detector. Two types of sample extraction techniques typically used for sorbents include solvent desorption or direct thermal desorption of test compounds to a secondary focusing unit (either sorbent or cryogen based). The test compounds are then typically transferred to a GC system for analysis. Other analytical systems may be used (i.e., HPLC) in lieu of GC systems as long as the recovery efficiency criteria of this method are met.

3.3.1 Recover the test compounds from the sorbent tubes that require solvent desorption by transferring the adsorbent material to a sample vial containing the desorption solvent. The desorption solvent shall be the same as the solvent used to prepare calibration standards. The volume of solvent depends on the amount of adsorbed material to be desorbed (1.0 mL per 100 mg of adsorbent material) and also on the amount of test compounds present. Final volume adjustment and or dilution can be made so that the concentration of test compounds in the desorption solvent is bracketed by the concentration of the calibration solutions. Ultrasonicate the desorption solvent for 15 min in an ice bath. Allow the sample to sit for a period of time so that the adsorbent material can settle to the bottom of the vial. Transfer the solvent with a pasteur pipet (minimizing the amount of adsorbent material taken) to another vial and store at 4 °C.

3.3.2 The analytical instrument shall be calibrated with a minimum of three levels of standards for each compound whose concentrations bracket the concentration of test compounds from the sorbent tubes. Liquid calibration standards shall be used for calibration in the analysis of the solvent extracts. The liquid calibration standards shall be prepared in the desorption solvent matrix. The calibration standards may be prepared and injected individually or as a mixture. If thermal desorption and focusing (onto another sorbent or cryogen focusing) are used, a certified gaseous mixture or a series of gaseous standards shall be used for calibration of the instrument. The gaseous standards shall be focused and analyzed in the same manner as the samples.

3.3.3 The analytical system shall be certified free from contaminants before a calibration is performed (see Section 3.2.4). The calibration standards are used to determine the linearity of the analytical system. Perform an initial calibration and linearity check by analyzing the three calibration standards for each target compound in triplicate starting with the lowest level and continuing to the highest level. If the triplicate analyses do not agree within 5 percent of their average, additional analyses will be needed until the 5 percent criteria is met. Calculate the response factor (Equation 3, Section 4.4) from the average area counts of the injections for each concentration level. Average the response factors of the standards for each compound. The linearity of the detector is acceptable if the response factor of each compound at a particular concentration is within 10 percent of the overall mean response factor for that compound. Analyze daily a mid-level calibration standard in duplicate and calculate a new response factor. Compare the daily response factor average to the average response factor calculated for the mid-level calibration during the initial linearity check, repeat the three-level calibration procedure if the daily average response factor differs from the initial linearity check mid-level response factor by more than 10 percent. Otherwise, proceed with the sample analysis.

3.3.4 Analyze the desorption solvent or direct thermal desorption tubes from each sample using the same analytical parameters used for the calibration standard. Calculate the total weight detected for each compound (Equation 4, Section 4.5). The slope (area/amount) and y-intercept are calculated from the line bracketed between the two closest calibration points. Correct the concentration of each waste sample with the appropriate recovery efficiency factor and the split flow ratio (if used). The final concentration of each individual test compound is calculated by dividing the corrected measured weight for that compound by the weight of the original sample determined in Section 3.2.1 (Equation 5, Section 4.6).

3.4 Repeat the sample collection, recovery, and analysis twice more, for a total of three samples. Report the corrected concentration of each of the waste samples, average waste concentration, and relative standard deviation (Equation 6, Section 4.7).

4. Calculations

4.1 Definitions and Variables

A_S=Mean area counts of test compound in standard.

A_s=Mean area counts of test compound in sample desorption solvent.

b=y-intercept of the line formed between the two closest calibration standards that bracket the concentration of the sample.

C_T=Amount of test compound (μg) in calibration standard.

CF=Correction for adjusting final amount of sample detected for losses during individual sample runs.

F_p=Nitrogen flow through the purge chamber (6 L/min).

F_s=Nitrogen split flow directed to the sample recovery system (use 6 L/min if split flow design was not used).

PPM=Final concentration of test compound in waste sample (μg/g).
RE=Recovery efficiency for adjusting final amount of sample detected for losses due to inefficient trapping and desorption techniques.
R.F.=Response factor for test compound, calculated from a calibration standard.
S=Slope of the line (area counts/C_T) formed between two closest calibration points that bracket the concentration of the sample.
W_C=Weight of test compound expected to be recovered in spike solution based on theoretical amount.
W_E=Weight of vial and PEG (g).
W_F=Weight of vial, PEG and waste sample (g).
W_S=Weight of original waste sample (g).
W_T=Corrected weight of test compound measured (μg) in sample.
W_X=Weight of test compound measured during analysis of recovery efficiency spike samples (μg).

4.2 Recovery efficiency for determining trapping/desorption efficiency of individual test compounds in the spike solution, decimal value.

$$RE = \frac{W_x}{W_c} \quad (1)$$

4.3 Weight of waste sample (g).

$$W_S = W_F - W_E \quad (2)$$

4.4 Response Factor for individual test compounds.

$$RF = \frac{C_T}{A_S} \quad (3)$$

4.5 Corrected weight of a test compound in the sample, in μg.

$$W_T = \frac{A_u - b}{S} \times \frac{1}{RE} \times \frac{F_p}{F_s} \quad (4)$$

4.6 Final concentration of a test compound in the sample in ppmw.

$$PPM = \frac{W_T}{W_S} \quad (5)$$

4.7 Relative standard deviation (RSD) calculation.

$$RSD = \frac{100}{\overline{PPM}} \sqrt{\frac{\sum_{i=1}^{n} \left(PPM_i - \overline{PPM}\right)^2}{n-1}} \quad (6)$$

5. Part 63 is amended by adding Appendix C to read as follows:

Appendix C to part 63

Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit

I. Purpose

The purpose of this appendix is to define the procedures for an owner or operator to use to calculate the site specific fraction of organic compounds biodegraded (F_{bio}) in a biological treatment unit. If an acceptable level of organic compounds is destroyed rather than emitted to the air or remaining in the effluent, the biological treatment unit may be used to comply with the applicable treatment requirements without the unit being covered and vented through a closed vent system to an air pollution control device.

The determination of F_{bio} shall be made on a system as it would exist under the rule. The owner or operator should anticipate changes that would occur to the wastewater flow and concentration of organics, to be treated by the biological treatment unit, as a result of enclosing the collection and treatment system as required by the rule.

II. Definitions

Biological treatment unit = wastewater treatment unit designed and operated to promote the growth of bacteria and other factors to destroy organic materials in wastewater.

f_{bio} = The fraction of individual applicable organic compounds in the wastewater biodegraded in a biological treatment unit.

F_{bio} = The fraction of total applicable organic compounds in the wastewater biodegraded in a biological treatment unit.

Fe = The fraction of applicable organic compounds emitted from the wastewater to the atmosphere.

Kl = First order biodegradation rate constant, L/g bio-hr.

KL = liquid-phase mass transfer coefficient, m/s.

M = compound specific mass flow weighted average of organic compounds in the wastewater, Mg/Yr.

III. Procedures for Determination of f_{bio}

The first step in the analysis to determine if a biological treatment unit may be used without being covered and vented through a closed vent system to an air pollution control device, is to determine the compound specific f_{bio}. The following 3 procedures may be used to determine f_{bio}:

(1) EPA Test Method 304A or 304B (Appendix C, Part 63)—Method for the Determination of Biodegradation Rates of Organic Compounds.

(2) Performance data with and without biodegradation.

(3) Inlet and outlet concentration measurements. All procedures must be executed so that the resulting F_{bio} based on the collection system and waste management units being in compliance with the regulation. If the collection system and waste management units meet the suppression requirements at the time of the performance test, any of the three procedures may be chosen. If the collection system and waste management units are not in compliance at the time of the performance test, then only Method 304A or 304B shall be chosen.

Select the appropriate procedure from the three listed above based on the availability of site specific data. If the facility does not have site specific data on the removal efficiency of their biological treatment unit, then Procedure 1 may be used. Procedure 1 allows the use of a bench scale reactor to determine the first order biodegradation rate constant. Procedure 3 would be used if the facility has, or measures to determine, data on the inlet and outlet individual organic compound concentration for the biological treatment unit. Procedure 2 is used if a facility has performance data on a biotreatment unit prior to and after addition of the microbial mass. An example where Procedure 2 could be used is, an activated sludge unit where measurements have been taken on inlet and exit concentration of organic compounds in the wastewater prior to seeding with the microbial mass and start up of the unit. The flow chart listed in Figure 1 outlines the steps to use for each of the procedures.

A. Method 304A or 304B (Procedure 1)

If the first procedure is selected, follow the instructions in Appendix C of part 63 Method 304A "Method for the Determination of Biodegradation Rates of Organic Compounds (Vented Option)" or Method 304B "Method for the Determination of Biodegradation Rates of Organic Compounds (Scrubber Option)". Method 304A or 304B provides instruction on setting up and operating a self-contained benchtop bioreactor system which is operated under conditions representative of the target full-scale system. Method 304A uses a benchtop bioreactor system with a vent, and uses modeling to estimate any air emissions. Method 304B uses a benchtop bioreactor system which is equipped with a scrubber and is not vented.

There are some restrictions on which method a source may use. If the facility is measuring the rate of biodegradation of compounds that may tend to react or hydrolyze in the scrubber of Method 304B, this method shall not be used and Method 304A is the required method. If a Henry's law value is not available to use with Form V, then Method 304A shall not be used and Method 304B is the required method. When using either method, the feed flow to the benchtop bioreactor shall be representative of the flow and concentration of the wastewater that will be treated by the full scale biological treatment unit after the collection and treatment system has been enclosed as required under the applicable subpart.

The conditions under which Method 304A or 304B is run establishes the operating parameters of the full scale biological

treatment unit. If the biological treatment unit is operated at a non-steady state for example, varying dissolved oxygen, mixed liquor suspended solids, temperature, or other critical parameters, the Agency believes this will adversely affect the biodegradation rate and is an unacceptable treatment option. If the variation in operating parameters is due to seasonal changes or process changes, the facility shall conduct the test method at these different parameters and show the system is achieving the acceptable level of control as required by the regulation. The facility would be making multiple runs of the test method to establish an acceptable operating range for its biological treatment unit. For wide ranges of variation in operating parameters, the facility shall demonstrate the biological treatment unit is achieving an acceptable level of control, as required by the regulation, across the range and not only at the endpoints.

If Method 304A is used, complete Form V initially. Form V is used to calculate K1 from the Method 304A results. Form V uses the Henry's law constant to estimate the fraction lost from the benchtop reactor vent. The owner or operator shall use the Henry's law values in Table I. Form V also gives direction for calculating an equivalent KL. Note on Form V if the calculated number for line 11 is greater than the calculated value for line 13, this procedure shall not be used to demonstrate the compound is biodegradable. If line 11 is greater than line 13, this is an indication the fraction emitted from the vent is greater than the fraction biodegraded. The equivalent KL determined on Form V is used in Form II (line 6). Estimation of the Fe and f_{bio} must be done following the steps in Form III. Form III uses the previously calculated values of K1 and KL (equivalent KL), and site specific parameters of the full scale bioreactor as input to the calculations. Forms II, III, and V must be completed for each organic compound in the wastewater to determine Fe and f_{bio}.

If Method 304B is used, perform the method and use the measurements to determine K1, which is the first order biodegradation rate constant. Form I lists the sequence of steps in the procedure for calculating K1 from the Method 304B results. Once K1 is determined, KL must be calculated by use of mass transfer equations. Form II outlines the procedure to follow for use of mass transfer equations to determine KL. Because of the complexity of these equations, a computer program which incorporates these mass transfer equations may be used. Water7 is a program that incorporates these mass transfer equations and may be used to determine KL. Refer to Form II–A to determine KL, if Water7 or the most recent update to this model is used. The Bay Area Sewage Toxics Emission (BASTE) model and the TOXCHEM (Environment Canada's Wastewater Technology Centre and Environmega, Ltd.) model may also be used with several stipulations. The programs must be altered to output a KL value which is based on the site specific parameters of the unit modeled, and the Henry's law values listed in Table I must be substituted for the existing Henry's law values in the programs. Input values used in the model and corresponding output values shall become documentation of the f_{bio} determination. The owner or operator should be aware these programs do not allow modeling of certain units. To model these units, the owner or operator shall use one of the other appropriate procedures as outlined in this appendix. The owner or operator shall not use a default value for KL. The KL value determined by use of these models shall be based on the site specific parameters of the specific unit. This KL value shall be inserted in Form II (line 6). Estimation of the Fe and f_{bio} must be done following the steps in Form III. Form III uses the previously calculated values of K1 and KL, and site specific parameters of the full scale bioreactor as input to the calculations. Forms I, II, and III must be completed for each organic compound in the wastewater to determine Fe and f_{bio}.

B. Performance Data With and Without Biodegradation (Procedure 2)

Procedure 2 uses site specific performance data that represents or characterizes operation of the unit both with and without biodegradation. As previously mentioned, proper determination of f_{bio} must be made on a system as it would exist under the rule. Using Form IV, calculate KL and K1. After KL and K1 are determined, Form III is used to calculate Fe and f_{bio} for each organic compound present in the wastewater.

C. Inlet and Outlet Concentration Measurements (Procedure 3)

Procedure 3 uses measured inlet and outlet organic compound concentrations for the unit. Again, proper determination of f_{bio} must be made on a system as it would exist under the rule. The first step in using this procedure is to calculate KL using Form II. Again because of the complexity of the calculations, a computer model may be used. If the Water7 model or the most recent update to this model is used, then use Form II-A to calculate KL. After KL is determined using field data, complete Form VI to calculate K1. The TOXCHEM or BASTE model may also be used to calculate KL, with the stipulations listed in procedure 304B. After KL and K1 are determined, Form III is used to calculate Fe and f_{bio} for each organic compound.

IV. Calculation of F_{bio}

At this point, the individual f_{bio}'s determined by the previously explained procedures must be summed to obtain the total f_{bio}. To determine the F_{bio} multiply each compound specific f_{bio} by the compound specific average mass flow rate of the organic compound in the wastewater stream (see regulation for instruction on calculation of average mass flow rate). Sum these products and divide by the total wastewater stream average mass flow rate of organic compounds.

$$F_{bio} = \frac{\sum_{i=1}^{n} (f_{bio_i} \times M_i)}{\sum_{i=1}^{n} M_i}$$

M=compound specific average mass flow rate of the organic compounds in the wastewater(Mg/Yr)

n=number of organic compounds in the wastewater

The F_{bio} is then used in the applicable compliance equations in the regulation to determine if biodegradation may be used to comply with the treatment standard without covering and venting to an air pollution control device.

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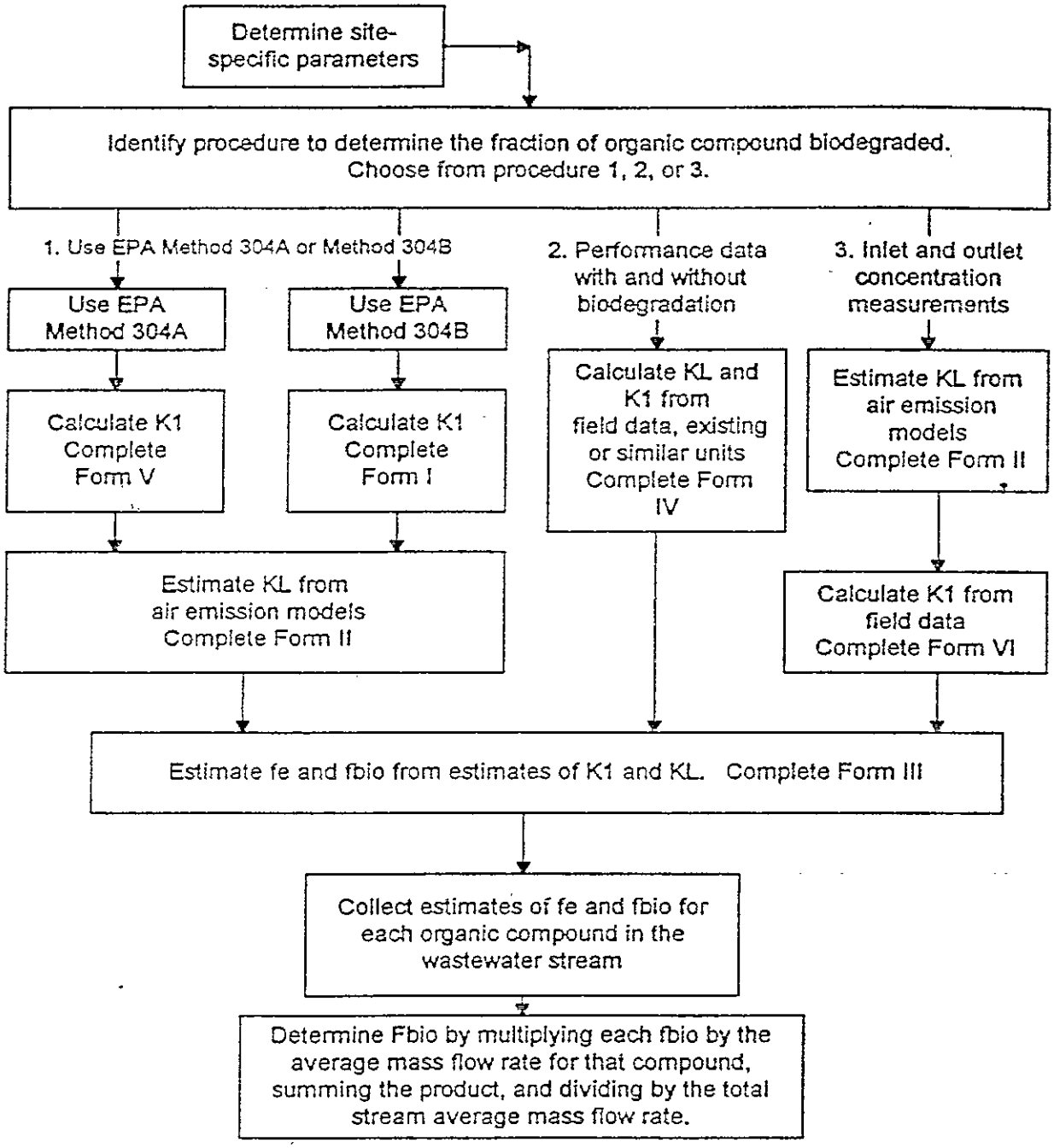

Figure 1. ALTERNATIVE METHODS FOR DETERMINING THE FRACTION OF ORGANIC COMPOUND BIODEGRADED (Fbio) IN A BIOLOGICAL TREATMENT UNIT

TABLE I

	Compound	H_L @ 25°C (atm / mole frac)	H_L @ 100°C (atm / mole frac)
1	Acetaldehyde	4.87e+00	5.64e+01
3	Acetonitrile	1.11e+00	1.76e+01
4	Acetophenone	5.09e-01	2.25e+01
5	Acrolein	4.57e+00	6.61e+01
8	Acrylonitrile	5.45e+00	6.67e+01
9	Allyl chloride	5.15e+02	2.26e+03
10	Aniline	9.78e-02	1.42e+00
12	Benzene	3.08e+02	1.93e+03
14	Benzyl chloride	1.77e+01	2.88e+02
15	Biphenyl	2.27e+01	1.27e+03
17	Bromoform	2.96e+01	3.98e+02
18	1,3-Butadiene	3.96e+03	1.56e+04
20	Carbon disulfide	1.06e+03	3.60e+03
21	Carbon tetrachloride	1.68e+03	1.69e+04
23	2-Chloroacetophenone	4.84e-02	1.43e+01
24	Chlorobenzene	2.09e+02	3.12e+03
25	Chloroform	2.21e+02	1.34e+03
26	Chloroprene	5.16e+01	1.74e+02
29	o-Cresol	9.12e-02	2.44e+01
31	Cumene	7.28e+02	7.15e+03
32	1,4-Dichlorobenzene(p)	1.76e+02	1.95e+03
33	Dichloroethyl ether	1.14e+00	3.57e+01
34	1,3-Dichloropropene	1.97e+02	1.44e+03
36	N,N-Dimethylaniline	7.70e-01	5.67e+02
37	Diethyl sulfate	3.41e-01	4.22e+01
38	3,3'-Dimethylbenzidine	7.51e-05	5.09e-01
40	1,1-Dimethylhydrazine	9.11e-02	1.57e+01

	Compound	H_L @ 25°C (atm / mole frac)	H_L @ 100°C (atm / mole frac)
42	Dimethyl sulfate	2.23e-01	1.43e+01
43	2,4-Dinitrophenol	2.84e-01	1.50e+02
44	2,4-Dinitrotoluene	4.00e-01	9.62e+00
45	1,4-Dioxane	3.08e-01	9.53e+00
47	Epichlorohydrin	1.86e+00	4.34e+01
48	Ethyl acrylate	1.41e+01	3.01e+02
49	Ethylbenzene	4.38e+02	4.27e+03
50	Ethyl chloride(chloroethane)	6.72e+02	3.10e+03
51	Ethylene dibromide	3.61e+01	5.15e+02
52	Ethylene dichloride(1,2-Dichloroethane)	6.54e+01	5.06e+02
54	Ethylene oxide	1.32e+01	9.09e+01
55	Ethylidene dichloride(1,1-Dichloroethane)	3.12e+02	2.92e+03
57	Ethylene glycol dimethyl ether	1.95e+00	4.12e+01
60	Ethylene glycol monoethyl ether acetate	9.86e-02	6.03e+00
62	Ethylene glycol monomethyl ether acetate	1.22e-01	6.93e+00
64	Diethylene glycol dimethyl ether	8.38e-02	4.69e+00
69	Diethylene glycol diethyl ether	1.19e-01	7.71e+00
72	Ethylene glycol monobutyl ether acetate	2.75e-01	2.50e+01
73	Hexachlorobenzene	9.45e+01	2.57e+04
74	Hexachlorobutadiene	5.72e+02	6.92e+03
75	Hexachloroethane	4.64e+02	7.49e+04
76	Hexane	4.27e+04	9.44e+04

	Compound	H_L @ 25°C (atm / mole frac)	H_L @ 100°C (atm / mole frac)
78	Isophorone	3.68e-01	1.68e+01
80	Methanol	2.89e-01	7.73e+00
81	Methyl bromide(Bromomethane)	3.81e+02	2.12e+03
82	Methyl chloride (Chloromethane)	4.90e+02	2.84e+03
83	Methyl chloroform (1,1,1-Trichloroethane)	9.67e+02	5.73e+03
84	Methyl ethyl ketone (2-Butanone)	7.22e+00	5.92e+01
86	Methyl isobutyl ketone (Hexone)	2.17e+01	3.72e+02
88	Methyl methacrylate	7.83e+00	9.15e+01
89	Methyl tert-butyl ether	3.08e+01	2.67e+02
90	Methylene chloride (Dichloromethane)	1.64e+02	9.15e+02
93	Naphthalene	2.68e+01	7.10e+02
94	Nitrobenzene	1.33e+00	2.80e+01
96	2-Nitropropane	6.61e+00	8.76e+01
99	Phosgene	7.80e+02	3.51e+03
102	Propionaldehyde	3.32e+00	1.42e+02
103	Propylene dichloride	1.59e+02	1.27e+03
104	Propylene oxide	1.98e+01	1.84e+02
106	Styrene	1.45e+02	1.72e+03
107	1,1,2,2-Tetrachloroethane	1.39e+01	1.99e+02
108	Tetrachloroethylene (Perchloroethylene)	9.83e+02	1.84e+04
109	Toluene	3.57e+02	2.10e+03
112	o-Toluidine	1.34e-01	1.15e+01
113	1,2,4-Trichlorobenzene	1.07e+02	1.04e+03
114	1,1,2-Trichloroethane	4.58e+01	5.86e+02

	Compound	H_L @ 25°C (atm / mole frac)	H_L @ 100°C (atm / mole frac)
115	Trichloroethylene	5.67e+02	7.66e+03
116	2,4,5-Trichlorophenol	4.84e-01	6.27e+01
117	Triethylamine	6.94e+00	2.57e+02
118	2,2,4-Trimethylpentane	1.85e+05	9.74e+05
119	Vinyl acetate	2.82e+01	2.80e+02
120	Vinyl chloride	1.47e+03	6.45e+03
121	Vinylidene chloride (1,1-Dichloroethylene)	1.44e+03	1.40e+04
123	m-Xylene	4.13e+02	3.25e+03
124	o-Xylene	2.71e+02	2.55e+03
125	p-Xylene	4.13e+02	3.20e+03

Form I DATA FORM FOR THE ESTIMATION OF THE EPA METHOD 304B FIRST ORDER BIORATE CONSTANT			
NAME OF THE FACILITY for site specific biorate determination			Example
COMPOUND for site specific biorate determination			*METHANOL*
INLET CONCENTRATION used in EPA METHOD 304B	1		78
EXIT CONCENTRATION measured by EPA METHOD 304B	2		6
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the bench scale bioreactor.	3		0.075
TEMPERATURE OF BIOREACTOR (deg. C)	4		35
VOLUME of EPA METHOD 304B bench scale bioreactor (L)	5		6
FLOW RATE of waste treated in the bench scale bioreactor (L/hr)	6		0.146
CALCULATIONS FROM EPA METHOD 304B DATA MEASUREMENTS			
RESIDENCE TIME (hr) Divide the number on line 5 by the number on line 6 and enter the results here.	7		41.10
Concentration Decrease (g/m^3). Subtract the number on line 2 from the number on line 1 and enter the results here.	8		72.00
BIORATE (g/m^3-hr). Divide the number on line 8 by the number on line 7 and enter the results here.	9		1.75
Product of concentration and biomass. Multiply the number on line 2 by the number on line 3 and enter the results here.	10		0.45
BIORATE K1 (L/g bio-hr) Divide the number on line 9 by the number on line 10 and enter the results here.	11		3.89
Temperature adjustment. Subtract 25 deg. C from the number on line 4 and enter the results here.	12		10
Temperature adjustment factor. 1.046 is the default temperature adjustment factor. Enter the temperature adjustment factor here.	13		1.046
Biorate temperature ratio. Raise the number on line 13 to the power of the number on line 12.	14		1.567
BIORATE K1 at 25 deg. C (L/g bio-hr) Divide the number on line 11 by the number on line 14 and enter the results here.	15		2.48

Note: With Monod kinetics, use Kmax = 1000 to convert the Monod kinetics to first order. If a different temperature adjustment factor than the default is entered on line 13, make sure that the adjustment factor used in the calculations agrees with the value entered on line 13.

Form II	PROCEDURES FORM FOR THE ESTIMATION OF THE KL FROM UNIT SPECIFICATIONS		
NAME OF THE FACILITY for site specific biorate determination			
NAME OF UNIT for site specific biorate determination			
NAME OF COMPOUND			
HENRY'S LAW constant for the compound (mole fraction in gas per mole fraction in water at 25 degrees Celsius)			
IDENTIFY THE TYPE OF UNIT			(check one box below)
	Quiescent impoundment	1	
	Surface agitated impoundment	2	
	Surface agitated impoundment with submerged air	3	
	Unit agitated by submerged aeration gas	4	
	EPA Method 304A, Covered unit, UNOX system, or bench scale reactor	5	

PROCEDURES BASED UPON THE TYPE OF UNIT

UNIT	PROCEDURE TO FOLLOW
1	Use the quiescent impoundment model to determine KL. Use Kq as KL as determined from Form VII.
2	Use the quiescent impoundment model to determine KL for the quiescent zone, Form VII. Use the aerated impoundment model to determine KL for the agitated surface, Form VIII.
3	Use the quiescent impoundment model to determine Kq for the quiescent zone, Form VII. Use the aerated impoundment model to determine KL for the agitated surface, Form VIII. The total system KL is the sum of the KL from Form VIII and the equivalent KL from Form V. Use the submerged air rate as the vent rate in form V.
4	Use the aerated impoundment model to determine KL if the surface is agitated. Use the quiescent impoundment model if the surface is not agitated. KL includes the effect of volatilization in the air discharge. See section 4.6.1 in the EMISSION MODEL REPORT (EPA-450/3-87-026). The total system KL is the sum of the KL from Form VIII and the equivalent KL from Form V. Use the submerged air rate as the vent rate in Form V.
5	KL for the surface is assumed to be equal zero. Determine equivalent KL based upon air discharge. Use Form V for EPA Method 304A or if the concentration in the vent is not measured. Use Form V-A if the concentration in the vent is measured.

Estimate of KL obtained from above procedures (m/s)	6	

Form II-A	PROCEDURES FORM FOR THE ESTIMATION OF THE KL FROM WATER 7		
NAME OF THE FACILITY for site specific biorate determination			
NAME OF UNIT for site specific biorate determination			
NAME OF COMPOUND			
HENRY'S LAW COMPOUND			
IDENTIFY THE TYPE OF UNIT			(check one box below)
	Quiescent impoundment	1	
	Surface agitated impoundment	2	
	Surface agitated impoundment with submerged air	3	
	Unit agitated by submerged aeration gas	4	
	Covered unit, UNOX system, bench scale reactor	5	

PROCEDURES BASED UPON THE TYPE OF UNIT

unit	procedure to follow
1	Use the quiescent impoundment model to determine KL.
2	Use the aerated impoundment model to determine KL for the combined agitated surfaces and quiescent surfaces.
3	Use the aerated impoundment model to determine KL for the combined agitated surfaces and quiescent surfaces.
4	Use the aerated impoundment model to determine KL if the surface is agitated. Use the quiescent impoundment model if the surface is not agitated. KL includes the effect of volatilization in the air discharge. See section 4.6.1 in the EMISSION MODEL REPORT (EPA-450/3-87-026).
5	KL for the surface is assumed to be equal zero. Select the covered unit option with the aerated impoundment model.

Form III DATA FORM FOR THE ESTIMATION OF THE COMPOUND FRACTION BIODEGRADED AND AIR EMISSIONS			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
ESTIMATE OF K1 from Form I line 11, Form V line 15, Form V-A line 15, Form IV line 14, or Form VI line 13. (L/g bio-hr)	1		3.89
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the full-scale bioreactor.	2		2.4
VOLUME of full-scale system (cubic meters)	3		2700
AREA of the liquid surface of the full-scale system (square meters)	4		1500
ESTIMATE OF KL from Form II or Form IV (m/s divided by 10^6)	5		4.95
FLOW RATE of waste treated in full-scale bioreactor (m^3/s)	6		0.1565
CALCULATIONS FROM ESTIMATES OF K1 AND KL			
BIORATE (m^3/s) Multiply the numbers on lines 1, 2, and 3 together and divide the results by 3600. Enter the results here.	7		7.0020
AIR STRIPPING (m^3/s). Multiply the numbers on lines 4 and 5 together and divide by 1,000,000. Enter the results here.	8		0.0074
EFFLUENT DISCHARGE (m^3/s). Enter the number on line 6 here.	9		0.1565
TOTAL of the three loss mechanisms. Add the numbers on lines 7, 8, and 9. Enter the results here.	10		7.1659
Fraction biodegraded: Divide the number on line 7 by the number on line 10 and enter the results here.	11		0.9771
Fraction air emissions: Divide the number on line 8 by the number on line 10 and enter the results here.	12		0.0010
Fraction remaining in unit effluent: Divide the number on line 9 by the number on line 10 and enter the results here.	13		0.0218
Total: add the numbers on lines 11, 12, and 13. The sum should equal 1.0	14		0.9999

Form IV DATA FORM FOR THE ESTIMATION OF K1 AND KL FROM FULL SCALE UNIT DATA WITH AND WITHOUT BIODEGRADATION			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the full-scale bioreactor.	1		2.4
VOLUME of full-scale system (cubic meters)	2		2700
AREA of the liquid surface of the full-scale system (square meters)	3		1500
INLET CONCENTRATION of compound (g/m^3 or ppmw)	4		133.5
EXIT CONCENTRATION of compound (g/m^3 or ppmw)	5		10.57
EXIT CONCENTRATION (NO BIODEGRADATION) of compound (g/m^3 or ppmw)	6		133
FLOW RATE of waste treated in the full-scale bioreactor (m^3/s)	7		0.1565
ESTIMATES OF K1 AND KL FROM FIELD DATA WITH AND WITHOUT BIODEGRADATION			
REMOVAL WITH BIODEGRADATION (g/s) Subtract the number on line 5 from the number on line 4 and multiply the results by the number on line 7. Enter the results here.	8		19.2385
REMOVAL WITHOUT BIODEGRADATION (g/s) Subtract the number on line 6 from the number on line 4 and multiply the results by the number on line 7. Enter the results here.	9		0.0783
KL A ESTIMATE (m^3/s) Divide the number on line 9 by the number on line 6. Enter the results here.	10		0.0006
K1 B V + KL A ESTIMATE (m^3/s) Divide the number on line 8 by the number on line 5. Enter the results here.	11		1.8201
K1 B V ESTIMATE (m^3/s) Subtract the number on line 10 from the number on line 11. Enter the results here.	12		1.8195
Product of B and V. Multiply the number on line 1 by the number on line 2 and enter the results here.	13		6,480.000
K1 ESTIMATE (L/gbio-hr) Divide the number on line 12 by the number on line 13 and multiply by 3600 s/hr. Enter the results here.	14		1.0108
KL ESTIMATE ($m/s \times 10^6$) Divide the number on line 10 by the number on line 3. Multiply the results by 1,000,000 and enter the product here.	15		0.4000

Form V DATA FORM FOR THE ESTIMATION OF K1 FOR EPA METHOD 304A OR FROM A COVERED, VENTED BIODEGRADATION UNIT.			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the unit.	1		0.075
VENT RATE of total gas leaving the unit (G, m^3/s)	2		.1
TEMPERATURE of the liquid in the unit (deg. C)	3		25
INLET CONCENTRATION of compound (g/m^3 or ppmw)	4		100
EXIT CONCENTRATION of compound (g/m^3 or ppmw)	5		5
ESTIMATE OF Henry's law constant (H, g/m^3 in gas / g/m^3 in liquid). Obtained from Form IX	6		0.00021
AREA OF REACTOR (m^2)	7		3400
VOLUME OF REACTOR (m^3)	8		10000
FLOW RATE of waste treated in the unit (m^3/s)	9		0.146
CALCULATION OF THE ESTIMATE OF K1			
TOTAL REMOVAL (g/s) Subtract the number on line 5 from the number on line 4 and multiply the result by the number on line 9. Enter the results here.	10		13.8700
[H G] ESTIMATE (m^3/s) Multiply the number on line 2 by the number on line 6. Enter the results here.	11		0.00002
[K1 B V + H G] (m^3/s) Divide the number on line 10 by the number on line 5. Enter the results here.	12		2.7740
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 11 from the number on line 12. Enter the results here.	13		2.7740
If the number on line 11 is greater than the number on line 13, this procedure cannot be used to demonstrate that the compound is biodegradable. Do not complete lines 14 and 15.			
Product of B and V. Multiply the number on line 1 by the number on line 8 and enter the results here.	14		750.000
K1 ESTIMATE (L/gbio-hr) Divide the number on line 13 by the number on line 14 and multiply by 3600 s/hr. Enter the results here.	15		13.3200
EQUIVALENT KL. Divide the number on line 11 by the number on line 7. Enter the results here.	16		0.0000

This form may be used to estimate the Equivalent KL with input data for lines 2, 6, and 7.

Form V-A DATA FORM FOR THE CAOCULATION OF K1 FROM A COVERED, VENTED BIODEGRADATIN UNIT. THE VENT CONCENTRATION IS MEASURED.			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the unit.	1		0.075
VENT RATE of total gas leaving the unit (G, m^3/s)	2		.1
TEMPERATURE of the liquid in the unit (deg. C)	3		25
INLET CONCENTRATION of compound (Ci, g/m^3 or ppmw)	4		100
EXIT CONCENTRATION of compound (Ce, g/m^3 or ppmw)	5		5
VENT CONCENTRATION of compound (Cv, g/m^3)	6		0.001
AREA OF REACTOR SURFACE (m^2)	7		3400
VOLUME OF REACTOR (m^3)	8		10000
FLOW RATE of waste treated in the unit (m^3/s)	9		0.146
CALCULATION OF THE ESTIMATE OF K1			
TOTAL REMOVAL (g/s) Subtract the number on line 5 from the number on line 4 and multiply the results by the number on line 9. Enter the results here.	10		13.870000
[G Cv/Ce] ESTIMATE (m^3/s) Multiply the number on line 2 by the number on line 6 and divide by the number on line 5. Enter the results here.	11		0.000020
[K1 B V + G Cv/Ce] (m^3/s) Divide the number on line 10 by the number on line 5. Enter the results here.	12		2.774000
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 11 from the number on line 12. Enter the results here.	13		2.774000
If the number on line 11 is greater than the number on line 13, this procedure cannot be used to demonstrate that the compound is biodegradable. Do not complete lines 14 and 15.			
Product of B and V. Multiply the number on line 1 by the number on line 8 and enter the results here.	14		750.000000
K1 ESTIMATE (L/gbio-hr) Divide the number on line 13 by the number on line 14 and multiply by 3600 s/hr. Enter the results here.	15		13.315200
EQUIVALENT KL. Divide the number on line 11 by the number on line 7. Enter the results here.	16		0.000000

Form VI	DATA FORM FOR THE ESTIMATION OF K1 FROM FULL SCALE UNIT DATA WITH BIODEGRADATION		
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
BIOMASS (g/L) This is the dried solids that are obtained from the mixed liquor suspended solids in the full-scale bioreactor.	1		0.075
VOLUME of full-scale system (cubic meters)	2		100000
AREA of the liquid surface of the full-scale system (square meters)	3		10000
INLET CONCENTRATION of compound (g/m^3 or ppmw)	4		100
EXIT CONCENTRATION of compound (g/m^3 or ppmw)	5		5
ESTIMATE OF KL from Form II (m/s)	6		0.00001
FLOW RATE of waste treated in the full-scale bioreactor (m^3/s)	7		0.146
CALCULATION OF THE ESTIMATE OF K1 FROM FIELD DATA			
REMOVAL WITH BIODEGRADATION (g/s) Subtract the number on line 5 from the number on line 4 and multiply the results by the number on line 7. Enter the results here.	8		13.8700
[KL A] ESTIMATE (m^3/s) Multiply the number on line 3 by the number on line 6. Enter the results here.	9		0.10
[K1 B V + KL A] (m^3/s) Divide the number on line 8 by the number on line 5. Enter the results here.	10		2.7740
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 9 from the number on line 10. Enter the results here.	11		2.6740
Product of B and V. Multiply the number on line 1 by the number on line 2 and enter the results here.	12		7,500.000
K1 ESTIMATE (L/gbio-hr) Divide the number on line 11 by the number on line 12 and multiply by 3600 s/hr. Enter the results here.	13		1.2835

FORM VII

DATA FORM FOR CALCULATING THE
MASS TRANSFER COEFFICIENT FOR A QUIESCENT SURFACE IMPOUNDMENT

Facility Name: _____

Waste Stream Compound: _____

Enter the following:

F - Impoundment fetch (m) _____
D - Impoundment depth (m) _____
U_{10} - Windspeed 10 m above liquid surface (m/s) _____
D_w - Diffusivity of compound in water (cm^2/s) _____
D_{ether} - Diffusivity of ether in water (cm^2/s) _____
μ_a - Viscosity of air, (g/cm-s) _____
ρ_a - Density of air, (g/cm^3) _____
D_a - Diffusivity of compound in air, (cm^2/s) _____
A - Area of impoundment, (m^2) _____
H - Henry's law constant, (atm-m^3/g mol) _____
R - Universal gas constant, (atm-m^3/g mol.°K) _____
μ_L - Viscosity of water, (g/cm-s) _____
ρ_L - Density of liquid, (g/cm^3) _____
T - Impoundment temperature, (°C) _____

Calculate the following:

Calculate F/D: _____

A. Calculate the liquid phase mass transfer coefficient, k_L, using one of the following procedures, (m/s)

1. Where F/D < 14 and U_{10} > 3.25 m/s, use the following procedure from MacKay and Yeun:[1] _____

Calculate the Schmidt number on the liquid side, Sc_L, as follows:
$Sc_L = \mu_L/\rho_L D_w$ _____

Calculate the friction velocity, U^*, as follows, (m/s):
$U^* = 0.01 \times U_{10}(6.1 + 0.63\ U_{10})^{0.5}$ _____

Where U^* is > 0.3, calculate k_L as follows:
$k_L = (1.0 \times 10^{-6}) + (34.1 \times 10^{-4})U^* \times Sc_L^{-0.5}$

Where U^* is < 0.3, calculate k_L as follows:
$k_L = (1.0 \times 10^{-6}) + (144 \times 10^{-4})(U^*)^{2.2} \times Sc_L^{-0.5}$

[1]Mackay, D., and A. Yeun. Mass Transfer Coefficient Correlations for Volatilization of Organic Solutes from Water. Environmental Science and Technology. 17:211-217. 1983.

2. For all other values of F/D and U_{10}, calculate k_L using the following procedure from Springer:[2]

Where U_{10} is < 3.25 m/s, calculate k_L as follows:
$k_L = 2.78 \times 10^{-6}(D_w/D_{sfcr})^{2/3}$

Where U_{10} is > 3.25 and 14 < F/D < 51.2, Calculate k_L as follows:
$k_L = [2.605 \times 10^{-9}(F/D) + 1.277 \times 10^{-7}] U_{10}^2 (D_w/D_{sfcr})^{2/3}$

Where U_{10} > 3.25 m/s and F/D > 51.2, calculate k_L as follows:
$k_L = (2.611 \times 10^{-7})U_{10}^2 (D_w/D_{sfcr})^{2/3}$

B. Calculate the gas phase mass transfer coefficient, k_G, using the following procedure from MacKay and Matsasugu, (m/s):[3]

Calculate the Schmidt number on the gas side, Sc_G, as follows: $Sc_G = \mu_G/\rho_G D_a$ _____

Calculate the effective diameter of the impoundment, d_e, as follows, (m):
$d_e = (4A/\pi)^{0.5}$ _____

Calculate k_G as follows, (m/s): $k_G = 4.82 \times 10^{-3} U_{10}^{0.78} Sc_G^{-0.67} d_e^{-0.11}$ _____

C. Calculate the partition coefficient, Keq, as follows: Keq = H/[R(T+273)] _____

D. Calculate the overall mass transfer coefficient, K_q, as follows, (m/s):
$1/K_q = 1/k_L + 1/Keq\text{-}k_G$ _____

Where the total impoundment surface is quiescent:
$KL = K_q$

Where a portion of the impoundment surface is turbulent, continue with Form VIII.

[2]Springer, C., P. D. Lunney, and K. T. Valsaraj. Emission of Hazardous Chemicals from Surface and Near Surface Impoundments to Air. U.S. Environmental Protection Agency, Solid and Hazardous Waste Research Division. Cincinnati, OH. Project Number 808161-02. December 1984.

[3]Hwang, S. T. Toxic Emissions from Land Disposal Facilities. Environmental Progress. 1:46-52. February 1982.

FORM VIII

DATA FORM FOR CALCULATING THE
MASS TRANSFER COEFFICIENT FOR AN AERATED SURFACE IMPOUNDMENT

Facility Name: _____

Waste Stream Compound: _____

Enter the following:

J - Oxygen transfer rating of surface aerator, (lb O_2/hr-hp) _____
POWR - Total power to aerators, (hp) _____
T - Water temperature, (°C) _____
O_t - Oxygen transfer correction factor _____
MW_L - Molecular weight of liquid _____
A_t - Turbulent surface area of impoundment, (ft^2) _____
(If unknown, use values from Table 1)
A - Total surface area of impoundment, (ft^2) _____
ρ_L - Density of liquid, (lb/ft^3) _____
D_w - Diffusivity of constituent in water, (cm^2/s) _____
$D_{O_2,w}$ - Diffusivity of oxygen in water, (cm^2/s) _____

d - Impeller diameter, (cm) _____
w - Rotational speed of impeller, (rad/s) _____
ρ_a - Density of air, (gm/cm^3) _____
N - Number of aerators _____
g_c - Gravitation constant, (lb_m-$ft/s^2/lb_f$) _____
d^* - Impeller diameter, (ft) _____
D_a - Diffusivity of constituent in air, (cm^2/s) _____
MW_a - Molecular weight of air _____
R - Universal gas constant, (atm-m^3/g mol.°C) _____
H = Henry's law constant, (atm-m^3/g mol) _____

Calculate the following:

A. Calculate the liquid phase mass transfer coefficient, k_L, using the following Equation from Thibodeaux:[4],[5]

$$k_L = [8.22 \times 10^{-9}\ J\ (POWR)(1.024)^{T-20}\ O_t\ 10^6\ MW_L/(Va\rho_L)]\ (D_w/D_{O_2,w})^{0.5},\ (m/s)$$

_____

[4]GCA Corporation. Emissions Data and Model Review for Wastewater Treatment Operations. Draft Technical Note. Prepared for U.S. Environmental Protection Agency. Contract No. 68-01-6871, Assignment 49. August 1985. p. 4-2.

[5]Hwang, S. T. Toxic Emissions from Land Disposal Facilities. Environmental Progress. 1:46-52. February 1982.

B. Calculate the gas phase mass transfer coefficient, k_G, using the following procedure from Reinhardt:[6,7]

Calculate the viscosity of air, μ_a, as follows, (g/cm.s):
$\mu_a = 4.568 \times 10^{-7} T + 1.7209 \times 10^{-4}$ _____

Calculate the Reynold's number as follows:
$R_e = d^2 w \rho_a / \mu_a$ _____

Calculate power to impeller, P_i, as follows, ($ft.lb_f/s$):
$P_i = 0.85 (POWR) 550/N$ _____

Calculate the power number, p, as follows:
$p = P_i g_c / (\rho_L d^{*5} w^3)$ _____

Calculate the Schmidt number, Sc_G, as follows:
$Sc_G = \mu_a / \rho_a D_a$ _____

Calculate the Fronde number, F_r, as follows:
$F_r = d^* w^2 / g_c$ _____

Calculate k_G as follows:
$k_G = 1.35 \times 10^{-7} R_e^{1.42} p^{0.4} Sc_G^{0.5} F_r^{-0.21} D_a MW_a / d$, (m/s) _____

C. Calculate the partition coefficient, Keq, as follows:
$Keq = H/[R(T+273)]$ _____

D. Calculate the overall turbulent mass transfer coefficient, K_t, as follows, (m/s):
$1/K_t = 1/k_L + 1/Keq.k_G$ _____

E. Calculate the quiescent mass transfer coefficient, K_q, for the impoundment using Form VII.
_____

F. Calculate the overall mass transfer coefficient, KL, for the impoundment as follows:

$$KL = \frac{K_q (A - A_c) + K_c A_c}{A}$$ _____

[6]GCA Corporation. Emissions Data and Model Review for Wastewater Treatment Operations. Draft Technical Note. Prepared for U.S. Environmental Protection Agency. Contract No. 68-01-6871, Assignment 49. August 1985. p. 4-3.

[7]Reinhardt, J. R. Gas-Side Mass-Transfer Coefficient and Interfacial Phenomena of Flat-Bladed Surface Agitators. Ph.D. dissertation, University of Arkansas, Fayetteville, Ar. 1977. p. 48.

Table 1. Turbulent Areas and Volumes for Surface Agitators*

ω, Motor horsepower, hp	A_t, Turbulent area, ft^2	A_t, Turbulent area, m^2	Effective depth, ft	V, Agitated volume, ft^3	a_v, Area per volume ft^2/ft^3
5	177	16.4	10	1,767	0.100
7.5	201	18.7	10	2,010	0.100
10	227	21	10.5	2,383	0.0952
15	284	26.4	11	3,119	0.0909
20	346	32.1	11.5	3,983	0.0870
25	415	38.6	12	4,986	0.0833
30	491	45.7	12	5,890	0.0833
40	661	61.4	13	8,587	0.0769
50	855	79.5	14	11,970	0.0714
60	1,075	100	15	16,130	0.0666
75	1,452	135	16	23,240	0.0625
100	2,206	205	18	39,710	0.0555

*Data for a high speed (1,200) rpm) aerator with 60 cm propeller diameter (d).

Form IX DATA FORM FOR THE ESTIMATION OF THE HENRY'S LAW CONSTANT FOR A COMPOUND IN THE BIOLOGICAL TREATMENT UNIT			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
LISTED HENRY'S LAW VALUE AT 25 degrees Celsius. (ratio of mol fraction in gas to mole fraction in water)	1		.2885
TEMPERATURE of the liquid in the unit (deg.C)	2		25
CALCULATION OF K			
Temperature adjusted Henry's law value (equals the value on line 1 if the temperature on line 2 is 25)	3		0.2885
Discuss basis of temperature adjustment			
Temperature in degrees Kelvin. Add 273.16 to the number on line 2. Enter the results here.	4		298.1600
Temperature ratio. Divide 273.16 by the number on line 4. Enter the results here.	5		0.9162
Henry's Law adjustment factor. Multiply the number on line 5 by 0.804 and enter the results here.	6		0.7366
Henry's Law value (g/m3 gas per g/m3 liquid) Multiply the number on line 3 by the number on line 6 and divide the results by 1000. Enter the results here and on Form V line 6.	7		0.0002
Henry's Law value (atm m3 per mol) Divide the number on line 3 by 55555 and enter the results here.	8		0.000005

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Part V

Environmental Protection Agency

40 CFR Part 63
National Emission Standards for Hazardous Air Pollutants for Certain Source Categories; Final Rule

Emission credits are excess emission reductions above those required by subpart G that are used to offset emission debits in emissions averaging.

Emission debits are increased emissions that result when a source elects not to control a Group 1 emission point to the level required by subpart G.

Emission point means an individual process vent, storage vessel, transfer rack, wastewater stream, or equipment leak.

Group 1 emission point means an individual process vent, storage vessel, transfer rack, or wastewater stream that satisfies the applicability criteria for the control requirements of subpart G.

Group 2 emission point means an individual process vent, storage vessel, transfer rack, or wastewater stream that does not satisfy the applicability criteria for the control requirements of subpart G.

Halogenated vent stream or *halogenated stream* means a vent stream from a process vent or transfer operation determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater.

Hazardous Air Pollutant or *HAP* means any air pollutant listed under section 112(b) of the Act.

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Reference control technology means a device or devices that can be used to comply with the control requirements in subpart G. Subpart G specifies the reference control technologies for each kind of emission point and establishes a control efficiency that the devices should achieve when being used to comply with this rule.

Very volatile hazardous air pollutant or *very volatile HAP* means one of the chemicals listed in table 8 of subpart G.

Volatile organic concentration or *VO concentration* refers to the concentration of organic compounds (including both hazardous air pollutant and nonhazardous air pollutant organic compounds) in a wastewater stream that is measured by Method 25D, as found in 40 CFR 60, appendix A.

Volatile organic hazardous air pollutant concentration or *VOHAP concentration* means the concentration of an individually-speciated organic hazardous air pollutant in a wastewater stream or a residual that is measured by proposed Method 305.

Waste management unit means any component, piece of equipment, structure, or transport mechanism used in conveying, storing, treating, or disposing of any waste, including a wastewater stream or a residual. Wastewater tanks are an example of a waste management unit.

Wastewater means organic hazardous air pollutant-containing water, raw material, intermediate, product, by-product, co-product, or waste material that is discharged into an individual drain system and either:

(1) contains a concentration of at least 5 parts per million by weight total organic hazardous air pollutant and has a flow rate of 0.02 liter per minute or greater; or

(2) contains a concentration of at least 10,000 parts per million by weight total organic hazardous air pollutant at any flow rate.

Wastewater includes process wastewater and maintenance wastewater.

B. Acronyms

Acronym	Term
Act	Clean Air Act.
ALAPCO	Association of Local Air Pollution Control Officers.
ASPEN	Advanced system for process engineering.
BACT	Best available control technology.
BAT	Best available technology.
BD	Butadiene.
BID	Background information document.
BIF	Boilers and industrial furnaces.
CEM	Continuous emissions monitoring.
CFR	Code of Federal Regulations.
CMA	Chemical Manufacturers Association.
CMPU	Chemical manufacturing process unit.
CO	Carbon monoxide.
CTG	Control techniques guideline.
CWA	Clean Water Act.
DMS	Dual mechanical seal.
DOT	Department of Transportation.
DRE	Destruction and removal efficiency.
EB/S	Ethylbenzene/styrene.
EDC	Ethylene dichloride.
EFR	External floating roof.
EO	Ethylene oxide.
E.O.	Executive Order.
EPA	Environmental Protection Agency.
Fe	Fraction emitted.
Fm	Fraction measured.
FR	Federal Register.
Fr	Fraction removed.
FTIR	Fourier transform infrared.
HAP	Hazardous air pollutant.
HON	Hazardous organic national emission standards for hazardous air pollutants.
IFR	Internal floating roof.
LDAR	Leak detection and repair.
LAER	Lowest achievable emission rate.
MACT	Maximum achievable control technology.
MIBK	Methyl isobutyl ketone.
MR	Mass removal (actual).
NCS	Notification of Compliance Status.
NESHAP	National emission standards for hazardous air pollutants.
NO_X	Nitrogen oxides.
NPDES	National Pollutant Discharge Elimination System.
NRDC	Natural Resources Defense Council.
NSPS	New source performance standards.
NSR	New source review.
OCCM	Office of Air Quality Planning and Standards Control Cost Manual.
OCPSF	Organic chemicals, plastics, and synthetic fibers.
OMB	Office of Management and Budget.
OSHA	Occupational Safety and Health Administration.
P.L.	Public Law.
PAV	Product accumulator vessel.
POM	Polycyclic organic matter.
POTW	Publicly owned treatment works.
PRA	Paperwork Reduction Act.
PRV	Pressure relief valve.
PSD	Prevention of significant deterioration.
QIP	Quality improvement program.
R&D	Research and development.
RCRA	Resource Conservation and Recovery Act.
RCT	Reference control technology.
RIA	Regulatory Impact Analysis.
RMR	Required mass removal.
SARA	Superfund Amendment and Reauthorization Act.
SIP	State Implementation Plan.
SMS	Single mechanical seal.
SOCMI	Synthetic organic chemical manufacturing industry.
STAPPA	State and Territorial Air Pollution Program Administrators.
TAC	Total annual cost.
TACB	Texas Air Control Board.
TCI	Total capital investment.
THC	Total hydrocarbon.
TIC	Total industry control.
TOC	Total organic compound.
TRE	Total resource effectiveness.
TRI	Toxics release inventory.
TSDF	Treatment, storage, and disposal facility.
VHAP	Volatile hazardous air pollutant.
VO	Volatile organics measurable by Method 25D.
VOC	Volatile organic compound.
VOHAP	Volatile organic hazardous air pollutant.

C. Abbreviations

Abbreviation	Unit of measure
bbl	Barrel.
BOE	Barrels of oil equivalent.
Btu	British thermal unit.
Btu/kW-hr	British thermal unit per kilowatt-hour.
°C	Degrees Celsius.
°F	Degrees Fahrenheit.
gal	Gallon.
gpm	Gallons per minute.
hr	Hour.
kg/hr	Kilograms per hour.

Abbreviation	Unit of measure
kPa	Kilopascals.
kW-hr/yr	Kilowatt-hour per year.
l/hour•m²	Liters per hour per square meter.
lpm	Liters per minute.
gal	Gallons.
m³	Cubic meters.
Mg	Megagrams.
mg	Milligrams.
mg/dscm	Milligram per dry standard cubic meter.
MW	Megawatts.
ppb	Parts per billion.
ppm	Parts per million.
ppmv	Parts per million by volume.
ppmw	Parts per million by weight.
psia	Pounds per square inch absolute.
scm/min	Standard cubic meter per minute.
TJ	Terajoules.
yr	Year.

II. Background

A. Development of Hazardous Organic NESHAP and Public Participation

On December 31, 1992, the EPA proposed to regulate, under section 112 of the Act, the emissions of 112 organic HAP's from SOCMI processes which are part of major sources. Following publication of the proposed rule, two public hearings were held and 339 written comments were received regarding the proposed rule. The EPA considered all public comments and made appropriate changes to the provisions. The final rule issued today represents the EPA's final decisions for the MACT standard for the SOCMI.

A background information document summarizing and responding to legal comments and technical comments pertaining to this rulemaking may be obtained from either: (1) The National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487–4650, or (2) the EPA Technology Transfer Network (TTN). The TTN is an electronic bulletin board system which is free, except for the normal long distance charges. To access the HON BID: (1) Set software to data bits: 8, N; stop bits: 1; (2) Use access number (919) 541–5742 for 1200, 2400, or 9600 bps modems [access problems should be directed to the system operator at (919) 541–5384]; (3) Specify TTN Bulletin Board: Clean Air Act Amendments; and (4) Select menu item: Recently Signed Rules.

Please refer to "Hazardous Air Pollutant Emissions from Process Units in the Synthetic Organic Chemical Manufacturing Industry—Background Information for Promulgated Standards," and specify volume number(s).

- Volume 2A: Comments on Process Vents, Storage Vessels, Transfer Operations, and Equipment Leaks (EPA–453/R–94–003a);
- Volume 2B: Comments on Wastewater (EPA–453/R–94–003b);
- Volume 2C: Comments on Emissions Averaging (EPA–453/R–94–003c);
- Volume 2D: Comments on Applicability, National Impacts, and Overlap with Other Rules (EPA–453/R–94–003d);
- Volume 2E: Comments on Recordkeeping, Reporting, Compliance, and Test Methods (EPA–453/R–94–003e); and
- Volume 2F: Commenter Identification List (EPA–453/R–94–003f).

B. Previous Federal Register Citations and Background Documents

Previous Federal Register Notices. Previous Federal Register notices pertaining to this rulemaking are listed below in chronological order. Since the complete Federal Register citation and dates are listed here, they will not be repeated throughout this notice. Where appropriate, an abbreviated descriptive title used to refer to the document throughout this notice is also listed.

(1) "National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Seven Other Processes; Proposed rule and notice of public hearing," 57 FR 62608, December 31, 1992. Proposal notice.

(2) "National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Seven Other Processes; Correction," 58 FR 11667, February 26, 1993. Correction notice.

(3) "National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Seven Other Processes; Reopening of public comment period and correction to Regulatory Flexibility Act certification," 58 FR 53478, October 15, 1993. Supplemental notice.

Previous Background Documents. The following is a listing of background documents pertaining to this rulemaking. The complete title, EPA publication number, publication date, and National Technical Information Service [NTIS] numbers are included. Where appropriate, an abbreviated descriptive title used to refer to the document throughout this notice is also listed.

(1) "Hazardous Air Pollutant Emissions from Process Units in the Synthetic Organic Chemical Manufacturing Industry—Background Information for Proposed Standards, Volume 1A: National Impacts Assessment," EPA–453/D–92–016a. November 1992. (NTIS Number PB93–156552) (Docket item A–90–19: III–B–1). Proposal BID Volume 1A.

(2) "Hazardous Air Pollutant Emissions from Process Units in the Synthetic Organic Chemical Manufacturing Industry—Background Information for Proposed Standards, Volume 1B: Control Technologies," EPA–453/D–92–016b. November 1992. (NTIS Number PB93–156560) (Docket Item A–90–19: III–B–1). Proposal BID Volume 1B.

(3) "Hazardous Air Pollutant Emissions from Process Units in the Synthetic Organic Chemical Manufacturing Industry—Background Information for Proposed Standards, Volume 1C: Model Emission Sources," EPA–453/D–92–016c. November 1992. (NTIS Number PB93–156578) (Docket item A–90–19: III–B–1). Proposal BID Volume 1C.

C. Statutory Requirements for NESHAP

Section 112 of the Act requires that the EPA establish regulations setting emission standards for categories of sources of HAP emissions. In addition, the Act sets out specific criteria for establishing a minimum level of control, and criteria to be considered in evaluating control options more stringent than the minimum control level. For most of these rules, assessment and control of any remaining unacceptable health risk is to occur 8 years after they are promulgated. However, for the rules required to be promulgated in the first 2 years after enactment, EPA is not required to conduct this assessment until 9 years after promulgation.

Specifically, section 112(c), as amended, directs the Administrator to develop a list of all categories or subcategories of major sources and such categories or subcategories of area sources that meet the requirements of section 112(c)(3), emitting any of the HAP's listed in section 112(b). Section 112(d) directs the Administrator to promulgate emission standards for each listed category or subcategory of HAP sources. Such standards will be applicable to both new and existing sources and shall require:

> • • • the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a

prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new and existing sources in the category or subcategory to which such emission standard applies * * *

42 U.S.C. 7412(d)(2).

The Amendments further provide that "*the maximum degree of reduction in* emissions that is deemed achievable" shall be subject to a "floor" which is determined differently for new and existing sources. For new sources the standards set shall not be any less stringent than "the emission control that is achieved in practice by the best controlled similar source." For existing sources, the standards may not be less stringent than the average emission limitation achieved by the best performing 12 percent of existing sources in each category or subcategory of 30 or more sources. (Smaller categories or subcategories are limited to the average of the best performing five sources in the category or subcategory.)

III. Summary of Promulgated Rule and Significant Changes

This section of the notice summarizes the final rule and significant changes made in response to public comment. The rationale for specific provisions and changes is explained in sections V and VI.

The rule consists of four subparts in 40 CFR part 63. Subpart F provides the applicability criteria for SOCMI sources, requires that owners and operators of SOCMI sources comply with subparts G and H, and specifies general recordkeeping and reporting requirements. The specific control, monitoring, reporting, and recordkeeping requirements are stated in subpart G for process vents, storage vessels, transfer racks, and wastewater streams, and in subpart H for equipment leaks. Subpart I provides the applicability criteria for the non-SOCMI processes subject to the negotiated regulation for equipment leaks and requires owners and operators to comply with subpart H.

A. Summary of Subpart F

Subpart F lists the HAP's regulated by this rule and specifies what is included in the SOCMI source category and thus subject to the requirements in subparts F, G, and H. In the final rule, the EPA has revised the procedures for determining applicability to more clearly indicate the boundaries between processes (i.e., where one process ends and the next begins). In addition, subpart F presents definitions and general information on compliance, reporting, and recordkeeping requirements that are applicable for sources subject to subparts G and H.

1. Regulated Pollutants

Subpart F lists 112 organic HAP's that the EPA has determined may be emitted from SOCMI processes because they are either produced as a product or used as a reactant. The emissions of these 112 organic chemicals are regulated by *subparts F, G, and H.*

2. Definition of Source Category and Source

The rule applies to chemical manufacturing process units that are: (1) Part of a major source as defined in section 112 of the Act; (2) produce as a primary product a SOCMI chemical listed in table 1 of subpart F; and (3) use as a reactant or manufacture as a product, by-product, or co-product one or more of the organic HAP's listed in table 2 of subpart F. A chemical manufacturing process unit is subject to the provisions of subparts F, G, and H only if all of the above three conditions are satisfied. Table 1 of subpart F is a list of 385 chemicals which defines SOCMI products that may be produced by a HAP-emitting process.

For the SOCMI source category, a source comprises all the SOCMI chemical manufacturing process units that are subject to the rule and are located at contiguous or adjoining properties under common control. Subpart F defines the SOCMI source as the collection of process vents; storage vessels; transfer racks; wastewater and the associated treatment residuals; and pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems in the relevant chemical manufacturing process units. As listed above, the first four kinds of emission points in a SOCMI source are subject to subparts F and G. However, SOCMI equipment leaks are subject to subparts F and H. As such, a SOCMI source is subject to three of the HON's four subparts.

3. Other Provisions

Subpart F establishes the compliance dates for new and existing sources and requires the source be properly operated and maintained at all times. Sources are required to develop a start-up, shutdown, and malfunction plan which includes a description of procedures for managing wastewaters generated during maintenance. Monitoring of cooling water is also required to detect leaks in heat exchange equipment. If a leak is detected, the heat exchanger must be repaired or taken out of service.

Procedures for obtaining permission to use an alternative means of emission reduction are included in subpart F. The applicability of the General Provisions in subpart A to sources subject to subparts F, G, and H is clarified. General performance test requirements are specified, including the provision that performance tests be conducted under maximum representative operating conditions for the process. The General Reporting and Recordkeeping Provisions of subpart F include the requirement that required records and reports must be maintained for 5 years, and specify where reports must be sent. Reports can be submitted on electronic media that are compatible with the system used by the Administrator or the State permitting authority.

B. Summary of Subpart G

1. Overview

The MACT standard for SOCMI sources is expressed as an allowable emissions level that is determined by means of an equation specified in subpart G. The allowable emissions level is the sum of the emissions from all the emission points in the source that would occur after the required emission reductions are achieved for the emission points meeting the HON's applicability criteria (Group 1 points) through use of reference control technologies. Although controls are not required for Group 2 emission points, both Group 1 emission points and Group 2 emission points are included in the equation defining the source's allowable emissions level.

Though subpart G is structured as an allowable emissions level, there is no need for owners or operators to actually calculate emissions estimates for every emission point at the source. Actual emissions estimates are only required for emission points that are included in emissions averages.

The owner or operator can utilize two methods, or a combination of them, to demonstrate compliance with the HON. The primary method that owners or operators will use to determine compliance with the HON is the application of the reference control technologies (or equivalent controls) at Group 1 emission points. This compliance approach is described in sections 2 through 5 below. Owners or operators may also use emissions averaging to demonstrate compliance at a limited number of emission points. Emissions averaging is described in section 6 below. Section 7 describes the

NON's recordkeeping and reporting provisions.

Process Vent Provisions

A process vent means a gas stream that is continuously discharged during the operation of the unit from an air oxidation reactor, other reactor, or distillation unit within a SOCMI chemical manufacturing process unit. Process vents include vents from distillate receivers and product separators. Process vents include gas streams that are discharged directly to the atmosphere and gas streams discharged to the atmosphere after diversion through a product recovery device. The rule applies only to process vents that are associated with continuous (non-batch) processes and emit process vent streams containing more than 0.005 weight-percent HAP.

A Group 1 process vent is defined as a process vent with a flow rate greater than or equal to 0.005 scmm, an organic HAP concentration greater than or equal to 50 ppmv, and a TRE index value less than or equal to 1.0. The process vent provisions require the owner or operator of a Group 1 process vent stream to:

(1) Reduce the emissions of organic HAP using a flare;

(2) Reduce emissions of organic HAP by 98 weight-percent or to a concentration of 20 ppmv or less; or

(3) Achieve and maintain a TRE index above 1. Performance test provisions are included for Group 1 process vents to verify that the control device achieves the required performance.

The organic HAP reduction is based on the level of control achieved by the reference control technology. Group 2 process vent streams with TRE index values between 1.0 and 4.0 are required to monitor those process vent streams to ensure those streams do not become Group 1, which require control. The owner or operator can calculate a TRE index value to determine whether each process vent is a Group 1 or Group 2 process vent or the owner or operator can elect to comply directly with the control requirements without calculating the TRE index. The TRE index value is determined after the final recovery device in the process or prior to venting to the atmosphere. The TRE calculation involves an emissions test or engineering assessment and use of the TRE equations in section 63.115 of subpart G.

The rule encourages pollution prevention through product recovery because an owner or operator of a Group 1 process vent may add recovery devices or otherwise reduce emissions to the extent that the TRE becomes greater than 1.0 and the Group 1 process vent becomes a Group 2 process vent.

Group 1 halogenated streams controlled using a combustion device must vent the emissions from the combustor to an acid gas scrubber or other device to limit emissions of halogens prior to venting to the atmosphere. The control device must reduce the overall emissions of hydrogen halides and halogens by 99 percent (95 percent for control devices installed prior to the December 31, 1992 proposal) or reduce the outlet mass emission rate of total hydrogen halides and halogens to less than 0.45 kg/hr. Monitoring, reporting, and recordkeeping provisions necessary to demonstrate compliance are also included in the process vent provisions.

3. Storage Vessel Provisions

A storage vessel means a tank or other vessel associated with a SOCMI chemical manufacturing process unit that stores a liquid containing one or more of the organic HAP's listed in table 2 of subpart F. The final rule specifies assignment procedures for determining whether a storage vessel is associated with a SOCMI chemical manufacturing process unit. The storage vessel provisions do not apply to the following: (1) vessels permanently attached to motor vehicles, (2) pressure vessels designed to operate in excess of 204.9 Kpa (29.7 psia), (3) vessels with capacities smaller than 38 m^3 (10,000 gal), (4) wastewater tanks, and (5) vessels storing liquids that contain organic HAP's only as impurities. An impurity is produced coincidentally with another chemical substance and is processed, used, or distributed with it.

The EPA is not taking final action at this time regarding provisions for storage vessels of 76 m^3 (20,000 gallons) to 151 m^3 (40,000 gallons). The reason is that, through a separate Federal Register notice, the EPA is soliciting additional public comment regarding the appropriate interpretation of the language in section 112(d)(3)(A) of the Act concerning establishment of the MACT floor and the effect of that interpretation on the control requirements for these storage vessels. The EPA intends to evaluate the public comments received in response to that action promptly and intends to proceed to take final action on provisions for storage vessels of 76 m^3 to 151 m^3 within 90 days of the publication of the separate notice.

The storage provisions require that one of the following control systems be applied to Group 1 storage vessels: (1) An internal floating roof with proper seals and fittings; (2) an external floating roof with proper seals and fittings; (3) an external floating roof converted to an internal floating roof with proper seals and fittings; or (4) a closed vent system with a 95-percent efficient control device. The storage provisions give details on the types of seals and fittings required. Monitoring and compliance provisions include periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections. If a closed vent system and control device is used, the owner or operator must establish appropriate monitoring procedures. Reports and records of inspections, repairs, and other information necessary to determine compliance are also required by the storage provisions. No controls are required for Group 2 storage vessels.

4. Transfer Operations Provisions

Transfer operations are defined as the loading of liquid products that are on the list of organic HAP's in subpart F from a transfer rack into a tank truck or railcar. Transfer rack means the collection of loading arms and loading hoses at a single system that is assigned to a SOCMI chemical manufacturing process unit and is used to fill tank trucks and railcars with liquid products that are on the list of organic HAP's in subpart F. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to load tank trucks or railcars. The transfer provisions do not apply to the loading of liquid organic HAP's at an operating pressure in excess of 204.9 Kpa (29.7 psia); loading of marine vessels; racks loading liquids that contain organic HAP's only as impurities; or racks loading liquid organic HAP's if emissions are returned to a storage vessel in a vapor balancing system.

The transfer provisions require control of Group 1 transfer racks to achieve 98-percent organic HAP reduction or an outlet concentration of 20 ppmv. Combustion devices or product recovery devices may be used to comply with this requirement. Alternatively, vapor balancing systems may be used.

The transfer provisions include design specifications for vapor collection systems. Specifically, vapor collection systems are required to route the organic vapors to a control device or to a vapor balancing system and are required to operate without detectable emissions. In addition, the provisions require that liquid organic HAP's be loaded only into DOT-certified vehicles or vehicles that have been determined to be vapor tight according to Method 27 of 40 CFR part 60, appendix A.

Group 1 halogenated streams controlled using a combustion device must vent the emissions from the combustor to an acid gas scrubber or other device to limit emissions of halogens, prior to venting to the atmosphere. The control device must reduce the overall emissions of hydrogen halides and halogens by 99 percent or reduce the outlet mass emission rate of total hydrogen halides and halogens to less than 0.45 kg/hr.

Initial performance tests of control device efficiency are required for racks loading at least 11.8 million liters per year. Design evaluations are allowed in other cases. Monitoring, reporting, and recordkeeping provisions are specified. Controls are not required for Group 2 racks.

5. Wastewater Provisions

The final rule applies to any organic HAP-containing water, raw material, intermediate, product, by-product, co-product, or waste material that exits any chemical manufacturing process unit equipment and has either (1) a total volatile organic HAP concentration of 5 ppmw or greater and a flow rate of 0.02 lpm or greater; or (2) a total volatile organic HAP concentration of 10,000 ppmw or greater at any flow rate. "Wastewater," as defined in § 63.101 of subpart F, encompasses both maintenance wastewater, which is regulated by subpart F, and process wastewater, which is regulated by subpart G. The process wastewater provisions in subpart G also apply to organic HAP-containing residuals that are generated from the management and treatment of Group 1 wastewater streams. Examples of process wastewater streams include, but are not limited to, wastewater streams exiting process unit equipment (e.g., decanter water, such as condensed steam used in the process), product tank drawdown, feed tank drawdown, and residuals recovered from waste management units. Examples of maintenance wastewater streams are those generated by descaling of heat exchanger tubing bundles, cleaning of distillation column traps, and draining of pumps into an individual drain system.

In the final rule, an owner or operator may determine the VOHAP concentration and flow rate of a wastewater stream either (1) at the point of generation; or (2) downstream of the point of generation. If wastewater stream characteristics are determined downstream of the point of generation, an owner or operator must make corrections for losses by air emissions; reduction of VOHAP concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or VOHAP concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP's. An owner or operator must determine whether a wastewater stream is a Group 1 or Group 2 wastewater stream by determining the flow rate and VOHAP concentration for the point of generation by (1) sampling; (2) using engineering knowledge; or (3) using pilot-scale or bench-scale test data. An owner or operator who elects to use the process unit alternative in § 63.138(d) or the 95-percent biological treatment option in § 63.138(e) is not required to make a Group 1/Group 2 determination. Both the applicability determination and the Group 1/Group 2 determination must reflect the wastewater characteristics before losses due to volatilization, a concentration differential due to dilution, or a change in VOHAP concentration or flow rate due to treatment.

To provide greater flexibility to owners or operators, the EPA has added to the final rule an additional option in § 63.144 of subpart G for determining applicability in lieu of a Group 1/Group 2 determination. This option allows an owner or operator to designate a wastewater stream or mixture of wastewater streams to be a Group 1 wastewater stream without actually determining the flow rate and VOHAP concentration for the point of generation. This option helps those SOCMI plants that already have emission suppression systems in place from the point of generation to a location downstream. Using this option, an owner or operator can simply declare that a wastewater stream or mixture of wastewater streams is a Group 1 wastewater stream and that the emissions from the stream(s) are controlled from the point of generation through treatment. An owner or operator is required to determine the wastewater stream characteristics (i.e., VOHAP concentration and flow rate) for the designated Group 1 wastewater stream in order to establish the treatment requirements in § 63.138.

Controls must be applied to Group 1 wastewater streams, unless the source complies with the source-wide mass flow rate provisions of § 63.138(c)(5) or (c)(6) of subpart G; or implements process changes that reduce emissions as specified in § 63.138(c)(7) of subpart G. Control requirements include (1) suppressing emissions from the point of generation to the treatment device; (2) recycling the wastewater stream or treating the wastewater stream to the required Fr values for each HAP as listed in table 9 of subpart G; (3) recycling any residuals or treating any residuals to destroy the total combined HAP mass flow rate by 99 percent or more; and (4) controlling the air emissions generated by treatment processes. While emission controls are not required for Group 2 wastewater streams, owners or operators may opt to include them in management and treatment options.

Suppression of emissions from the point of generation to the treatment device will be achieved by using covers and enclosures and closed vent systems to collect organic HAP vapors from the wastewater and convey them to treatment devices. Air emissions routed through closed-vent systems from covers, enclosures, and treatment processes must be reduced by 95 percent for combustion or recovery devices; or to a level of 20 ppmv for combustion devices.

The treatment requirements are designed to reduce the HAP content in the wastewater prior to placement in units without air emissions controls, and thus reduce the HAP emissions to the atmosphere. The required Fr values in table 9 of subpart G are based on steam stripping. The final rule provides several compliance options, including percent reduction, effluent concentration limitations, and mass removal.

For demonstrating compliance with the various requirements, owners or operators have a choice of using a specified design, conducting performance tests, or documenting engineering calculations. Appropriate compliance, monitoring, reporting, and recordkeeping provisions are included in the regulation.

6. Emissions Averaging

Under subpart G, only owners or operators of existing sources may use emissions averaging. A change to the rule prohibits new sources from using emissions averaging to comply with the rule. Any process vents, storage vessels, or transfer racks in the source can be included in an emissions average. However, only wastewater streams that are not treated in a biological treatment unit are eligible for emissions averaging. Equipment leaks are regulated under a separate subpart and are also not eligible for emissions averaging.

a. *Credit/Debit System.* In general, the system for accumulating and quantifying credits and debits remains the same as described at proposal. The owner or operator must identify all the emission points that would be included in an emissions average and estimate their allowable and actual emissions

using the reference efficiencies of the reference control technologies for each kind of emission point.

For each Group 1 point, the allowable emissions level is the emissions remaining after application of a reference control technology. As a result, all Group 1 emission points that are not being controlled with the reference control technology or a control measure achieving an equivalent reduction are emitting more than their allowable emissions. These points are generating emission "debits." Emission debits are calculated by subtracting the amount of emissions allowed by the standard for a given emission point from the amount of actual emissions for that point. If a Group 1 emission point is controlled by a device or a pollution prevention measure that does not achieve the control level of the reference control technology, the amount of emission debits will be based on the difference between the actual control level being achieved and what the reference control would have achieved. Equations for calculating debits are provided in § 63.150 of subpart G.

The owner or operator must control other emission points to a level more stringent than what is required for that kind of point to generate emission "credits." Emission credits are calculated by subtracting the amount of emissions that actually exist for a given emission point from the amount of emissions that would be allowed under subpart G, and then applying a 10-percent discount factor. If credits are generated through the use of a pollution prevention measure, no discount factor is applied. These provisions for a discount factor were added for the final rule. Equations for calculating credits are also provided in § 63.150 of subpart G. To be in compliance, the owner or operator must be able to show that the source's emission credits were greater than or equal to its emission debits.

Credits may come from:

(1) Control of Group 1 emission points using technologies that the EPA has rated as being more effective than the appropriate reference control technology;

(2) Control of Group 2 emission points; and

(3) Pollution prevention projects that result in control levels more stringent than what the standard requires for the relevant point or points.

A reference control technology cannot be used to generate credits beyond its assigned efficiency. For a new control technology or work practice, either the EPA or the permit authority must determine its control efficiency before it can be used to generate credits.

b. *Compliance.* The rule requires that emissions averaging plans be reviewed as part of a source's Implementation Plan or operating permit application. The controls in the averaging plan would then be cited in a source's Implementation Plan or operating permit. Thus, to show compliance using emissions averaging, the owner or operator must prove both:

(1) The appropriate controls have been applied and maintained; and

(2) That the amount of emission credits and debits meet certain quarterly and annual requirements.

c. *Significant Changes.* Significant changes were made to the emissions averaging provision. One change is that the number of emission points that can be included in an average has been limited to no more than 20 points or 25 points if pollution prevention is used. Another notable addition is the requirement that sources must demonstrate that their emissions average will not result in greater risk or hazard than compliance without averaging. Also, State or local agencies have been granted the discretion to not include emissions averaging in their implementation of the rule without having to go through the § 112(l) rule delegation process. Summaries of significant comments and associated changes are discussed in section V.D of this preamble. All comments regarding emissions averaging are summarized and responded to in the BID, volume 2C.

7. *Recordkeeping and Reporting*

The rule requires sources complying with subpart G to keep records and submit reports of information necessary to document compliance. Records must be kept for 5 years. For emission points where continuous monitoring is required, the final rule requires retention of hourly average data values rather than the 15-minute average values specified in the proposed rule. However, 15-minute values must be retained for operating days when the daily average value of the monitored parameter is outside the permitted range.

The following five types of reports must be submitted to the Administrator: (1) Initial Notification, (2) Implementation Plan (if an operating permit application has not been submitted), (3) Notification of Compliance Status, (4) Periodic Reports, and (5) other reports. The requirements for each of the five types of reports are summarized below.

a. *Initial Notification.* The Initial Notification is due 120 days after the date of promulgation for existing sources. For new sources that have an initial start-up more than 90 days after promulgation, the application for approval of construction or reconstruction required under the General Provisions must be submitted in lieu of the Initial Notification. The application is due as soon as practicable before commencement of construction or reconstruction, or 90 days after promulgation of subpart G, whichever is later. For new sources that have an initial start-up prior to 90 days after promulgation, no application for approval of construction is required and the Initial Notification is due within 90 days after promulgation.

The Initial Notification must list the chemical manufacturing process units that are subject to subpart G, and which provisions may apply (e.g., process vents, transfer operations, storage vessels, and/or wastewater provisions). A detailed identification of emission points is not necessary for the Initial Notification. However, the notification must include a statement of whether the source expects that it can achieve compliance by the specified compliance date.

b. *Implementation Plan.* The Implementation Plan details how the source plans to comply with subpart G. An Implementation Plan is required only for sources that have not yet submitted an operating permit application.

Existing sources must submit the Implementation Plan at different times for emission points included in averages and emission points not included in averages. The Implementation Plan for emission points included in an average is due 18 months prior to the date of compliance. The Implementation Plan for emission points not included in an emissions average is due 12 months prior to the date of compliance. For new sources that have an initial start-up more than 90 days after promulgation, the Implementation Plan must be submitted with the application for approval of construction or reconstruction. For new sources that have an initial start-up prior to 90 days after promulgation, the Implementation Plan is due within 90 days after promulgation (at the same time as the Initial Notification). This timing for new source submittals is slightly different than in the proposed rule.

The information in the Implementation Plan should be incorporated into the source's operating permit application. The terms and conditions of the plan, as approved by the permitting authority, would then be incorporated into the operating permit.

For points included in an emissions average, the Implementation Plan must

include: An identification of all points in the planned average and whether they are Group 1 or Group 2 points; the specific control technique or pollution prevention measure that will be applied to each point; the control efficiency for each control used in the average; the projected credit or debit generated by each point; and the overall expected credits and debits. The Implementation Plan must also state that the same types of testing, monitoring, reporting, and recordkeeping that are required by the proposed rules for Group 1 points will be done for all points (both Group 1 and Group 2) included in an emissions average.

For emission points not included in an average, the Implementation Plan must include a list of emission points subject to the process vents, storage vessels, transfer operations, and wastewater provisions and whether each point is Group 1 or Group 2. The control technology or method of compliance planned for each Group 1 point must be specified. The plan must also state that appropriate testing, monitoring, reporting, and recordkeeping will be done for each Group 1 point.

If an owner or operator wishes to monitor a unique parameter or use a unique recordkeeping and reporting system for any emission point in their source, the request, including a rationale, must be submitted with the Implementation Plan, unless this information has already been included in their operating permit application.

c. *Notification of Compliance Status.* The Notification of Compliance Status must be submitted within 150 days after the source's compliance date. It contains information on Group 1 points and all points in emissions averages that is necessary to demonstrate that compliance has been achieved, such as: The results of any performance tests for process vents, transfer operations, and wastewater emission points; one complete test report for each test method used for a particular kind of emission point; TRE determinations for process vents; design analyses for storage vessels and wastewater emission points; site-specific ranges for each monitored parameter for each emission point and the rationale for the range; and values of all parameters used to calculate emission credits and debits for emissions averaging.

d. *Periodic Reports.* Generally, Periodic Reports must be submitted semiannually. However, there are two exceptions. Quarterly reports must be submitted for all points included in an emissions average. In addition, if monitoring results show that the parameter values for an emission point are outside the established range for more than the number of excused excursions, the implementing agency may request that the owner or operator submit quarterly reports for that emission point. After 1 year, semiannual reporting can be resumed, unless the implementing agency requests continuation of quarterly reports.

All Periodic Reports must include information required to be reported under the recordkeeping and reporting provisions for each emission point. For emission points involved in emissions averages, the report must include the results of the calculations of credits and debits for each month and for the quarter. For continuously monitored parameters, the data on those daily periods when the parameters are outside their established ranges are included in the reports. Periodic Reports must also include results of any performance tests conducted during the reporting period and reports of equipment failures, leaks, or improper work practices that are discovered during required inspections. Additional information the source is required to report under its operating permit or Implementation Plan would also be described in Periodic Reports.

e. *Other Reports.* Other reports must be submitted as required by the provisions for each kind of point. Other reports include: reports of start-up, shutdown, and malfunction; notifications of inspections for storage vessels; and information about sources requesting approval for a nominal control efficiency for use in calculating credits for an emissions average.

C. Summary of Subpart H

The applicability and provisions of subpart H generally have not changed since proposal. Minor changes have been made, however, to clarify the EPA's intent in some provisions and some revisions were made to recordkeeping and reporting provisions to reduce unproductive efforts. The following is a brief summary of the requirements of the provisions in subpart H of the final rule.

1. Applicability

The standards would apply to equipment in organic HAP service 300 or more hours per year that is associated with a process subject to subpart F or I of part 63. The provisions apply to valves, pumps, connectors, compressors, pressure relief devices, open-ended valves or lines, sampling connection systems, instrumentation systems, surge control vessels, bottoms receivers, and agitators. The provisions of subpart H also apply to closed vent systems and control devices used to control emissions from any of the listed equipment.

For SOCMI processes, compliance with the provisions of subpart H is phased in by type of chemical manufacturing process. Subpart F divides the regulated processes into five distinct groups to which the provisions of subpart H apply beginning 6 months after publication of the final rule in the Federal Register. Thereafter, subpart H applies to another group of processes every 3 months. Table 1 of subpart F lists the group to which each chemical manufacturing process subject to this rule is assigned. Processes listed in subpart I must comply with the provisions of subpart H 6 months after publication of the final standard in the Federal Register.

a. *Pumps and Valves.* The standard requires leak detection and repair for pumps in light liquid service and for valves in gas or light liquid service. Standards for both are implemented in three phases. The first and second phases for both types of equipment consist of an LDAR program, with lower leak definitions in the second phase. The LDAR program involves a periodic check for organic vapor leaks with a portable instrument; if leaks are found, they must be repaired within a certain period of time. In the third phase, the periodic monitoring (a work practice standard) is combined with a performance requirement for an allowable percent leaking components.

The standard requires monthly monitoring of pumps using an instrument and weekly visual inspections for indications of leaks. In the first two phases of the valve standard, quarterly monitoring is required. In phase three, semiannual or annual monitoring may be used by process units with less than 1 percent and less than 0.5 percent leaking valves, respectively.

In phase three, if the base performance levels for a type of equipment are not achieved, owners or operators must, in the case of pumps, enter into a QIP, and in the case of valves may either enter into a QIP or implement monthly LDAR. The QIP is a concept that enables plants exceeding the base performance levels to eventually achieve the desired levels without incurring penalty or being in a noncompliance status. As long as the requirements of the QIP are met, the plant is in compliance. The basic QIP consists of information gathering, determining superior performing technologies, and replacing poorer performers with the superior

technologies until the base performance levels are achieved.

b. *Connectors.* The rule also requires leak detection and repair of connectors in gas or light liquid service. The monitoring frequency for connectors is determined by the percent leaking connectors in the process unit and the consistency of performance. Process units that have 0.5 percent or greater leaking connectors are required to monitor all connectors annually. Units that have less than 0.5 percent may monitor biannually and units that show less than 0.5 percent for two monitoring cycles may monitor once every 4 years.

c. *Other Equipment.* Standards for compressors, open-ended lines, pressure relief devices, and sampling connection systems remain essentially unchanged from the proposed standard and other existing equipment regulations (See 40 CFR part 61, subpart V). The provisions for closed vent systems were revised to make them consistent with the provisions in subpart G, and to clarify intent. Agitators must be monitored for leaks or better designed systems, such as dual mechanical seals, must be installed. Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service are subject to instrument monitoring only if evidence of a potential leak is found through sight, sound, or smell. Instrumentation systems consist of smaller pipes and tubing that carry samples of process fluids to be analyzed to determine process operating conditions or systems for measurement of process conditions.

2. Delay of Repair

Under certain conditions delay of repair beyond the required 15 days may be acceptable. Examples of these situations include where: (1) A piece of equipment cannot be repaired without a process unit shutdown, (2) equipment is taken out of organic HAP service, (3) emissions from repair will exceed emissions from delay of repair until the next shutdown, and (4) equipment with better leak performance such as pumps with SMS are replaced with DMS.

3. Alternative Standards

Specific alternative standards have been written for batch processes and enclosed buildings. For batch processes, the owner or operator can choose either to meet similar standards to those for continuous processes, with monitoring frequency prorated to time in use of organic HAP, or to periodically pressure test the entire system. For enclosed buildings, the owner or operator may forego monitoring if the building is kept under a negative pressure and emissions are routed through a closed vent system to an approved control device.

4. Test Methods and Procedures

The standards require the use of Method 21 of appendix A of part 60 to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. Test procedures using either a gas or a liquid for pressure testing the batch system are specified to detect for leaks.

5. Recordkeeping and Reporting

The standards require certain records to demonstrate compliance with the standard and the records must be retained in a readily accessible recordkeeping system. Subpart H requires that records be maintained of equipment that would be subject to the standards, testing associated with batch processes, design specifications of closed vent systems and control devices, test results from performance tests, and information required by equipment in QIP. Other recordkeeping requirements are specified in § 63.181 of subpart H.

Subpart H requires owners and operators to submit three types of reports: (1) An Initial Notification; (2) a Notification of Compliance Status; and (3) Periodic Reports. Owners or operators subject to the requirements of subpart G as well as subpart H may submit one Initial Notification for both requirements. Owners or operators of sources subject to subparts I and H must submit an Initial Notification that lists the units subject to subpart H and the location of the source. The Notification of Compliance Status must be submitted within 90 days after the compliance date for process units in the first group. Thereafter, the owner or operator must submit a Periodic Report every 6 months that contains summary information on the leak detection and repair program, changes to the process unit, changes in monitoring frequency or monitoring alternatives, and/or initiation of a QIP. The Periodic Report will also include any Notification of Compliance Status for any process units that had compliance dates in the previous 6-month period. Reports can be submitted on electronic media that are compatible with the system used by the Administrator or the State permitting authority.

D. Summary of Subpart I

In contrast to the sources in the SOCMI source category, sources in the non-SOCMI processes would be covered by subparts I and H only. For these processes, the source would include only pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems. As explained in the Source Category Schedule for Standards (58 FR 63941), the EPA is considering regulating the other kinds of emission points in these processes in future section 112 standards. The processes subject to subpart H of the HON are included in 20 different source categories or subsets of source categories. The exact relationship of the HON's equipment leak processes to the source categories listed for section 112 standards is specified in table 1 of the Source Category Schedule for Standards (58 FR 63941).

IV. Impacts

This section presents the environmental, energy, cost, and economic impacts resulting from the control of HAP emissions under the rule. It is estimated that approximately 370 sources and 940 chemical manufacturing processes would be required to apply controls by the standards.

Impacts are presented relative to a baseline set at the level of control in the absence of the rule. The estimates include the impacts of applying control to: (1) Existing emission points and (2) additional emission points from SOCMI process units that are expected to begin operation over a 5-year period. Thus, the estimates represent annual impacts occurring in the fifth year. Assuming a SOCMI-wide growth rate of 3.5 percent each year over a 5-year period, national impacts for the emission points that will be added in the first 5 years of the rule are estimated to be 19 percent of total national impacts in the fifth year.

A. Environmental Impacts

Environmental impacts include the reduction of HAP and VOC emissions, increases in other air pollutants, and decreases in water pollution and solid waste resulting from the proposed rule.

Under the rule, it is estimated that emissions of HAP would be reduced by 460,000 Mg/yr (510,000 tons/yr) and the emissions of VOC's would be reduced by 950,000 Mg/yr (1,000,000 tons/yr) (see table 1). Estimates of baseline emissions are presented in conjunction with emissions reductions estimates to better illustrate the level of control being achieved by the rule. Baseline emissions take into account the current estimated level of emissions control, based on State and Federal regulations, for each SOCMI emission point. As a result, baseline emissions reflect the level of control that would be achieved in the absence of the rule.

The baseline emission estimates in table 1 include the extrapolation of estimates for well-characterized processes to account for processes that could not be characterized. Consequently, the table 1 estimates contain considerable uncertainty and are presented only to provide an estimate of the total nationwide impact of the rule. Decisions were based on information from the well-characterized processes only. As discussed in section III.B.3 of this preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels at existing sources. Therefore, emission reductions for storage vessels shown in table 1 and consequently the total, may be slightly overstated.

On average, SOCMI sources generate over twice as much VOC emissions as HAP emissions. Although the intent of the rule is to reduce HAP emissions, the control of HAP's also results in the control of non-HAP VOC's. The control requirements of the HON would result in reduction of 82 percent of HAP emissions and 79 percent of VOC emissions beyond the baseline control level.

There would be a very slight increase in emissions of CO and NO_x, relative to other sources of these pollutants, resulting from the on-site combustion of fossil fuels as part of control device operations. Additional emissions of NO_x and CO (and other pollutants) resulting from increased electricity demand are not included in the impacts presented. Under the rule, estimates of increased emissions of CO and NO_x are 1,700 Mg/yr (1,900 tons/yr) and 17,000 Mg/yr (19,000 tons/yr), respectively (see table 2). The impacts for process vents and transfer operations are based on the assumptions that incinerators or flares are used to combust emission streams. To the extent noncombustion controls are used to achieve compliance with the standards, the actual CO and NO_x emissions would be lower.

Impacts for water pollution and solid waste were judged to be negligible and were not quantified as part of the impacts analysis. The basis for judging these impacts to be negligible is discussed in chapter 5.0 of proposal BID volume 1A.

B. Energy Impacts

Increases in energy use were estimated for steam, natural gas, and electricity. These three types of energy were compared and totaled on a BOE basis. Table 3 shows the estimated individual and total energy use increases. Estimates for total energy use are 290 million kw-hr/yr of electricity, 6,900 billion Btu/yr of natural gas, and 3,000 billion Btu/yr of steam. This equates to 13,000 TJ/yr (2.1 million BOE/yr).

C. Cost Impacts

Cost impacts include the capital costs of new control equipment, the cost of energy (supplemental fuel, steam, and electricity) required to operate control equipment, and operation and maintenance costs. Generally, cost impacts also include cost savings generated by reducing the loss of valuable product in the form of emissions. Average cost effectiveness ($/Mg of pollutant removed) is also presented as part of cost impacts. Average cost effectiveness is determined by dividing the annual cost by the annual emission reduction.

For the final rule, it is estimated that total capital costs for installation of controls would be $430 million (1989 dollars), and total annual costs of this control, excluding the cost savings attributable to equipment leaks, would be $180 million (1989 dollars) per year (see table 4). Because of the EPA's deferral of a final decision on control of medium-sized storage vessels at existing sources, as discussed in section III.B.3 of this preamble, the cost impacts for storage vessels, and consequently the total cost impacts, may be slightly overstated. The estimated cost of the monitoring, recordkeeping and reporting requirements for the rule is $70 million/yr. The total nationwide annual cost of this rule is, therefore, $230 million/yr.

It is expected that the actual compliance cost of the rule would be less than those presented, but it is not possible to quantify the amount. This is because cost estimates for some kinds of emission points were made assuming a separate control device would be constructed for each emission point. In reality, some operators will duct emissions from several of these emission points to a common control device, upgrade an existing control device, use other less expensive control technologies, implement pollution prevention technologies, or use emissions averaging. Additionally, owners or operators of sources may develop more efficient monitoring and recordkeeping systems. All of these options would reduce the estimated costs while achieving the same emission reductions. The effect of such practices on the national costs could not be estimated because the ability to use any of these practices is highly site-specific and data were not available to estimate how often the lower cost compliance practices could be utilized.

D. Economic Impacts

Because many SOCMI chemicals are used as raw materials in the production of other SOCMI chemicals, the economic impact analysis looked at cumulative costs of control for each of the SOCMI chemicals listed in subparts F and H. About 94 percent of the chemicals are estimated to have a production cost increase of less than 10 percent; more than 80 percent have cost increases less than 3 percent. Approximately 6 percent of the chemicals analyzed incur a cost increase of over 10 percent. Almost all of the chemicals with a product cost increase exceeding 10 percent have annual national production of less than 10 million kilograms (11,000 tons) and are therefore low volume chemicals. (Two-thirds of the SOCMI chemicals have production over 10 million kilograms (11,000 tons).)

Market analyses for a subset of 21 of the chemicals estimated price increases from 0.1 percent to 3.9 percent and quantity decreases from 0.1 percent to 4 percent. The market analyses lead to the conclusion that percentage quantity decreases will be less than the percentage cost increases due to the regulation. The market analyses indicate that severe disruption of the industry is an unlikely result.

The diversity of chemical producers (most sources are involved in the production of several chemicals) decreases the likelihood of plant closure as a result of the regulation. A more likely consequence of the regulation is a change from a chemical manufacturing process with a higher cumulative control cost to a process with a lower control cost.

The impact for the low volume chemicals is the most uncertain. The cost estimates for these chemicals involve more uncertainty and, in many cases, industry profile information specific to the manufacturers of these chemicals was not available. Many of the low volume chemicals can be considered specialty chemicals. Generally, there is a lack of viable substitutes for specialty chemicals. In addition, the production cost of specialty chemicals is usually only a small portion of the cost of the final goods made with the specialty chemical. For these two reasons, a price increase for a specialty chemical is less likely to lead to a business closure or a production cutback than a price increase for a large volume chemical. This decreases the likelihood of large quantity impacts or closures.

The RIA addresses the benefits, costs, and economic impact of the regulation.

Because benefits could only be addressed qualitatively, the RIA is not able to provide guidance as to which regulatory option optimizes net benefits. However, the RIA does summarize the types of benefits associated with the reduction of HAP's, VOC's, and particulate matter formed from VOC's.

V. Summary of Significant Comments and Associated Changes to the Proposed Subparts F and G

A. Selection of Source Category and Source

1. Definition of SOCMI

Public comments have indicated confusion regarding the definition of the source category covered by the HON. Several commenters misinterpreted the definition to include activities that were not intended to be regulated with this rule such as marine vessel loading and refinery processes. Thus, the commenters asserted that the proposed rule contained too many exemptions and loopholes. The commenters concluded that the EPA should broaden the scope of the HON.

Section 112(c) of the Act requires the EPA to publish a list of all categories of major sources of listed HAP's (and such categories of area sources as the Administrator determines warrant regulation), then to establish rules for each of these categories of sources of HAP emissions. As such, the HON was not intended to require controls for all operations in the chemical industry. Rather, the HON sets section 112(d) standards for the SOCMI source category. The SOCMI source category includes only the part of the chemical industry that produces the major industrial chemicals. Other parts of the chemical industry use SOCMI chemicals to produce pesticides, agricultural chemicals, pharmaceuticals, polymers, and specialty chemicals. These operations are substantially different than the SOCMI and were outside the scope of the impact analysis for the HON. Accordingly, these other segments of the chemical industry are separate source categories, and will be subject to separate MACT or GACT standards at a later date.

The EPA acknowledges that some integrated facilities will have operations from multiple source categories on the same plant site (e.g., refinery units, SOCMI production, and pesticide production). However, to include all emission points at these facilities in the scope of the HON is inappropriate because it is not consistent with Congressional intent to regulate categories of HAP emissions. Further, such an undertaking would make implementation of the rule an insurmountable task. Instead, the HON provides comprehensive coverage of the emissions of 112 organic HAP's from five kinds of emission points in 365 SOCMI production processes. Emissions from processes in other source categories will be covered by separate MACT standards. In conclusion, the EPA does not believe it would be practical or appropriate to broaden the applicability of the HON, as suggested by some commenters, to include emissions from other source categories.

In previous rules and in the proposed HON, the EPA defined the SOCMI source category with lists of chemical products. In the proposed HON, there were two lists of SOCMI chemicals. One listed chemicals that would be subject to subpart G and the other listed chemicals that would be subject to subpart H. The two differed because the subpart H list had been agreed to by the negotiating committee before all technical analyses were complete.

Commenters suggested simplifying the applicability of the HON by making the lists identical or by combining them into a single list. Other commenters asserted that there were non-SOCMI chemicals (e.g., phthalate esters) on the proposed lists and that these chemicals should be removed from the final rule.

The EPA agrees with the commenters that the applicability of the rule will be clearer if there is only one list of SOCMI chemicals. Thus, the EPA has combined the two lists and placed the resulting list in table 1 of subpart F of part 63.

The EPA re-evaluated several chemicals that some commenters had claimed were not SOCMI chemicals. In several cases the EPA disagreed with the commenters because the chemicals met the criteria that EPA has used to define the SOCMI. However, the EPA agreed with the commenters regarding phthalate esters. These chemicals are primarily used as plasticizers, not as building blocks for other chemical manufacturing, and will be regulated under a separate source category called "Phthalate Plasticizer Production." Because the production of these chemicals will be covered by a future section 112(d) standard, the EPA felt that it would be inappropriate to include them under the HON. Thus, phthalate esters were deleted from the list of SOCMI chemicals in the final rule.

The EPA added a chemical to the HON SOCMI list that had previously been listed as a separate source category. The dodecanedioic acid process shares equipment with an adiponitrile process which is subject to the provisions of the HON. The EPA determined that it would be more appropriate to regulate production of dodecanedioic acid as part of the HON rather than prepare a separate standard. Thus, this chemical has been added to the list of SOCMI chemicals in the HON.

Several commenters have alleged that the applicability provisions in the proposed HON are confusing, especially when applied to plant sites with integrated operations. To address the confusion, the EPA has clarified the provisions in the final rule to simplify the determination of applicability for facilities with integrated operations. Several commenters suggested that the term "chemical manufacturing process" be clarified regarding where the coverage of the HON begins and ends. The commenters described situations where:

(1) Unit operations produce a SOCMI chemical as part of an overall non-SOCMI process;

(2) Solvent is recovered or reclaimed;

(3) Unit operations, storage vessels, and transfer racks are shared by two or more processes; and

(4) The intended product is less than a by-product on a mass basis.

In the final rule, the EPA has changed the term "chemical manufacturing process" to "chemical manufacturing process unit" and provided additional clarification on the boundary of a process subject to the HON. The term is now defined as follows:

Chemical manufacturing process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. For the purpose of this subpart, chemical manufacturing process unit includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems. A chemical manufacturing process unit is identified by its primary product.

Additionally, the final rule provides a comprehensive assignment procedure for distillation units, storage vessels, and transfer racks that are shared among processes. This assignment procedure is based on the predominant use of the equipment. The EPA has also clarified the term "source" by consolidating the definition into two adjacent paragraphs and wording it more in terms of

equipment having specific functions. These and other clarifications should remove the confusion on the limits of a chemical manufacturing process unit subject to the HON.

Commenters also asserted that the proposed definition of "flexible operation unit" was inadequate because it addressed only feedstock changes, and not operating changes to accommodate different products or specifications. Because changes in these units could be frequent, the commenters suggested basing applicability on the previous year's production.

In the final rule, the EPA has changed the definition of "flexible operation unit" to include operating changes. Additionally, the EPA reevaluated the proposed requirement that a flexible operation unit would be subject to the HON only during times when the unit was producing a SOCMI product. The EPA decided that, due to the frequent product changes associated with flexible operation units, such a provision could complicate compliance determinations for sources and enforcement agencies. The EPA considered the commenters' suggestion to base applicability on the previous year's production but decided against this because the year preceding promulgation of the final rule might not have been representative of typical operation of the unit. Therefore, in the final rule flexible operation units are assigned to a specific chemical manufacturing process unit based on the anticipated use of the unit. For existing sources, assignment is based on the expected use over the first five years following promulgation, and for new sources, assignment is based on expected use in the first five years after start-up.

2. Definition of Major Source

The EPA received a number of comments regarding a source's potential to emit. The EPA's policy on potential to emit is enunciated in the General Provisions. The reader is directed to those provisions for guidance.

Public comments have indicated confusion on the applicability of the HON to a SOCMI chemical manufacturing process unit at a plant site where the predominant activity is part of another source category (e.g., a petroleum refinery). Some commenters pointed out that the permit rule (40 CFR 70.2) narrowed the basis for determination of major source status to include only the emission points within a single two-digit SIC code. The commenters argued that this change would mean that the HON would apply only if a source was major due to its SOCMI processes. In other words, if the SOCMI processes at a source did not exceed the 10/25 tons per year HAP emission threshold, then the HON would not apply.

The EPA maintains that, although 40 CFR 70.2 defines major source for the purpose of permitting, it does not alter the statutory definition under section 112. The permit rule applies to sources subject to a section 112(d) standard regardless of whether they are major sources as defined by 40 CFR 70.2.

The EPA's position remains that if a plant site is a major source within the section 112 definition, the HON applies to the HAP-emitting SOCMI processes, and that the applicability of the HON to the SOCMI portion of the plant site is not limited by the principal activity at the site. This is consistent with the intent of the Act to regulate categories of HAP emission sources. The part 70 definition may result in more than one permit being issued for a major source of HAP emissions, but does not affect the applicability of MACT standards.

3. Exclusion of Area Sources

In the preamble to the proposed HON, the EPA requested information on the existence and characteristics of any area sources in the SOCMI in order to determine if a separate MACT standard should be prepared. Because the comments did not indicate any reasons to develop an area source standard, the EPA maintains that the HON applies to major sources only. Area sources are not subject to the HON.

4. *Determining New Source Status*

The EPA received a number of comments regarding the process for determining if new or existing source requirements would apply to a particular SOCMI emission point or process unit. In response to those comments the EPA has clarified the relevant section of subpart F. The requirements and definitions used by the HON to distinguish new and existing sources are consistent with section 112(a) and the related components of the General Provisions. As a result, the following could be subject to the HON's requirements for new sources: (1) Chemical manufacturing process units constructed after the date of proposal of the HON (December 31, 1992); (2) existing sources reconstructed after that date; and (3) "greenfield" HON chemical manufacturing process units that constitute all or part of a major source constructed after that date. (New source requirements would not be triggered by the addition of an individual emission point, such as a storage vessel.) In addition, a newly constructed chemical manufacturing process unit must also have the potential to emit major quantities (10 tons per year of any HAP or 25 tons per year of any combination of HAP's) in order to be subject to new source requirements for the HON. Thus, any change or addition to an existing SOCMI plant site must meet the same three criteria as a "greenfield" plant to be considered a new source. The EPA selected this approach for determining what is subject to new source requirements to avoid providing an incentive for SOCMI owners and operators to construct processes as area sources. Also, EPA wanted to ensure that new sources built at existing plant sites are subject to the same requirements as new sources that are "greenfield" sites. Additions to an existing plant that do not meet the requirements of being a chemical manufacturing process unit and do not have the potential to emit major amounts, will be subject to existing source requirements.

B. Selection of Pollutants

In selecting the HAP's that would be regulated by the HON, the EPA started with the list of 189 HAP's in the Act. Because the HON was intended to reduce emissions from organic chemical manufacturing, the EPA studied the processes used to manufacture SOCMI chemicals and narrowed the list to those organic HAP's that would be emitted from SOCMI processes.

In the proposed rule, there were two lists of organic HAP's—one that applied to subpart G and another that applied to subpart H. The lists differed by 37 HAP's because the subpart H list had been agreed to by the negotiating committee before all technical analyses were complete. These technical analyses indicated that 37 of the organic HAP's on the list approved by the committee should be removed from the list because they would not be emitted from SOCMI production processes. In public comments received on the proposed rule, it was suggested that the EPA combine the two lists to simplify implementation of the rule. The EPA decided that it was appropriate to include only one list of organic HAP's in the final rule. The list is located in table 2 of subpart F and contains 112 compounds. Keeping the shorter of the two proposed lists will not result in greater emissions because the additional 37 HAP's on the longer list would not be emitted from SOCMI processes. Also, because the non-SOCMI processes in subpart I are only subject to the standard for the designated pollutants, combining the organic HAP lists does

not affect emissions from those processes.

C. Selection of Rule

1. Floor Determination

a. *Background on impacts estimates.* As explained in the preamble to the proposed rule (57 FR 62621), the EPA developed the information on control costs and emissions for SOCMI using a model emission point approach to represent the broad range of characteristics of SOCMI operations. The EPA elected to use the model emission point approach in part because of the limited time provided by the statutory requirement to regulate 40 source categories (which legislative history states should be the priority elements of the chemical industry) by 1992 and to establish regulations for all initially listed source categories by 2000. Because a generic model emission point approach allows one regulation to cover a large number of different chemical processes, it was considered more resource efficient and the only practical way to develop regulations on the schedule mandated by Congress.

The impacts estimation methodology involved three steps: (1) Development of a data base characterizing the SOCMI, (2) development and assignment of model emission points for each kind of emission point, and (3) calculation of emissions and control impacts. The characterization of the SOCMI primarily involved identifying the specific routes, reactants, and process technologies used to produce a chemical and the corresponding SOCMI chemical manufacturing process units. In addition, information on existing State and Federal regulations was compiled for each kind of emission point to determine the baseline control requirements applicable to SOCMI chemical manufacturing process units.

Model emission points were developed to represent each kind of emission point in the SOCMI. The models were developed to emphasize those characteristics that most influence emissions, control costs, energy needs, and secondary environmental impacts. These models were applied to individual chemical manufacturing process units in the SOCMI data base using decision rules based on the level of information in the data base and the specificity of a given model. These models are representative of average, representative, or typical emissions for the specific process or reaction type. Thus, the estimates do not reflect actual emissions that would occur at any particular chemical manufacturing process unit because process design and operation characteristics vary from plant to plant.

Estimates of existing controls were developed by compiling information in existing state and Federal regulations applicable to SOCMI processes. In this analysis, the EPA used data on the control requirements in existing State and Federal regulations to identify those emission points that must be controlled in the absence of this rule and to identify the required controls. It was assumed that all chemical manufacturing process units would be in compliance with applicable air pollution regulations.

The data base and model emission points used to estimate the impacts of the HON are based on published literature and information that the EPA has collected during other rulemaking efforts including NSPS for air oxidation processes, distillation operations, reactor processes, volatile organic liquid storage, and equipment leaks; and NESHAP for vinyl chloride and benzene. Some additional information was obtained on wastewater operations and transfer loading operations by requesting it from the industry under authority of section 114 of the Act.

In development of the proposed rule, the EPA recognized that the data base developed to provide estimates of nationwide costs and emission reductions did not provide site-specific emission and control information and these limitations needed to be considered in the determination of the floor for the category. The EPA developed the floor from an analysis of the information for each kind of emission point. The information the EPA used in determining the source-wide floor consisted of the estimates of the number and characteristics of the model emission points, the emission control requirements currently in place for each point based on information available to the EPA, and the expected control efficiencies for the control technology. To determine the source-wide floor for existing sources at proposal, the EPA examined the supporting information to identify the emission characteristics of the emission points which had at least 12 percent of the points controlled by the reference control technology. This analysis was done for each kind of emission point. The characteristics used to identify groups of emission points were physical parameters such as flow rate, HAP concentration, and vapor pressure. The source-wide floor was determined by the combination of the control levels for all four kinds of emission points.

A similar method was used to determine the source-wide floor for new sources. For each kind of emission point, the characteristics of the smallest emission point controlled by the reference control technology were identified as the means for determining the best controlled similar source. Again, the source-wide floor was determined by the combination of control levels for all emission points.

b. *Public comment issues.* Commenters raised three basic issues on the approach used to determine the floor for SOCMI sources:

(1) Information used to predict existing control understated actual control present;

(2) The methodology used to estimate the floor overstated the floor; and

(3) The ranking criterion used for process vents introduced cost considerations into the floor.

Data base understates actual control. A number of commenters argued that the approach, or the information, the EPA used understated actual control in the SOCMI. Some of these commenters thought that the EPA should have gathered site-specific data on emissions and controls to properly establish the floors. Other commenters argued that the EPA should have used state air toxics and new source review permits to determine actual control levels, since many air toxics programs are implemented through permit programs.

While the EPA would have preferred to have developed site-specific information on emissions and controls for processes subject to this rule, it was not possible to do so given the deadlines applicable to this rulemaking. Section 112(e)(1) of the CAA required that the EPA promulgate emission standards for at least 40 source categories and subcategories by November 15, 1992. Having failed to meet that statutory deadline, the EPA entered into a consent decree requiring the promulgation of the HON by February 28, 1994. Neither that deadline nor the statutory deadline for the rules covering 40 source categories and subcategories could have been met if the EPA used the alternative approach suggested by the commenters. The EPA's past experience in developing the data base for the previous section 112 program and for NSPS standards demonstrates the great length of time necessary to develop and analyze the data for development of emission standards to control emissions from the SOCMI. The data base developed for this rulemaking used the results of more than 10 years of data gathering and analysis of SOCMI sources. Developing an entirely new data base as suggested by the commenters is expected to require anywhere from 4 to 10 years depending

on the degree of evaluation of performance and whether permits are reviewed for all SOCMI sources. Consequently, the EPA elected to use information readily available to it to determine the floor for the SOCMI standard under section 112(d) of the CAA. In light of the EPA's prior experience with regulation of the SOCMI, the EPA believes that this decision was entirely reasonable.

Furthermore, the EPA does not believe that the method used by the EPA to determine existing control levels and the floor understated actual control levels in SOCMI. The EPA holds this view because other assumptions used in the analysis introduced a positive bias. Examples of assumptions that would introduce an upward bias to the analysis include: (1) All sources are in compliance with all applicable control requirements for air emissions; and (2) sources would be in compliance with recently established requirements such as 40 CFR part 61 subpart BB. Thus, the EPA believes that taken as a whole the uncertainties should balance out, and the control level is not understated. It should be noted also that other commenters thought that the floor was overstated.

Methodology overstated floor. In contrast, another group of commenters argued that the point-by-point approximation of the floor introduced a positive bias in the source-wide floor. These commenters explained that the assumption that the best controlled of each kind of point are co-located is invalid. They noted that in practice different sources have the better controls on the different kinds of points. These commenters argued that the EPA should have considered this bias in decisions to require control beyond the floor. Some of these commenters also questioned inclusion of requirements in recent NESHAP in the assessment of the floor control and the estimates of control efficiency achieved by some control devices. None of the commenters provided data or suggested methodologies that could be used to improve the EPA data base to develop better estimates of the source-wide floor.

The EPA maintains that, given the uncertainties in the data base, the procedure used to determine the floors in the proposal (and in this final rule) is a reasonable approach to the determination of the floor. As explained above, the EPA could not develop actual site-specific data in the time available for this rulemaking. Thus, the EPA had to rely on existing data sources to develop model emission points characteristics for sources subject to this rule. Where data were available for the specific process, the model emission points characteristics reflected average or representative operations for the specific process. In cases where no data were available for a specific process, the model emission point characteristics were derived from average characteristics for the generic reaction type (e.g., hydrogenation, halogenation, etc.). Thus, the estimates cannot be viewed as reflecting actual emissions and controls at any particular process unit or plant site. The EPA considered whether to develop floors using estimates of site-specific emissions and controls and rejected that approach as introducing additional assumptions and such large uncertainties as to render the analysis meaningless. For example, due to incomplete information, it is probable that not all process units at each plant site were properly identified. In fact, locations of some chemical production processes are unknown. Site specific differences in process unit design could not be taken into account in assigning model emission points and baseline control levels. Thus, there is uncertainty about the existence of any particular emission point, as well as its assigned emission and control level at any particular plant site. Furthermore, independent assignment procedures were used for each kind of emission point. In consideration of these factors, the EPA believes that the uncertainties introduced by the assumptions made in assigning emission point characteristics to specific sites are so large as to undermine the validity of the analysis. The EPA believes that the approach it used of developing point-by-point approximations of the source-wide floor was the most appropriate use of the available data base to determine the floors. Moreover, the EPA does not believe that its methodology, when all aspects are considered, did overstate the source-wide floor. While the assumption of collocation of the best controlled points does introduce an upward bias in the analysis, there are other aspects of the analysis that work in the opposite direction. For example, the use of information from State regulations instead of site-specific control and operation information would be likely to understate the degree of control present in some sources. As previous commenters noted, site-specific controls that may have been included in new source permits or applied voluntarily could not be accounted for in the data base. Thus, the EPA expects these factors are likely to balance out. It should be noted also that other commenters thought that the floor was understated.

The EPA also believes that its choice of methodology was reasonable since it provided additional assurance that, not withstanding the uncertainties inherent in the data base, the floor determined by the EPA would be no less stringent than the actual source-wide floor. As some of the uncertainties present, such as the reliance on analyses of State regulations rather than actual permitted levels of emissions, would lead to a less stringent floor in the absence of countervailing factors, the EPA believes it was reasonable to provide a safety factor by determining the floor on the basis of a point-by-point approximation that assumed the co-location of the best-controlled points.

In any event, even if the EPA's point-by-point methodology may have overstated the floor, such an overstatement does not invalidate the emission standard since the overall source-wide standard exceeds the floor determined by the EPA.

A second issue raised regarding the methodology and information was whether it was appropriate to consider the Benzene Transfer (40 CFR part 61, subpart BB) or Benzene Waste (40 CFR part 61, subpart FF) NESHAP as applicable control requirements. These commenters questioned whether section 112(d)(3)(A) of the Act required that these control requirements not be considered in the floor determination. (See section II.C of this notice.)

The EPA maintains that it was appropriate to consider the control requirements of Benzene Transfer since these controls were required more than 30 months before promulgation of this rule. Furthermore, information collected in the section 114 surveys shows that a few sources were steam stripping wastewater containing chemicals with volatilities similar to benzene. Because the new source floor is determined based on the best controlled similar source, the requirements were included in the determination of the floor for new sources. In addition, the Vinyl Chloride NESHAP, which was issued in 1977, also requires treatment of wastewater streams containing greater than 10 ppm. Consideration of the Benzene Waste NESHAP did not affect the existing source floor because fewer than 1 percent of the wastewater streams in the HON data base are expected to be subject to Benzene Waste NESHAP control requirements, and the floor is determined to be no control for wastewater streams at existing sources.

Ranking criterion used for process vents analysis. Some commenters thought that the EPA had introduced cost considerations into the floor by the ranking procedure used for process

vents. These commenters noted that considering cost in determining the floor was contrary to Congressional intent.

The EPA does not believe that the procedure used to rank process vents did introduce cost into the determination of characteristics of process vents controlled at the floor. The reasons EPA holds this view can be best explained by restating the process used and comparing it to other ways of analyzing the process vent data.

To determine the source-wide floor, the EPA ranked the data base for the specific emission point by a characteristic that would affect the likelihood for control. For existing sources, the proposed floor was defined as the emission characteristics where at least 12 percent of the points were controlled by the reference control technology. For new sources, the proposed floor was defined by the characteristics of the point with the smallest emission rate that was controlled. By analyzing the ranked data, it could be determined that emission points with certain physical characteristics are currently controlled, while emission points with other characteristics are not controlled. Storage vessels, for example, were ranked by vapor pressure because vapor pressure is one of the three major factors that influence emissions and potential emission reductions. The ranking clearly showed that vessels storing liquids above a certain vapor pressure are controlled at the best controlled sources, so the source-wide floor would require control of such vessels; whereas, vessels storing liquids with lower vapor pressures are not currently controlled and would not require control under the source-wide floor.

Process vents were ranked using cost effectiveness of control (or TRE) as a surrogate measure because this can be used to reflect all possible combinations of various factors that affect emission rates and likelihood of current control (flow rate, HAP concentration, net heating value, and corrosion properties). Use of a single criterion of cost effectiveness results in a more easily understood parameter and is consistent with the format of the process vent provisions. The cost-effectiveness values were used only to rank the vents in the data base and as a characteristic to identify controlled vent characteristics (similar to the way in which vapor pressure was used to identify the characteristics of the best controlled storage vessels). In determining the process vent component of the source-wide floor, no judgements were made about the reasonableness of the characteristics of the controlled vents.

Because of the opinions expressed by commenters, the EPA also reevaluated the process vent control level associated with the floor using emissions as the ranking parameter. Emissions correlate with likelihood of control, but the correlation is weaker because other factors (such as concentration and flow) also influence it. The process vent data base was ranked by vent from lowest to highest emission rate. The characteristics of the process vent where at least 12 percent of the process vents are controlled is 64 Mg/yr (71 tons/yr) and the cost-effectiveness value is $1,620/Mg ($1,460/ton). Thus, essentially identical results are obtained by both ranking procedures.

As discussed in section V.C.1.c of this preamble, comment has been requested in other rulemakings on the meaning of the statutory language "the average emission limitation achieved by the best performing 12 percent of the existing sources." Because of this, the average characteristics of the top 12 percent of the process vents were determined using the emissions ranking of the data base. This analysis showed that vents with 27 Mg/yr (30 tons/yr) emissions would have to be controlled at the floor. When these average characteristics are used to derive the comparable TRE value, the result is about $2,900/Mg ($2,600/ton). The discussion of the control levels selected for existing process vents demonstrates that in this case the interpretation of the statutory floor language is not relevant. This is the case because, when cost and environmental and energy impacts are considered, as required by the statute, the appropriate control level for process vents is equal to the more stringent floor calculation. Thus any ambiguity in the floor language and methodology does not affect the regulatory alternative selected for this rule.

Analysis of expected control efficiency at floor for storage vessels at existing sources. Several commenters questioned the assessment of the performance capabilities of actual controls on existing storage vessels. As discussed in section V.C.3 of this preamble, the performance was reassessed considering the comments. This reevaluation determined that for existing storage vessels best control systems are:

(1) A 90-percent efficient control device; or

(2) An IFR or EFR with a continuous seal, but without controlled fittings.

Also in the reexamination of existing control level, it was determined that an error had been made in assignment of applicability of the Benzene Storage NESHAP (40 CFR part 60, subpart Y) to storage vessels in the data base. Upon examination of the data base, it was found that some vessels had been assumed to be controlled due to subpart Y, but the liquids stored did not meet the applicability criteria of subpart Y. The Benzene Storage NESHAP applies only to vessels storing liquids that meet the specifications of ASTM D-836-84 for industrial grade benzene, or refined benzene -485, -535, or -545. After correction of the data base, 2 percent of the small vessels, 6 percent of the medium vessels, and 12 percent of the large vessels were found to be controlled. The effect of this on the assessment of the floor for existing sources is discussed in the next section of this preamble.

c. Interpretation of statutory language for existing source floors. In recent Federal Register notices of proposed rulemakings (Pulp and Paper and Chromium Electroplating), the EPA has requested comment on the EPA's interpretation of the meaning of "the average emission limitation achieved by the best performing 12 percent of the existing sources" and the methodology for determining the MACT floor. Comments have been specifically requested in these proposed rulemakings on whether the MACT floor for existing sources should be set at the 88th percentile or at the level reflecting the median or mean level of control achieved by the best performing 12 percent of sources. Questions have been raised on how the methodology used in determination of the floors for the HON relates to floors being determined using alternative procedures.

With the exception of process vents and medium-sized storage vessels, the two methodologies result in the same control level for the floor. This results because for most of the HON data base there is little variation in the physical characteristics of the emission points in the top 12 percent of the population. The average or mean is equal to the median value of the distribution as well as the 88th percentile value. Thus, for this data base, whether the floor is determined using the characteristics of the median, mean or 88th percentile does not matter. The assessment of the average characteristics of the best performing 12 percent of each kind of point is described below.

As described earlier in the discussion of the process vent ranking criterion, the average characteristics of the top 12 percent of the process vents was equivalent to about $3,000/Mg ($2,700/ton). The characteristics of process vents where at least 12 percent are controlled

by the reference control technology is equivalent to $1,500/Mg ($1,350/ton).

For small storage vessels, the revised data base showed that only 2 percent of the vessels were controlled. Thus, the median characteristics of the top 12 percent of the vessels is no control. This control level is the same as the level predicted by characteristics where at least 12 percent are controlled.

As mentioned earlier, the EPA is not taking final action at this time concerning the provisions applicable to medium storage vessels. The reason is to take comments on the difference in the floor determination that would result from the application of the two interpretations discussed above. For medium storage vessels, 6 percent of the vessels are controlled with either a 90-percent efficient control device or an IFR or EFR with a continuous seal. All of the controlled medium-sized vessels contained liquids with vapor pressures of 13.1 kPa (1.9 psia). The arithmetic average, or mean characteristics of the top 12 percent of the medium vessels would not represent the performance of any known technology. If the EPA used the median as the average for these vessels, however, the floor determined by the average characteristics of the top 12 percent of the sources would require control of vessels storing liquids with vapor pressures of 13.1 kPa (1.9 psia) by either a 90-percent efficient control device or an IFR or EFR with a continuous seal. This is the same vapor pressure that was identified at proposal. With the revised data base, the floor determined by the characteristics where at least 12 percent of the points are controlled would require no control.

For large storage vessels, the revised data base showed that 12 percent of the vessels were controlled and essentially all controlled vessels in the top 12 percentile of each size range of vessels stored liquids with vapor pressures of 13.1 kPa (1.9 psia). So the median or average characteristics of the top 12 percent of the vessels is the same as the characteristics where at least 12 percent of the vessels were controlled. Both procedures show the floor to require control of vessels containing liquids with vapor pressures of 13.1 kPa (1.9 psia) and higher.

The data base information for transfer racks also showed that all controlled racks loaded liquids with vapor pressures of 10.3 kPa (1.5 psia) and no racks loading liquids with vapor pressures less than 10.3 kPa (1.5 psia) were controlled. Thus, the two procedures would predict the same control requirements for the floor.

Fewer than 1 percent of the wastewater streams in the HON data base were expected to be subject to regulations that required control of air emissions. Thus, for wastewater the average of the top 12 percent of streams would represent no control since the median stream is not controlled and the arithmetic average of the top 12 percent of the sources does not correspond to any known control measure. The alternative procedure for determining the floor also shows that the floor would be no control.

In summary, the outcome of the debate concerning the appropriate interpretation of the floor language is not pertinent to the final provisions for process vents, transfer operations, wastewater, small storage vessels, and large storage vessels. Under either interpretation, the floor would not alter the regulatory decisions contained in this rule for those emission points because the standard is, on the basis of cost and environmental and economic impacts, set at or above each component of the floor regardless of which interpretation is chosen. In the case of medium storage vessels, however, the EPA is deferring final action pending the receipt and review of additional public comment.

2. Alternative Control Levels

a. *Stringency of standard.* The proposed standard would have required control of emission points with characteristics meeting the criteria listed in table 5 through the use of reference control technologies. The EPA selected the proposed control requirements from the alternatives listed in tables 5 and 6 of the proposed notice of rulemaking (57 FR 62629 and 62630). These alternatives differed only in the number of emission points that would be controlled by the reference control technology. The proposed requirements were selected considering: (1) Magnitude of the emission reduction; (2) cost of the emission reduction; (3) economic impacts and feasibility; (4) consistency with previous decisions; (5) other non-air quality health and environmental impacts; and (6) energy requirements. It was the EPA's judgement that the proposed requirements would be achievable at reasonable cost, and with reasonable economic and other impacts.

The proposed control requirements were expected to significantly reduce HAP emissions from SOCMI sources. The proposed standard was estimated to reduce HAP emissions from the four kinds of emission points by 422,000 Mg/yr (464,000 tons/yr) from existing and new sources. At proposal the total nationwide annual cost associated with this emission reduction was estimated to be about $182 million/yr, with $48 million/yr of this cost associated with the monitoring, recordkeeping, and reporting requirements.

Public comments on the proposed control levels were polarized with industry groups arguing the proposed standard was too stringent and environmental and public interest groups arguing the standard did not require sufficient control. Commenters who argued that the standard was too stringent thought that in the decisions to go beyond the floor the EPA should have considered the bias introduced by the procedure used to determine the floor. Several commenters suggested alternative criteria which they considered to be more appropriate. These commenters, however, did not provide supporting rationale for their preferences. Commenters representing environmental and public interest groups expressed concern that the proposed standard did not require control of all emissions, but allowed a large amount of emissions to go uncontrolled. Several State and local regulatory agency commenters thought that, at a minimum, the standard should have required control comparable to existing control requirements for VOC, such as the NSPS standards for SOCMI process vents (40 CFR part 60, subparts III, NNN, and RRR).

The EPA considered all of the comments in selecting the final control requirements of the standard. In considering these comments, the EPA viewed the concerns in the context that the positions and concerns were diametrically opposed to one another. Thus, no response could completely resolve the issues. The EPA's reexamination of the control requirements of the standard and response to the commenters' concerns is provided in the following paragraphs of this section of the preamble.

The final regulatory alternatives for existing and new sources are shown in tables 6 and 7.

[Note: Regulatory alternatives were developed using information for the chemical processes that could be characterized sufficiently to permit assignment of model emission points. The estimates presented in tables 6 and 7 differ from the estimates summarized in section IV of this notice because the estimates in section IV include an extrapolation to account for processes that could not be modeled.]

The only differences between these alternatives and the alternatives at proposal are revisions made to the estimates of wastewater emissions and control costs and the storage vessel control costs, as discussed in sections V.C.3.b and V.C.3.d of this preamble.

The following discussion of the final selection of control levels is limited to the primary factors that affected the decision. The primary factors are the emission reduction, control cost, consistency with other standards, and economic efficiency. Other factors such as non-air environmental impacts (solid waste and water) and energy impacts do not vary significantly among the alternatives. Consequently, these factors are not discussed in this preamble. Readers should see the proposed rulemaking (57 FR 62508) for the discussion of these other factors.

(i) *Process vents.* In the final rule, the EPA selected Option 3 (TRE cost-effectiveness values of up to $3,000/Mg) as the basis for the requirements for process vents at existing sources. The EPA's selection of Option 3 for process vents was principally based on consideration of the emission reductions, costs, and consistency with other standards. Specifically, the control level required by this option will reduce emissions by 2,000 Mg/yr (2,200 tons/yr) more than Option 2, upon which the proposed requirements were based. This additional emission reduction is estimated to cost approximately $4 million/yr more than Option 2 or $2,500 for each additional Mg of emissions ($2,270/ton).

The EPA believes that the control required by Option 3 is achievable considering the statutory criteria, for the following reasons. First, EPA has received extensive comment on the proposed rule. No commenters submitted data or arguments demonstrating that the costs of the proposed range of options (Options 1 to 4) were unreasonable. Second, the incremental cost effectiveness of Option 3 compared to Option 2 ($2,500/Mg [$2,275/ton]) is within the cost-effectiveness values from recent decisions on other standards. Third, the TRE format of the process vents provisions allows facilities the flexibility to comply through changes in equipment or operations. As a result, actual costs could be lower than estimated. Based on the above considerations, the EPA judged that the control required by Option 3 is achievable considering the statutory criteria.

Fourth, Option 3 would provide consistency between the HON and the recently issued CTG for SOCMI process vents, which requires control of vents with TRE cost-effectiveness values of $2,500/Mg of VOC ($2,270/ton). Option 3 would also be consistent with the applicability criteria for the three SOCMI process vents NSPS, which require control of vents with TRE cost-effectiveness values of $3,000/Mg of VOC ($2,700/ton) adjusted to 1989 dollars. The EPA believes that consistency among these requirements would reduce administrative costs and implementation difficulties for both EPA and permit authorities as well as industry. An additional consideration in selection of Option 3 was public comments that the requirements should be at least equivalent to the requirements of the SOCMI NSPS and CTG.

In addition, Option 3 is consistent with one interpretation of the statutory language on floors, and thereby arguably is the minimum statutorily permissible level of control. However, based on the above analysis, Option 3 would have been selected whether it was equal to or above the floor.

More stringent control than Option 3 was not selected because the EPA could not conclude, based on currently available information, that the additional emission reduction warranted the additional cost in this case. The control level for Option 4 as compared with Option 3 would achieve an additional emission reduction of 1,100 Mg/yr (1,200 tons) at an additional cost of $4 million/yr. The incremental cost effectiveness of Option 4 relative to Option 3 is $3,900/Mg ($3,500/ton).

The final standard retains the proposed requirement for control of process vents with TRE cost-effectiveness values of $11,000/Mg ($9,980/ton) at new sources. The EPA considered selecting a level of emission reduction more stringent than the level associated with the source-wide floor for process vents at new sources. However, a standard more stringent than the floor component is not being established because the costs were considered high given the very small additional emission reduction available. The additional control would achieve an additional emission reduction of about 100 Mg/yr at a cost of about $4 million/yr, or $47,000 for each additional Mg of emission reduction ($43,000/ton). Therefore, the control level associated with the source-wide floor was considered to represent the maximum reduction achievable for new sources considering cost and other impacts. The final standard for new sources reflects the floor level of control for process vents.

(ii) *Storage vessels.* As described in section V.C.3.b of this preamble, the cost analysis for storage vessels at existing sources was revised after consideration of public comments on the assumptions in the cost analysis. These revisions are reflected in the control cost estimates in table 6. The EPA also revised its estimate of control levels achieved by storage vessels at existing sources. As discussed in section V.C.1 of this preamble, the best controls are IFR or EFR seals without controlled fittings or a 90 percent efficient control device. Because these controls are less economically efficient than the proposed option, which was based on the existing requirements in 40 CFR part 60 subpart Kb, the EPA did not develop a regulatory alternative corresponding to floor control levels for all storage vessels at existing sources. Instead, the regulatory alternatives in table 6 reflect the combination of: (1) The proposed control requirements for vessels, which at the time of proposal were equipped with less efficient controls than the control at the revised floor and (2) the floor control for vessels, which at the time of proposal were equipped with the floor controls. The alternatives were structured in this manner because the EPA could not conclude, based on currently available information, that requiring replacement of existing well-operated and maintained controls that met the control efficiency achieved by sources at the floor was justified. This additional control was estimated to cost about $38,000 for each additional Mg of emission reduction achieved ($34,000/ton).

For small storage vessels at existing sources, the maximum potential reduction of 380 Mg/yr would cost about $22 million/yr, or $58,000 for each additional Mg ($52,000/ton). Due to the relatively high incremental costs and low emission reductions of these alternatives, the EPA believes that the control level for the small storage vessels component of the source-wide floor for existing sources represented the maximum reduction achievable considering cost and other impacts.

As discussed in section III.B.3 of this preamble, the EPA is not taking final action at this time regarding medium vessels at existing sources.

For large storage vessels at existing sources, the EPA considered but rejected changing the control levels from the proposed requirements. The selected control level achieves an additional 3,100 Mg/yr (3,400 tons/yr) emission reduction above Option 1 at an additional cost of $5 million/yr, or about $1,600 for each additional Mg ($1,400/ton). Another consideration was that the selected control requirements are consistent with the requirements in the NSPS for storage vessels (40 CFR part 60, subpart Kb).

The more stringent control option, Option 3, was not selected because although it would achieve roughly an

additional 4,000 Mg/yr (4,400 tons/yr) emission reduction, the additional cost would be substantial ($15 million/yr). This would be equivalent to about $4,000 for each additional Mg of emission reduction ($3,600/ton). The EPA could not conclude, based on currently available information, that the additional emission reduction warranted the additional cost in this case.

The control decisions for storage vessels at new sources were also reexamined. The regulatory alternatives in table 7 reflect minor revisions made to the cost analysis as a result of public comments. After considering the alternatives and the associated impacts, the EPA concluded that the proposed requirements represented the maximum reduction achievable considering costs and other impacts. More stringent control than the proposed levels would not reduce HAP emissions significantly enough to warrant the increase in control costs.

For small and medium vessels at new sources, none of the alternative control options more stringent than the floor components were selected. After considering the emission reductions, costs, and other impacts of the alternatives, the EPA determined the cost to achieve the additional reduction was high given the very small potential emission reductions. Additional control would reduce emissions from medium storage vessels by less than 20 Mg/yr (22 tons/yr) at an additional cost of about $750,000/yr, or $47,000 for each additional Mg. For the small storage vessels segment of the population, further control would result in less than 10 Mg/yr (11 tons/yr) emission reduction at an added cost of about $2.3 million/yr or $336,000 for each additional Mg. Therefore, due to the relatively high incremental costs and low incremental emission reductions, the EPA determined that the control level for the small and medium storage vessels components of the source-wide floor for new sources represented the maximum reduction achievable considering cost and other impacts.

For large storage vessels at new sources, the EPA concluded that the proposed control levels represented the maximum reduction achievable considering costs and other impacts. The control requirement for large storage vessels is estimated to achieve an emission reduction of 1,700 Mg/yr (1,900 tons/yr) of HAP's compared to emissions that would occur without the standard. This represents an 84 percent reduction from this segment of the SOCMI storage vessel population. The annual cost to achieve this reduction is about $2.9 million and the average cost effectiveness of this control is $1,700/Mg ($1,500/ton). More stringent control was not selected because the additional emission reduction of 3 Mg/yr achieved through further control is not significant, given the additional cost ($300,000/yr). This cost was judged to be disproportionately high.

(iii) *Transfer operations.* No changes were made to the estimates of emissions or control costs for transfer operations. The final transfer operations control requirements for both existing and new sources are unchanged from the proposed requirements. More stringent control was not selected because the small additional emission reduction that could be achieved was disproportionate to the cost. The incremental cost effectiveness of the additional emission reduction that could be achieved is $54,000/Mg.

(iv) *Process wastewater.* As discussed in the proposed notice of rulemaking (57 FR 62643–62645), there were a number of issues regarding the emission and control cost estimates that the EPA was evaluating at the time of proposal. The EPA has completed its evaluation of these issues, and section V.G.4 of this preamble summarizes the basis for the final estimates for SOCMI sources subject to the HON. A more detailed description of the analysis and basis for the final estimates is provided in the BID and docket A–90–23. The emission and control cost estimates provided in tables 6 and 7 reflect the revised emission and cost estimates for process wastewater. The revised estimates are approximately 20 percent lower than the estimates presented at proposal (57 FR 62629–62630).

The EPA reexamined the proposed control requirements in light of these changes and public comments on the stringency of the standard. After considering the alternatives and the associated impacts, the EPA concluded that the proposed control criteria for process wastewater streams at existing sources (flow of 10 lpm or greater and VOHAP concentration of 1000 ppmw) represent the maximum reduction achievable considering costs and other impacts. More stringent control than the proposed levels would not reduce HAP emissions significantly enough to warrant the increase in control costs.

Alternative control Options 2 through 4 were not selected because the additional emission reduction achieved through further control was not significant, given the costs and the uncertainty regarding the characterization of SOCMI wastewater systems. Specifically, control of wastewater streams with a flow rate of 5 lpm or greater and a VOHAP concentration of 800 ppmw (Option 2) was estimated to result in about 700 Mg/yr (770 tons/yr) additional reduction at a cost of about $2.9 million/yr. This control option has an incremental cost effectiveness of $4,300/Mg ($3,900 ton). Options 3 and 4 achieve only a small additional emission reduction at incremental cost effectiveness values of $13,400/Mg and $24,000/Mg ($12,100/ton and $21,600/ton). Given the technical uncertainties that exist regarding the representation of SOCMI wastewater streams and industry practices in design of wastewater collection and treatment systems, it is uncertain whether any of the alternative control options considered would result in additional emission reductions.

The regulatory alternatives considered for process wastewater streams at new sources were a combination of the floor control requirement for organic HAP's with volatilities similar to benzene (see table 8 of subpart G for the list of organic HAP's) and control alternatives for the less volatile organic HAP's (see table 9 of subpart G for the list of organic HAP's). Table 7 shows the emission reductions and costs associated with the floor control for the table 8 organic HAP's combined with the emission reduction and costs for control of total VOHAP concentrations of either 1,000 ppmw (Option 2) or 5 ppmw (Option 3). After considering the alternatives and the final emission and control costs, the EPA concluded that the control requirements in Option 2 are achievable. The control requirements for new source wastewater streams would apply to 3 sets of streams: Streams with flow rates of 0.02 lpm or greater and a VOHAP concentration of 10 ppmw or greater of organic HAP's listed in table 8 of subpart G; and streams with a flow rate of 10 lpm or greater and a VOHAP concentration of 1000 ppmw or greater of organic HAP's listed in table 9 of subpart G; and any stream with a VOHAP concentration of 10,000 ppmw or greater of organic HAP's listed in table 9 of subpart G. The control level was selected considering the emission reduction achieved by the alternative control options for HAP emissions and considering the criteria enumerated in Section 112(d) of the Act.

The control requirements of Option 2 are estimated to achieve an emission reduction of 13,500 Mg/yr (14,800 tons/yr) compared to emissions in absence of this rule. This represents an 82 percent reduction from uncontrolled emission rates. The annual cost to achieve this reduction is about $12.8 million. Option 2 is estimated to achieve an emission reduction of about 3,200 Mg/yr (3,500

tons/yr) of HAP emissions above Option 1 (the floor). This control would cost an additional $2.8 million/yr with an average cost-effectiveness value of $948/Mg ($860/ton).

A more stringent level of emission limitation was not selected because control beyond Option 2 is estimated to achieve only a small additional emission reduction. The further control would reduce emissions by an additional 400 Mg/yr (440 tons/yr) of HAP and would cost about $24 million per year, an increase of about $11 million per year over the cost of Option 2. Because the cost is disproportionately large compared to this additional emission reduction, the EPA did not select the more stringent control option for the standard.

b. *Summary of control decisions.* In summary, the selected control provisions are estimated for the well-characterized processes to reduce emissions from existing sources by 312,000 Mg/yr (343,000 tons/yr) and new sources by 61,300 Mg/yr over emissions that would occur in absence of this rule. The cost of this control is estimated to be about $107 million/yr for existing sources and $32,300/yr for new sources. The cost of the monitoring, recordkeeping and reporting requirements associated with the controls is estimated to be $68 million/yr. Tables 6 and 7 also show the emission reduction and cost associated with the maximum reduction that could be achieved. For existing sources, only an additional 10,000 Mg/yr (11,000 tons/yr) emission reduction could result, and this would cost an additional $103 million/yr. Similarly, for new sources, the additional emission reduction is about 400 Mg/yr (670 tons/yr) and this would cost $19 million/yr more than the selected control requirements. The EPA considers the selected standard to be the maximum reduction achievable considering costs and other impacts. [As discussed in previous sections, the EPA is deferring decision on control of medium-sized storage vessels at existing sources. Thus, the costs and emission reductions presented in table 6 may be slightly overstated.]

3. Selection of Requirements

a. *Process vents.* This section discusses the following issues related to the selection of requirements for process vents: 95-percent control vs. 98-percent control for existing sources, 98-percent control for existing sources, 98-percent control for organic HAP's, and the halogenated stream limit.

(i) *95-Percent Control vs. 98-Percent Control for Existing Sources.* For the final rule, the EPA maintains the same position as at proposal that existing control devices must achieve an organic HAP reduction of 98 percent or 20 ppmv (measured as total organic HAP or TOC).

Several commenters suggested that facilities with an existing control device achieving 95 percent reduction be allowed to operate for a period of time (e.g., 10 years) or until a replacement is necessary. One commenter acknowledged that emissions averaging could be used to make up the difference between 95 percent and 98 percent, but that emissions averaging may not be a viable option in all cases, for example at small production facilities.

Available information shows that controls achieving 98 percent reduction for Group 1 process vents are in use at a significant number of existing sources, and are part of the MACT floor. Thus, the standard must require 98-percent reduction. This level of control is required by previous NSPS and several state regulations. For those existing process vent control devices that are achieving less than 98 percent, the EPA has provided emissions averaging as an alternative compliance option. An emission credit from control of another emission point in the facility can be used to offset the emission debit generated by the use of a process vent control device with less than 98 percent efficiency. For small production facilities, the magnitude of emission debit generated by controlling process vents to efficiencies lower than 98 percent should be small. Therefore, emissions averaging should still be a viable option for these facilities. Facilities may also have other options for control of Group 1 process vents. In some cases, addition of supplemental fuel and modification of control device operating conditions can allow existing devices to achieve 98 percent. In other cases, process modifications to raise the TRE to greater than 1.0 may also be a feasible means of compliance.

(ii) *98-Percent control for organic HAP.* For the final rule, the EPA maintains the same position as at proposal that the reference control technology (RCT) of combustion can achieve at least 98-percent reduction for total organic HAP. The 98-percent reduction level applies to both process vents and transfer operations.

One commenter said that the EPA had not demonstrated that RCT achieves a 98-percent reduction for each HAP and that the efficiency appeared to be based on VOC control levels for previous NSPS. However, several commenters said that the reduction was achievable or that the RCT can provide greater than 98-percent reduction and that at least 99.9-percent reduction should be required.

The EPA would first like to reiterate that control by thermal oxidation is not specifically required by the HON process vents provisions. Thermal oxidation is simply the reference control technology whose performance level must be met by any controls intended to comply with the HON process vents provisions. The commenter correctly states that 98-percent control is based on studies used to determine VOC control levels for past NSPS and has not been proven by testing for each individual HAP. These two issues do not weaken the EPA's decision for 98-percent control of HAP's for the following reasons: (1) Nearly all HAP's covered by this rule are also VOC's; and (2) HON compliance is not based upon control of each individual HAP. Compliance with the HON may be based upon measurements of either total organic HAP or TOC. Clearly, a control device might have a higher level of control for one particular HAP than for another, but compliance is based on the overall reduction of total organic HAP or TOC.

The 98-percent level of control was chosen because it has been shown to be uniformly achievable by well-designed and operated combustion devices. As stated earlier, test data to demonstrate efficiency in a thermal incinerator are not available for each individual HAP. However, the efficiency conclusions for a thermal incinerator (98-percent reduction or an outlet concentration of 20 ppmv) were based on test data using the most difficult VOC compounds to combust, which included several organic HAP's. Therefore, it was concluded that the 98-percent reduction can be achieved for total organic HAP for all well-designed and operated systems. The EPA recognized that thermal incineration may achieve greater than 98-percent reduction in some cases, but test data shows that levels greater than 98 percent may not be uniformly achievable under all operating conditions.

(iii) *Halogenated streams limit.* For the final rule, the EPA has determined that a mass limit is more appropriate for identifying halogen streams that require control of acid gases. The mass limit format will result in a more efficient control approach for acid gas formation and will provide greater flexibility for compliance. This has been changed from proposal where a halogen stream was defined by a concentration limit.

Several commenters requested that a mass limit be used in lieu of a concentration for determining if a

process vent stream was halogenated or nonhalogenated so multiple process vent streams could be controlled in a common header system. Several commenters also requested a mass limit so flares could be used to control vent streams which contained a small mass rate of halogen compounds. Some commenters cited an existing state regulation in Texas and RCRA rules that were based on a mass limit. Other commenters objected to the requirement to use a scrubber following a combustor to achieve the specified halogen reduction. They noted that other control device combinations, such as a scrubber before a flare, could achieve the same results for some process vent streams.

The EPA agrees with the commenters, and a mass limit for defining halogen streams was incorporated in the final rule. The mass limit will provide greater flexibility for compliance. The data used to evaluate the proposed concentration limit were used in this reassessment to determine a mass limit for promulgation. This change is consistent with the demonstrated scrubber performance and not a change in the intended stringency of the rule. The rule has been revised to define a halogenated stream as a process vent stream containing 1.0 lb/hr or greater of halogen atoms. If Group 1 halogenated streams are combusted, the rule requires a 99-percent reduction of total halogen and hydrogen halides or a reduction of halogen and hydrogen halide emissions to less than 1.0 lb/hr. If halogen controls were installed prior to proposal, these are required to achieve 95-percent reduction or reduce emissions to 1.0 lb/hr. A commenter noted that State rules require 95-percent control. The EPA did not include costs for replacing existing scrubbers that achieve between 95- and 99-percent removal in the national impact estimates, and it would not be reasonable to require replacement of existing scrubbers given the small additional percent emission reduction that would be achieved.

The rule has been reworded so that only the emission limit is specified rather than also specifying that a scrubber must be used after a combustor. The rule has also been reworded to allow owners or operators flexibility to reduce halogen atom mass flow rate of a Group 1 process vent stream to less than 1.0 lb/hr before combustion (thereby becoming nonhalogenated) and use any type of organics control device (including a flare) to combust the stream.

b. *Storage Vessels*—(i) *Vapor pressure criteria for large storage vessels*—The final rule maintains the same applicability criteria (i.e., vapor pressure and storage vessel size) that were specified in the proposed rule as MACT for large storage vessels located at both new and existing sources.

Two commenters requested that the vapor pressure criterion for determination of Group 1 status of large storage vessels be increased (i.e., reduced in stringency). The commenters objected to the EPA's selection of options above the floor because, in the commenters' view, the options were not cost-effective. The commenters asserted that the EPA's cost analysis had underestimated the actual cost of compliance by underestimating the following costs:

(1) The cost of cleaning and degassing storage vessels;

(2) The capital cost for IFR's;

(3) The installation cost for retrofitting fixed roof tanks with IFR's; and

(4) The cost for installing a condenser on a fixed roof storage vessel.

Regarding the cost of cleaning and degassing storage vessels, the commenters contended that the EPA's cost estimate was low because: (1) It did not include the cost of hazardous waste disposal; and (2) it was based on the cost of cleaning and degassing tanks containing gasoline and light petroleum products. Regarding the cost of IFR's, the commenters contended that the EPA's capital costs for the installation of IFR's were low for two reasons: (1) The EPA's estimated capital costs, which are based on vendor quotes, were lower than the vendor quote obtained by the commenter; and (2) in general, vendor quotes underestimate the installation costs for IFR's because they do not account for additional tank repairs that are discovered after the tank has been emptied and cleaned for retrofit. Regarding the cost of installing a condenser on a fixed roof storage vessel, one commenter contended that the EPA's cost did not incorporate additional start-up costs, such as testing the operation of a new condenser after installation.

The EPA determined that the costing equation used in the proposal analysis for cleaning and degassing should be revised to include the cost of hazardous sludge disposal. These costs have been incorporated into the impacts analysis for the final rule. Regarding the EPA's costing equation for cleaning and degassing storage vessels (including hazardous sludge disposal), the EPA had its equation reviewed prior to proposal by companies that perform cleaning and degassing for the chemical industry. The EPA concluded that the equation is representative of the cost for the chemical industry. The commenters did not provide adequate detail to demonstrate that the cost for the chemical industry would generally be higher than EPA's estimate.

The EPA determined that the commenters' capital cost estimates for internal floating roofs are higher than EPA's estimates because the commenters were addressing the capital cost of fiberglass internal floating roofs. The EPA's analysis was based on aluminum internal floating roofs, which are much less expensive than fiberglass IFR's. However, if at baseline a fixed roof storage vessel stores a liquid that is not compatible with an aluminum IFR, the EPA estimated the cost of installing a condenser, rather than a fiberglass IFR, for the fixed roof vessel. The EPA's cost of a refrigerated condenser is, on average, equivalent to the cost for a fiberglass IFR.

The EPA's cost equation for installing an IFR on a fixed roof storage vessel, which is based on vendor quotes, already accounts for those tank changes that are directly associated with the installation of the IFR (i.e., the cost of cutting openings and vents). The EPA does not consider the additional tank changes suggested by the commenters (e.g., upgrading the column supports) to be directly related to the retrofit or to be applicable to the average retrofit for compliance with the rule. Therefore, the EPA will continue to utilize its vendor quotes for installation costs for IFR's.

The EPA determined that it had underestimated the start-up costs for installing condensers on fixed roof storage vessels (e.g., the cost of testing a new condenser to ensure that it achieves the required temperature). In the proposal analysis, the EPA had used the costing factor provided in the EPA's OCCM: *Chapter 8—Refrigerated Condensers* published in November 1991, for installing a packaged condenser system. This factor did not account for the start-up cost mentioned by the commenters. The EPA has revised its installation cost equation for condensers to include the OCCM's costing equation for installing a nonpackaged condenser system. This revised equation accounts for the additional start-up costs for installing a condenser.

(ii) *Performance of existing control equipment on storage vessels at existing sources.* For the final rule, the EPA has revised its assessment of the performance achievable by the control equipment for storage vessels at existing sources. Refer to section V.C.2. of this preamble for further discussion of how this issue relates to the MACT floor for existing sources.

Two commenters recommended changing the RCT requirement for

condensers to specify 90-percent control for storage vessels at existing sources. The commenters contended that most existing refrigerated condensers on storage vessels at existing sources can achieve only 90- to 93-percent control and would therefore have to be replaced with new condensers that could achieve 95-percent control.

The EPA has concluded that most existing refrigerated condensers serving storage vessels at existing sources are achieving 90- to 93-percent control. At proposal, the EPA had assumed that these existing condensers could be adjusted to achieve 95-percent control through changes in coolant temperature. However, after reevaluating the available information, the EPA has concluded that not all of the existing condensers achieving 90-percent control can be adjusted to achieve 95-percent control. Additionally, the EPA has determined that IFR's controlling emissions from fixed roof storage vessels at existing sources do not have controlled fittings.

Therefore, the final rule establishes MACT for storage vessels at existing sources as 95-percent emissions reduction, except where control devices achieve 90- to 95-percent emissions reduction. The final rule does not require upgrade of an existing control device, provided the device was installed on a storage vessel on or before December 31, 1992 and is designed to reduce inlet emissions of total organic HAP's by at least 90 percent. Refer to section V.C.2. of this preamble for further discussion of how this issue relates to the MACT floor for existing sources.

c. *Transfer operations.* The analysis of the MACT floor level of control and the control requirement for transfer operations did not change for the final rule. Owners or operators of transfer racks that load 650,000 l/yr or more of organic HAP's with a rack-weighted partial pressure of 10.3 Kpa or greater are required to control emissions by 98-percent reduction, use a flare, or use vapor balancing. Facilities using vapor balancing can also choose to exclude the rack being vapor balanced from compliance with the transfer provisions.

Some commenters supported the stringency level set for transfer operations, including the definitions of Group 1 and Group 2 transfer racks, the level of control (i.e., 98 percent), and the allowance of vapor balancing. However, one commenter contended that the EPA did not identify the best-controlled transfer racks. The commenter asserted that the EPA identified vapor balancing as a superior control technology since transfer racks using this technology are exempt, but the EPA did not identify vapor balancing as the floor or MACT.

Based on the data available for the floor analysis, the EPA concluded that the average of the top 12 percent of the transfer racks achieve 98-percent reduction. The 98-percent value was based on racks subject to the Benzene Waste NESHAP. Using vapor balancing with vapor collection on a transfer rack exempts the facility from the HON transfer provisions because vapor balancing reduces emissions by 98 percent or better, based on a technical analysis. However, data were not available to identify if vapor balancing was being used on a sufficient proportion of SOCMI transfer operations to constitute a floor level of control.

d. *Process wastewater*—(i) *Lists of hazardous air pollutants.* Several commenters requested clarification of the difference in the lists of organic HAP's: (1) In the Act; (2) in table 2 of subpart F; and (3) in tables 8 and 9 of subpart G. The EPA clarifies that the Act includes a list of 189 HAP's from which the EPA has identified 112 organic HAP's that are emitted from SOCMI processes (table 2 of subpart F). From the list of 112 organic HAP's in table 2 of subpart F, the EPA has identified 76 organic HAP's that exist in water and that are most likely to be emitted from wastewater. These 76 organic compounds are listed in table 9 of subpart G. Table 8 of subpart G is a subset of table 9 and includes organic HAP's that volatilize from wastewater at a rate approximately equal to or greater than benzene.

(ii) *Definition of "wastewater."* In the proposed rule, the definition of "wastewater" contained several terms including process fluid, process wastewater, maintenance wastewater, and maintenance-turnaround wastewater. These terms were defined within the proposed definition of "wastewater."

In the final rule, the EPA has revised the definition of wastewater in § 63.101 of subpart F to clarify the scope of the EPA's original intent. As part of this clarification, the term "process fluid" has been removed from the definition of "wastewater," because commenters were confused that process fluids were considered to be wastewater before they left the process unit equipment and entered the individual drain system. The EPA clarifies that any fluid must exit the process unit equipment before it may be a wastewater stream subject to the HON. The term "maintenance-turnaround wastewater" also has been deleted from the definition of "wastewater" because all maintenance-related wastewater is now included in the definition of "maintenance wastewater." In the final rule, the definitions of both "wastewater" and "maintenance wastewater" are in § 63.101 of subpart F. The revised definition of "wastewater" in the final rule reads as follows:

> *Wastewater* means organic hazardous air pollutant-containing water, raw material, intermediate, product, by-product, co-product, or material that exits equipment in a chemical manufacturing process unit that meets all applicability criteria specified in § 63.100 (b)(1) through (b)(3) of subpart F and either: (1) Contains at least 5 ppmw total volatile organic hazardous air pollutants and has a flow rate of 0.02 lpm or greater; or (2) contains at least 10,000 ppmw total volatile organic hazardous air pollutants at any flow rate. Wastewater includes both process wastewater and maintenance wastewater.

Numerous comments were received on the definition of "wastewater" in section 63.101 of subpart F. All responses to these comments are located in § 4.1.2 of BID volume 2B. Commenters expressed concern about the following issues:

(1) The EPA should specify a percentage of water in order for a stream to be considered a wastewater subject to the HON;

(2) The definition of "wastewater" should not include "process fluid," "product," and "intermediate stream"; and

(3) The EPA should narrow the scope of the wastewater definition because products that are within a process unit should not be regulated.

The EPA has not specified a percentage of water that must be present in a wastewater stream in order for the stream to be a wastewater stream. The EPA intends for the HON to regulate as wastewater any stream that: (1) Exits process unit equipment; and (2) meets the concentration and flow rate criteria that are specified in the definition of wastewater. The EPA has determined that such wastewater streams have a significant potential for emissions and should therefore be regulated.

Because the EPA intends to regulate wastewater streams that are generated when organics exit process unit equipment, the EPA continues to include the terms "product" and "intermediate" in the definition of "wastewater." If an owner or operator chooses to discharge from process unit equipment either a product or intermediate that also meets the definition of a "wastewater" (i.e., flow rate and VOHAP concentration), the EPA wants to ensure that emissions from such wastewater streams are controlled. If a product or intermediate stream has not exited the process unit

equipment, then such streams cannot meet the definition of "wastewater" in § 63.101 of subpart F, and therefore are not subject to the wastewater provisions in the HON. The EPA has deleted the term "process fluids" from the definition of "wastewater" because commenters stated that process fluids also could mean fluids within a process unit.

(iii) *Basis of standard.* In the final rule, the EPA retains steam stripping as the RCT. Numerous commenters opposed basing control of HAP emissions from wastewater on steam stripping and recommended biological treatment as the RCT for the following reasons:

(1) The most common type of wastewater treatment currently employed by existing SOCMI sources is biological treatment;

(2) Many of the HAP's listed in table 9 of subpart G are not volatile and cannot be removed by steam stripping, but can be biologically degraded; and

(3) The inclusion of biological treatment as an RCT would be consistent with the Benzene Waste NESHAP requirements.

The EPA selected steam stripping as the RCT because it is the most universally applicable treatment technology for removing volatile organic HAP's from wastewater. The EPA is aware that many SOCMI facilities use biological treatment units for wastewater treatment. However, in general, compounds that are not easily steam stripped, but are readily biodegraded, are not being regulated by the HON. The HON regulates volatile organic HAP's and volatile organic HAP's can be treated by steam stripping. Not all of the regulated compounds are significantly biodegradable, because volatility does not correlate with biodegradation efficiency, as it does with steam stripping efficiency.

When reviewing biological treatment as the potential RCT, the EPA determined that variability in performance is significant. For example, the amount of emissions reduction achieved by biological treatment, even for biologically degradable compounds, will vary among SOCMI sources due to ranges in operating and design parameters, such as the biological degradation rate, surface area of the unit, aeration rate, hydraulic residence time, and the active biomass concentration. A well-operated and well-maintained biological treatment system can achieve reductions as high as 99-percent HAP destruction. However, the variability in performance makes it difficult to quantify a required emission reduction for the purpose of setting a standard. Emission reductions for biological treatment systems can only be determined on a site-specific basis. The EPA emphasizes that SOCMI sources using biological treatment can comply with the rule by consistently achieving the required emission reduction.

The EPA has reviewed the Benzene Waste NESHAP and has determined that the equipment standard for the use of a biological treatment unit in the Benzene Waste NESHAP would not achieve comparable emission control for all 76 HAP's regulated by the HON wastewater provisions. This option may be used in combination with other treatment options, but all wastewater streams must be conveyed or handled in individual drain systems or waste management units that limit HAP emissions to the atmosphere as required by §§ 63.133 through 63.137 of subpart G. The only wastewater streams that may be conveyed or handled in uncontrolled individual drain systems or waste management units are:

(1) Group 1 wastewater streams that have already been treated and have achieved compliance with one of the HON treatment options in § 63.138 of subpart G; and

(2) Group 2 wastewater streams. As required in the other wastewater compliance options, facilities using this option must comply with the emission suppression requirements in §§ 63.133 through 63.137 for all wastewater streams except those wastewater streams that are already in compliance. In the final rule, the EPA has included an additional compliance option for the use of biological treatment. Under this treatment option, an owner or operator is required to control all wastewater streams in accordance with §§ 63.133 through 63.137 and achieve a 95-percent reduction in total HAP mass for all wastewater that is treated in the biological treatment system.

(iv) *Clarification on the Use of the Terms "HAP" and "VOHAP".* In response to comments, the EPA clarifies the use of the terms "VOHAP concentration" and "HAP" to reflect the proper use of the terms throughout the preamble, regulation, and BID documents. The terms "volatile organic hazardous air pollutant concentration" or "VOHAP concentration" mean the concentration of an individually-speciated organic HAP in a wastewater stream or a residual as measured by Method 305. The term "VOHAP concentration" does not refer to the lists of organic HAP's in tables 8 and 9 of subpart G. The wastewater provisions of the HON regulate emissions from wastewater of those organic HAP's listed in table 8 for new sources and in table 9 for new and existing sources. The applicability of the requirements in the HON to wastewater streams is based on the VOHAP concentration of the HAP's present in the wastewater stream. In addition to using Method 305, the VOHAP concentration of a compound can be calculated by multiplying the HAP concentration of the compound by the compound-specific fraction measured (Fm) value listed in table 34 of subpart G.

(v) *Point of Generation.* In the final rule, the conceptual basis for the point of generation has not changed from the proposed rule. However, in consideration of the comments, the EPA has clarified the definition. The point of generation is located where process wastewater exits the chemical manufacturing process unit equipment.

Numerous commenters requested clarification on both the proposed definition of "point of generation" and the location where sampling for the flow rate and VOHAP concentration were permissible. The following comments were submitted:

(1) The EPA should not define the point of generation as "prior to mixing";

(2) The point of generation should be after the last recovery device and before discharge to a wastewater treatment or disposal system;

(3) The EPA should delete or explain the use of the term "integral to the process unit";

(4) The EPA should clarify that the point of generation is at the point where material exits the process unit and enters the individual drain system;

(5) To be consistent with RCRA, the point of generation should be the first point downstream of the process unit where emissions can enter the atmosphere; and

(6) Sampling should be allowed downstream of the point of generation in situations where the point of generation is either within a closed-pipe system or sampling could be dangerous to workers.

The basic foundation of the proposed provisions for process wastewater is to identify wastewater streams for control and treatment based on VOHAP concentration and flow rate at their point of generation, which is where the wastewater exits chemical manufacturing process unit equipment. This approach focuses control efforts on the wastewater streams with the highest HAP loadings. If dilution prior to a control determination were allowed, some wastewater streams that would have required control based on the VOHAP concentration criteria would not meet the VOHAP concentration

criteria at the point of generation for control and would not be treated. Thus, the EPA has retained the concept of "prior to mixing" to avoid the dilution of wastewater streams. However, the EPA allows the owner or operator to make corrections for changes in VOHAP concentration and flow rate using engineering calculations.

In consideration of commenter concerns, the final rule clarifies the EPA's original intent in § 63.144 of subpart G to reduce the sampling and analysis burden for industry while still meeting the EPA's objectives. The point of generation remains a single location in the final rule. However, sampling to determine the characteristics of a wastewater stream (i.e., VOHAP concentration and flow rate) may be accomplished either at the point of generation or downstream of the point of generation. If wastewater characteristics are determined downstream of the point of generation, the owner or operator must correct for:

(1) HAP losses due to volatilization;

(2) Reduction of VOHAP concentration or changes in flow rate by mixing with other water or wastewater; or

(3) Reduction of VOHAP concentration or flow rate by treatment or handling to destroy or remove HAP's.

The final rule also incorporates the concept of designating either a single wastewater stream or a mixture of wastewater streams as a Group 1 wastewater stream. This option allows the facility owner or operator to declare that at a designated location downstream of the point(s) of generation, all wastewater streams at this location and upstream are Group 1 and are therefore controlled in accordance with §§ 63.133 through 63.137. The owner or operator is required to meet all requirements for Group 1 wastewater streams, both upstream and downstream for the designated Group 1 wastewater stream. The advantages to using this option are that no sampling is necessary to make a Group 1/Group 2 determination and a facility can reduce the number of locations where wastewater stream characteristics are determined.

By adding the option to designate Group 1 wastewater streams and clarifying the option to determine wastewater characteristics downstream of the point of generation, the EPA has addressed commenter concerns about sampling in closed piping. While the concept of designating Group 1 wastewater streams does not allow any wastewater streams that would be Group 1 at the point of generation to become Group 2 wastewater streams, it does provide an avenue for fewer point of generation identifications than the proposed rule because sampling does not need to be done at the actual point of generation.

The EPA encourages owners or operators to sample downstream of the point of generation if sampling from the point of generation could be dangerous to workers or if the point of generation is within a closed-pipe system. In fact, the proposed rule allowed sampling downstream of the point of generation. Because numerous comments indicated that the proposed rule was not clear about where to sample and make Group 1/Group 2 determinations, the final rule has been clarified. The final provisions now specify that Group 1/Group 2 determinations can be made downstream of the point of generation using sampling, process knowledge, or bench-scale or pilot-scale test data.

e. *Cooling water.* In the final rule, the provisions for monitoring cooling tower and once-through cooling water systems have been modified in response to commenter concerns. In the final rule, the EPA clarifies the definition of heat exchange system (i.e., both cooling towers and once-through cooling systems). A leak in a heat exchange system is no longer identified by a statistically significant increase of 1 percent at a 95-percent confidence level but is identified only by a statistically significant increase of at least 1 ppm at a 95-percent confidence level. In the final rule, the EPA clarifies that sampling for leak detection must be conducted at the inlet and outlet of the cooling tower, not the inlet and outlet of each heat exchanger. For the final rule, a once-through cooling system will not be subject to the HON if it has an NPDES permit with a discharge limit of less than 1 ppm. An NPDES permit with a discharge limit of less than 1 ppm guarantees that the concentration differential across a once-through cooling water system is less than 1 ppm. Furthermore, the EPA realizes that routing the discharge from a steam jet ejector to a cooling tower may cause a concentration differential of 1 ppm across a heat exchange system. Therefore, in the final rule, the EPA includes re-routing the discharge from a steam jet ejector as a means of repairing a leak in a heat exchange system.

In response to comments requesting clarification about which HAP's were regulated, the EPA clarifies that water from cooling towers are regulated for the organic HAP's listed in table 2 of subpart F except for four water-reactive HAP's and once-through cooling systems are regulated only for the HAP's listed in table 9 of subpart G.

Several commenters were concerned that 15 days was not ample time to repair a leak in a heat exchange system. In response to comments, the EPA has extended the delay of repair for leaks in a heat exchange system from 15 days in the proposed rule to 45 days in the final rule. The final rule allows delay of repair beyond 45 days for situations where the owner or operator can show that emissions from shutdown of a process would be greater than emissions from the leak.

Several commenters submitted comments stating that the EPA: (1) Correct or clarify the original intent to require sampling across the cooling tower, not across each heat exchanger; (2) provide an exemption for heat exchange systems with low flows; (3) clarify which HAP emissions are regulated from cooling towers and once-through cooling water systems; and (4) clearly state which parameters are acceptable for monitoring. Numerous commenters suggested alternate ways of testing for a leak in a heat exchange system rather than testing for speciated HAP's, including testing for TOC or total VOHAP concentration, or using surrogate parameters to determine a leak. Having reviewed several sampling parameters and analytical methods, the EPA concludes that: (1) Sampling for total VOC, total HAP, TOC for semi-volatile compounds, or speciated HAP concentration is allowable; and (2) any method listed in 40 CFR part 136 or any other method approved by the Administrator may be used as long as the same method is used on both the inlet and outlet. The EPA concludes that monitoring of surrogate parameters is not sufficient to determine the magnitude of the leak in the cooling tower or once-through cooling system. After analyzing the amount of HAP's that could be emitted if the sampling frequency for leak detection were extended beyond quarterly, the EPA continues to require quarterly monitoring. The rule does not provide an exemption for heat exchange systems with a low flow rate (e.g., 1,000 to 2,000 gpm) because the emissions from such systems are significant if a leak is detected. For example, if a leak at 2,000 gpm is detected after 3 months of leaking, 1.1 tons of HAP emissions could have already been emitted.

f. *Maintenance wastewater.* In the final rule, the EPA requires that all maintenance-related wastewater be managed in the same manner. The definition of "maintenance-turnaround wastewater" has been eliminated from the final rule and incorporated into the definition of "maintenance wastewater," which now encompasses

all maintenance-related wastewater streams that are subject to the HON. The term "maintenance wastewater" in the proposed rule referred to only routine maintenance wastewater.

Also, in the final rule, all maintenance-related wastewater streams are subject to the same requirements under the HON. Unlike the proposed rule, the final rule does not require that routine maintenance wastewater be managed in a controlled drain system. In the final rule, the facility's start-up, shutdown, and malfunction plan must include a description of procedures that will ensure that all maintenance wastewater is properly managed and HAP emissions are controlled. These requirements are consistent with what was proposed for maintenance-turnaround wastewater.

The EPA received numerous comments opposing the proposed maintenance wastewater provisions, including: (1) Maintenance-related wastewaters are not a significant source of HAP emissions; (2) the control of maintenance wastewater cannot be justified; and (3) there should be a Group 1/Group 2 determination or a *de minimis* level to determine which maintenance wastewaters are subject to the regulation. Several commenters expressed confusion about the proposed requirements for routine maintenance wastewater and whether or not these maintenance wastewaters were required to be collected in a closed or controlled drain system. Numerous commenters suggested that the requirements for routine maintenance wastewater and maintenance-turnaround wastewater be the same.

In the proposed rule, the EPA's original intent was to require good work practices and reduce the burden of implementing the rule by deleting the requirement that the owner or operator must determine if emissions from maintenance wastewater have exceeded a designated *de minimis* level. Based on comments received, all maintenance-related wastewater is now subject to the same requirements. The EPA is eliminating the provisions which require that routine maintenance wastewater be managed in a controlled drain system. The EPA is not including a Group 1/Group 2 or *de minimis* level criteria for maintenance wastewater because of the difficulty in determining the concentration and flow rate and the difficulty of enforcement.

D. Emissions Averaging

This section of the preamble presents the rationale for the emissions averaging provisions (described in section 63.150 of subpart G) and the alternative policies that were considered in developing these provisions.

As part of the EPA's general policy of encouraging the use of flexible compliance approaches where they can be properly monitored and enforced, the Administrator is allowing sources the option of using emissions averaging to comply with subpart G. Under particular circumstances, emissions averaging can provide sources the flexibility to comply in the least costly manner while still maintaining a regulation that is workable and enforceable. The EPA's goal in crafting the emissions averaging provisions in the final rule has been to make emissions averaging available to sources faced with some emission points that are particularly difficult or costly to control. At the same time, the EPA has simplified and streamlined the emissions averaging provisions in order to ease the enforcement burden on implementing agencies.

The rationale for the specific provisions of the emissions averaging policy is detailed below. In general, the basic structure of the HON emissions averaging policy remains much the same as at proposal. Fundamental elements such as the credit/debit system, kinds of emission points allowed in averages, reference control efficiency provisions, provisions for approval of new devices, and an annual compliance period remain unchanged.

However, some provisions have been altered or added in order to sharpen the focus of emissions averaging, ease implementation and administration, and ensure at least the same air quality benefit as point-by-point compliance. For example, the number of emission points that can be included in an average has been limited; banking of credits has been disallowed; actions taken prior to November 15, 1990 or in response to another State or Federal requirement will not be credited; averaging will not be allowed at new sources; and a discount factor of 10 percent will be applied to credits generated by control other than pollution prevention measures. In addition, sources must demonstrate, to the implementing agency's satisfaction, that a proposed averaging plan will not cause an increase in risk or hazard relative to point-by-point controls. All of these changes are discussed in greater detail in the following sections.

The EPA included this limited emissions averaging system in the HON to provide sources with flexibility on ways to comply with this standard. The EPA will continue in future standards to seek ways to provide sources with flexibility, while maintaining sources' accountability for meeting health and environmental goals. However, the HON emissions averaging system, and its provisions for interpollutant trading, should not be viewed as setting a precedent for future MACT standards. Moreover, emissions averaging is only one way to provide sources with flexibility. The EPA will determine the proper amount and type of flexibility based on considerations specific to each standard.

1. Legal Basis and Scope of Emissions Averaging

a. *Legal basis of emissions averaging.* For the final rule, the EPA maintains the position that the Administrator has legal authority to permit sources to comply with the requirements of section 112(d) through emissions averaging.

Several commenters agreed that the legal basis for emissions averaging is sound, citing justifications such as:

(1) Emissions averaging is consistent with section 112(d) of the Act because cost must be considered in setting MACT standards;

(2) Section 112(h) requires that a numerical emission limit be promulgated where feasible, leaving it to individual sources to meet the limit; and

(3) Averaging will achieve equivalent or greater emission reductions than the rule without averaging.

A number of commenters contended that emissions averaging violates the law. Some did not consider it a permissible application of MACT. Others argued that because Group 1 points are left uncontrolled or undercontrolled under averaging, the rule would fail to achieve the maximum achievable emission reductions required under section 112(d). More commenters considered it doubtful that emissions averaging can achieve the same emission reductions as the rule without averaging, and claimed therefore that it does not represent an equivalent compliance option. Some commenters argued that the EPA does not have statutory authority to allow emissions averaging, and that because Congress specified the use of offsets in section 112(g) and not in section 112(d), it is unlikely that averaging was intended for MACT standards.

Following a thorough review of all the comments received on this issue, the EPA has concluded that emissions averaging is legally permissible under section 112.

As stated at proposal, section 112(d) requires standards to be established for each category or subcategory of sources listed under section 112(c). Such standards shall then be applicable to

sources within those categories or subcategories. The statute does not define "source category," nor does it impose precise limits on the Administrator's discretion to define "source." In this case, the Administrator has exercised that discretion to define "source" somewhat broadly to include all emission points relating to SOCMI production at a facility.

In setting the standard for a category or subcategory, the Administrator is required to determine a floor for the entire category or subcategory, and then set a standard applicable to each source within that category that is at least as stringent as the floor and requires the maximum achievable emission reductions considering certain factors. In determining whether the standard should be more stringent than the floor and by how much, the Administrator is to consider, among other factors, the cost of achieving the additional emission reductions. The statute does not limit how the standard is to be set beyond requiring that it be applicable to all sources in a category, be written as a numerical limit wherever feasible, and be at least as stringent as the floor. Therefore, the relevant statutory language is broad enough to permit the Administrator to exercise discretion to allow sources to meet MACT through the use of emissions averaging provided the standard applies to every source in the category, averaging does not cross source boundaries, and the standard is no less stringent than the floor. In this rule, the Administrator has created an averaging system that stays within those legal parameters. The source has been defined to include all SOCMI processes within a major source, and a standard has been written to apply to all sources in the category as provided by sections 112(d) (1) and (2). This standard is no less stringent than the floor for the category, calculated in accordance with section 112(d)(3), and takes cost and other relevant factors into consideration. The standard applies only to sources in the category, applies to all such sources, is written as a numerical limit where feasible, and averaging can only be conducted within the confines of each individual source, thus ensuring that the standard, as applied to each source, is no less stringent than the floor. In addition, a discount factor is applied when averaging is used, which further ensures that averaging will be at least as stringent as the rule without averaging.

Some commenters on the supplemental notice argued that the provisions for limiting the number of points, requiring a hazard or risk determination, and allowing States to exclude emissions averaging without having to follow the section 112(l) rule approval processes are inconsistent with E.O. 12866 (September 30, 1993). The commenters claimed that the Executive Order directs agencies to: (1) Develop regulations that do not impose unacceptable or unreasonable costs; and (2) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior. The EPA maintains that the rule adheres to the spirit of the Executive Order throughout, both by providing the most flexible emissions averaging program that is still enforceable and by allowing numerous different control options for each kind of emission point under point-by-point compliance. These two aspects of the rule provide flexibility to reduce emissions in the most cost-effective manner as encouraged in the Executive Order.

b. *Emission points allowed in averages.* Emissions averaging is allowed across all the emission points, except equipment leaks, within a single existing source, as "source" is defined for the SOCMI source category. As such, emissions from the following kinds of emission points can be averaged: process vents, wastewater operations, storage vessels, and transfer operations. Averaging is allowed across these four kinds of emission points in order to provide as much flexibility as possible while maintaining an enforceable standard.

No commenters explicitly expressed support for the selection of these particular kinds of emission points to be included in emissions averages. However, the EPA does not interpret this to mean that there was no support. Rather, it is reasonable to assume that commenters who supported emissions averaging in general, but did not explicitly comment on the kinds of emission points available for averaging, supported allowing averaging across all the kinds of points included in the proposal.

While some commenters supported the exclusion of equipment leaks from emissions averaging, a number of commenters expressed direct support for allowing equipment leaks in emissions averages. They argued that it is already possible to quantify emissions from equipment leaks sufficiently and suggested ways to establish baseline levels and to overcontrol equipment leaks for credit. However, the EPA has determined that, although methods are available for quantifying emissions from equipment leaks, equipment leaks cannot be included in emissions averages at this time because: (1) The negotiated standard for equipment leaks has no fixed performance level; and (2) neither a reference control efficiency nor allowable emission levels can be established for leaks. Without a reference control efficiency or allowable emissions, debits and credits cannot be established.

A few commenters recommended excluding wastewater from averaging as well, because they considered accurate or reliable estimation of wastewater emissions unlikely or impractical. However, the EPA considers the methods for estimating wastewater emissions to be sufficient for averaging. The reliability of estimations is assured because all sources will be using the same emissions estimation approach. The calculation procedures are specified in § 63.150 of subpart G. Also, the final rule clarifies that wastewater streams treated in biological treatment units cannot be used in averages, which was one of the primary concerns raised by commenters.

Several commenters also opposed allowing averaging across different kinds of emission points, and recommended that averaging should only be allowed among the same kinds of points. Some of these commenters were concerned that the four kinds of emission points have such different emission characteristics that averaging across the points could alter the dispersion of emissions and thus, their associated impacts. Other commenters were concerned that differences in emission estimation techniques across different kinds of points could be used to calculate credits that may not reflect actual emission reductions.

The EPA agrees that characteristics of emission points may affect the dispersion of emissions and associated impacts. However, these differences exist under point-by-point compliance as well, and it is equally likely that emissions averaging could decrease impacts as well as increase them. Similarly, the EPA acknowledges the potential for significant complexity in averaging across different kinds of emission points. In order to prevent inappropriate compliance scenarios, the emissions averaging program relies upon consistent emission estimation techniques and data from actual operations. In addition, implementing agencies may require sources to consider differences in dispersion and associated impacts as part of the risk review that is now required when approving emissions averages.

c. *Averaging at new sources.* Emissions averaging is not allowed as a compliance option for new sources. The decision to limit emissions averaging to

only existing sources represents a departure from the proposal, which envisaged emissions averaging at both existing and new sources.

While one commenter specifically supported allowing emissions averaging at new sources, a number of commenters specifically opposed allowing averaging at new sources. The EPA concurs with those commenters who maintained that new sources have historically been held to a stricter standard than existing sources, because it is most cost-effective to integrate state-of-the-art controls into equipment design and to install the technology during construction of new sources. One reason for allowing averaging is to permit existing sources flexibility to achieve compliance at diverse points with varying degrees of control already in place in the most economically and technically reasonable fashion. This concern does not apply to new sources which can be designed and constructed with compliance in mind. In addition, as averaging must be limited to an individual source, there could not be averaging between new and existing sources, even under the proposal. Therefore, not allowing averaging at new sources does not affect an existing sources' ability to use averaging.

d. *Broader Scope of Emissions Averaging.* In the final rule, the EPA is retaining the position taken at proposal that emissions averaging will be permitted only among emission points that are within the SOCMI source category. The EPA requested comment at proposal on a broader averaging alternative that would have allowed averaging of emissions from any point located within a contiguous facility, including both SOCMI and non-SOCMI emission points. Having considered all of the arguments put forth by commenters, both supporting and opposing broader averaging, the EPA has concluded that emissions averaging on a broader scope cannot be legally justified.

The fundamental problem with the broader averaging approach is that it allows averaging among multiple sources. The HON has defined the source, for the purposes of this standard, as the collection of SOCMI emission points within a major source. Many major sources containing such points will also contain other points not covered by this standard but to be covered by later, different MACT standards. Each of these standards will have a separate floor, and the statute requires that each standard be no less stringent than its floor. If averaging were allowed between sources covered by two separate standards, it is likely that one of the sources involved in the average would be emitting HAP's at a level that violates the standard applicable to it. Thus, averaging between multiple sources in different categories is not legally defensible.

Similarly, allowing averaging between new and existing sources at the same facility would also likely lead to one source failing to meet its applicable standard. There are separate MACT standards with separate floors for new and existing sources within the HON, just as there will be separate standards for sources in different categories at the same site. An average that included sources with different floors and different standards cannot be reconciled with the statutory requirement that each source in the category comply with the applicable standard.

The proposal discussed the possibility of defining "source" differently for purposes of sections 112 (d) and (i) of the Act. While the EPA believes that there is broad discretion to define "source" under section 112, and the term can quite legitimately have different meaning in different parts of the Act (see, *Chevron, U.S.A. Inc.* v. *NRDC*, 467 U.S. 837 (1984)), the EPA does not believe that it is appropriate to apply different definitions in the present context. The source to which a MACT standard applies under section 112(d) is the same source that is covered by the compliance requirements of section 112(i). Clearly, section 112(i)(3) provides for setting compliance dates for categories of sources for which a MACT standard has been set, and section 112(d) requires standards to be set for categories of sources. It is not reasonable to argue that compliance with a standard can be achieved beyond the boundaries of the individual sources that comprise the category.

2. Interpollutant Trading and Hazard Assessment or Risk Analysis

The emissions averaging provisions in the proposed rule allowed averaging across all HAP's covered by the HON. The EPA was aware that these HAP's are associated with a variety of different effects at different levels of exposure. Therefore, at proposal, comment was requested on the appropriateness of allowing interpollutant trading in an unrestricted manner, as well as on two potential approaches for considering toxicity.

Several commenters maintained that unrestricted interpollutant trading should be allowed because: (1) So long as pollutants are listed in section 112(b) of the Act, they should be freely available for averaging; (2) standards under section 112(d) must be based on the achievability of control technologies instead of hazard or risk; (3) accounting for toxicity would add administrative complexity; and (4) the understanding of HAP toxicity is so limited that adjusting for trades would be difficult, if not impossible. In contrast, several commenters criticized interpollutant trading, especially trading that does not take toxicity into account, citing reasons such as:

(1) It could endanger public and worker health; and

(2) The understanding of HAP toxicity is so limited that interpollutant trades should not be allowed at all.

In weighing the concerns expressed at proposal, the EPA agrees that emissions averages should achieve at least a comparable hazard or risk benefit to point-by-point compliance. At the same time, the EPA recognizes the inherent difficulty of devising one set of provisions that would adequately, fairly, efficiently, and simply address these concerns in all circumstances. After careful deliberation on all available options, the EPA has decided to require that sources who elect to use averaging must demonstrate, to the satisfaction of the implementing agency, that compliance through averaging would not result in greater hazard or risk than compliance without averaging. This new provision was introduced in the supplemental notice and has been included in the final rule.

The EPA will provide a technical support document to aid implementing agencies in making the demonstration based on existing procedures, but the actual methodology to be used by the source is to be chosen by the implementing agency. This approach gives all implementing agencies the authority to consider hazard or risk in approving averages.

It was also recognized that to satisfy a State or local agency that an averaging plan would not increase hazard or risk, a source might have to identify and quantify all the HAP's included in the average. Hence, comment was requested on whether identifying all the HAP's in the emissions streams would pose difficulties for sources, and if so, what those difficulties would be.

Several commenters responded to the supplemental notice in favor of requiring sources to conduct hazard or risk assessments claiming that it would better ensure that public health is protected. However, many of these commenters still preferred that emissions averaging not be allowed at all, arguing that: (1) No adequate methodology exists for assessing and comparing hazard or risk in all circumstances; (2) States do not have

the knowledge or resources to develop the necessary methodologies; and (3) the new requirement would add to the administrative burden placed on implementing agencies by the rule. Still, several commenters insisted that State and local agencies can and should be allowed to use or develop their own policies and tools for performing the hazard or risk determination.

The EPA maintains that methodologies exist for assessing and comparing hazard or risk, which are applicable to this context and appropriate for many emissions averaging scenarios. However, two points require clarification. First, the terms hazard and risk should not be equated. Hazard assessments address toxicity but not exposure. Hazard refers to the intrinsic toxic properties of a pollutant, such as potency or the types of toxic endpoints of concern (e.g., cancer, developmental effects). Risk is an integration of hazard and human exposure to the pollutant, used to estimate the type and likelihood of toxic effects associated with a specific pollutant release. Under this rule, the implementing agency can consider either of these factors in determining whether an averaging plan should be approved. Furthermore, the implementing agency may consider ecotoxicity, bioaccumulation, and acute toxicity exposure to organic HAP's when reviewing a hazard or risk determination. However, such considerations are not required.

The second point of clarification is that both hazard and risk assessment methodologies carry with them some uncertainty. The issue of uncertainty will be addressed in the forthcoming technical support document. The EPA intends that States should have discretion in structuring their determinations. States that have existing programs may wish to continue using their established procedures; in fact, the new requirement was designed largely because some States already use hazard or risk assessments to evaluate HAP control. The new requirement may be seen as an additional burden by some implementing agencies, but as stated previously, an assessment of hazard or risk is necessary to determine that averaging does not result in an increase in hazard or risk.

Several commenters responded in opposition to the provision requiring hazard or risk assessments and cited some of the reasons stated at proposal for opposing any kind of toxicity weighting. The commenters reiterated that: (1) Hazard or risk considerations are inappropriate in section 112(d) standards, which should be technology-based; (2) sources' compliance burdens would be increased, which would decrease the cost effectiveness of using averaging; and (3) there is no evidence that emissions averaging will increase hazard or risk. Some commenters on the supplemental notice added that hazard or risk assessment methodologies are likely to change after the study of risk assessment by the National Academy of Sciences mandated under section 112(o) of the Act is finished. They argued, therefore, hazard or risk should not be considered until after the study is submitted.

The floor and the RCT's for the rule were determined without any consideration of hazard or risk. Emissions averaging represents an alternative to the technology-based system of point-by-point compliance, and as an alternative must be demonstrated to result in equivalent control. This demonstration can consider hazard or risk without violating the intent of section 112(d) of the Act. It is possible that in some cases, having to conduct a hazard or risk assessment may so increase the cost of averaging that it is no longer more cost-effective to average, but the EPA does not think this is likely in most cases because of the limited size of most averages. To address the possibility that an averaging proposal may increase hazard or risk relative to point-by-point compliance, the EPA intends to provide a technical support document that could be used for this hazard or risk demonstration. The EPA recognizes the importance of allowing States substantial flexibility in designing such a demonstration and avoiding a burdensome or prescriptive set of requirements that unnecessarily interfere with averaging. Finally, the Act contains no requirement that hazard or risk considerations be delayed until after the study of risk assessment by the National Academy of Sciences is completed. The statutory requirements and deadlines remain in effect, the study notwithstanding.

A number of commenters agreed that the EPA should provide standard guidance on hazard or risk assessments for sources and implementing agencies. Some commenters recommended that the guidance should: (1) Take into account different aspects of HAP toxicity, dispersion, and exposure; (2) resemble guidance for air quality modeling, which defines different approaches for different situations; (3) be developed with States involvement; and (4) establish presumptive minimum levels for State programs to follow. The EPA intends to take these and other recommendations into account before issuing a technical support document.

Some commenters supported requiring identification of all HAP's in emission streams for the purposes of conducting the hazard or risk assessment because: (1) The capability for doing so is available; (2) many sources must do so anyway for the purposes of obtaining permits, paying annual emission fees, and establishing applicability as a major source; and (3) therefore, the requirement will not entail new data collection and should not be burdensome. On the other hand, some commenters opposed having to speciate HAP's in averaged emission streams because: (1) Concentrations of some HAP's are often below detection limits; (2) small concentrations are difficult to measure accurately by many analytical techniques; and (3) it would be inordinately burdensome to identify all HAP's in wastewater considering the variability of wastewater streams. Thus, many of these commenters recommended setting a *de minimis* level below which a HAP would not have to be identified. The EPA recognizes that the HAP's in an emission stream must be identified to a certain extent in order to make the required demonstration of hazard or risk. The EPA also concurs that it may not be technically feasible to identify HAP's at levels below some minimal concentration. The concerns over HAP identification have been noted and will be considered in developing the technical support document for approving averages.

3. Limits on Averaging

a. *Number of points allowed in averages.* The final rule limits a source to including no more than 20 Group 1 and Group 2 emission points in an emissions average. Where pollution prevention measures are used to control emission points to be included in an average, no more than 25 points can be included. For example, if two points to be included in an average are controlled by the use of a pollution prevention measure, the source can include up to 22 points in their emissions average. However, if 6 or more points in the average are controlled by pollution prevention, the source can include no more than 25 points in their average.

In contrast, the proposed rule allowed for unlimited averaging. A number of commenters expressed concern over the difficulty and burden of overseeing averages of large numbers of points. Some commenters contended that the resources required to administer the rule with emissions averaging are much greater than for the rule without

averaging and exceed what can be anticipated from part 70 permit fees.

Because the complexity of averaging across a large number of points raised significant enforcement concerns, as well as concerns about the resource burden on implementing agencies, the supplemental notice solicited comment on limiting averages.

A number of commenters responded to the supplemental notice in support of limiting the number of emission points, citing the same concerns as at proposal about the burden and cost of overseeing and enforcing large averages. In contrast, several commenters considered it inappropriate to limit averages, arguing that:

(1) The design of the program already limits the number of points; and

(2) Allowing unlimited averaging would not add much burden to implementing agencies because most of the burden of monitoring, recordkeeping, and reporting is borne by the source.

Some commenters noted, and the EPA concurs, that most sources will not find a large number of opportunities to generate cost-effective credits. Hence, it can be anticipated that most averages will involve a limited number of emission points, and imposing a limit should not affect most sources. The EPA does not agree that the implementing agency would not bear much of the burden of averaging. The source's effort to comply with monitoring, recordkeeping, and reporting requirements will be matched equally by the implementing agency's oversight and approval.

Some commenters suggested ways to limit averages other than on the basis of number or percent of points such as: (1) Selecting points to include or exclude on a case-by-case basis depending on characteristics of the proposed points and their emissions; (2) excluding wastewater; or (3) setting a mass limit for a source's emissions on the basis of allowable emissions. As explained in section V.D.1.b, "Emission Points Allowed in Averages," of this notice, all emission points except for equipment leaks are considered appropriate for emissions averaging at any source subject to the rule. To limit their inclusion based on their characteristics under case-by-case decisions would add unreasonable complexity for both the source and the implementing agency. Also, as discussed in section V.D.1.b of this notice, the EPA maintains that wastewater emissions points should remain eligible for averaging. Finally, placing a mass limit on a source would be difficult to enforce and also add complexity to the rule.

Several commenters considered the proposed range of 5 to 15 points or 5 to 15 percent of total points arbitrary and claimed there is no rational basis upon which to base a limit. One commenter advocated leaving selection of the number or percent limit to the discretion of the implementing agency. Otherwise, there was no consensus among commenters on whether the limit should be based on a number or a percent nor what value in the range was appropriate. The EPA rejected the choice of a fixed percentage of points at a source because for larger sources, this could result in hundreds of emission points in averages, which is unacceptable from an enforcement perspective. The limit of 20 points in an average, 25 points if pollution prevention measures are used, was chosen because the EPA anticipates that most sources will rarely want to include more than 20 points in an average. In addition, allowing much more than 20 points would make enforcement increasingly untenable. Thus, the competing interests of flexibility for sources and enforceability were balanced in this decision. A higher number of points is allowed where pollution prevention is used in order to encourage pollution prevention strategies, and because the same pollution prevention measure may reduce emissions from multiple points.

b. *State Discretion.* The final rule grants State and local implementing agencies the discretion to preclude sources from using emissions averaging to comply with the HON without using the section 112(l) rule approval processes encoded in 40 CFR 63.92 through 63.94. Without this provision, if a State or local agency wished to receive delegation of authority to implement and enforce the HON without averaging, EPA review, according to the procedures in 40 CFR 63.92, would be required.

Several commenters recommended that State and local agencies be allowed to exclude emissions averaging because: (1) Averaging may conflict with their own policies, such as State new source review and existing programs for controlling HAP's; and (2) the State or local agency may not have the resources to administer the rule, given the complexity added by the emissions averaging provisions. The EPA also recognized that because of statutory limitations, some States do not have the authority to elect requirements that are more stringent than Federal standards. States with these statutory limitations might not otherwise be able to use the rule approval processes [established in subpart E pursuant to section 112(l) of the Act] to remove emissions averaging as a compliance option for the HON. Because of these concerns stated at proposal, the supplemental notice solicited comment on the advisability of granting State or local agencies the discretion to not include emissions averaging in their implementation of the rule without having to go through the section 112(l) rule approval process.

Several commenters responded in favor of the provision granting States more flexibility in excluding emissions averaging for the reasons stated in comments on the proposal and also because: (1) Some States are opposed to allowing emissions averaging due to concerns over its enforceability and its potential for allowing increased health risk compared to point-by-point compliance; and (2) it allows States greater flexibility in implementing the rule. At the same time, several commenters opposed the provision stating that: (1) States should not have the option of excluding emissions averaging since they do not have the option of excluding other provisions of the rule; (2) averaging does not add much or any administrative burden to States; and (3) if some States exclude averaging, an uneven "playing field" of different rules would be created, penalizing sources in States that do not allow averaging.

The EPA maintains that States should have discretion on whether to allow emissions averaging for the following reasons. First, averaging increases the complexity of the rule and thus, increases the administrative burden on State and local agencies. This is an especially important concern because State and local agencies have limited personnel and resources. Second, the EPA understands that averaging conflicts with some existing State programs for regulating HAP's. Thirdly, because emissions averaging is an alternative compliance method to the primary control strategy, States should have the discretion to exclude it as opposed to other provisions that are essential to the rule and for which no alternative compliance mechanism has been provided. Even though the EPA supports the use of emissions averaging where it may be appropriate, its use must be balanced by the individual needs of States and local agencies that bear the responsibility for administering and enforcing the rule.

Finally, this provision does not create an uneven "playing field" because without this provision, most States could exclude emissions averaging from their implementation of the HON through the section 112(l) rule adjustment process in 40 CFR 63.92.

including the provision in the HON will reduce paperwork burdens on States, expedite delegation of the rule to States, and remove a potential source of uncertainty for sources subject to the HON.

The section 112(l) rule approval processes require States to make a demonstration that the State rule is of equivalent or greater stringency to the Federal rule. For a State rule without averaging, one component of this demonstration would be to show that the lack of averaging did not result in the State rule being less stringent than the Federal rule. The EPA has determined that requiring States to make this demonstration would be a needless exercise for the following reason. Today's rule defines both point-by-point compliance and averaging as acceptable ways of achieving a MACT level of control. If all sources in a State use the point-by-point compliance method—as would be the case in a State that implemented HON requirements without averaging—all sources would be achieving the MACT level of control required by today's rule. Under today's rule, no source is required to achieve emissions reductions greater than would be achieved by point-by-point compliance, and no source is required to use averaging. Therefore, a State rule that implements requirements of the HON rule without averaging is equivalent in stringency to the Federal HON rule.

Based on this equivalency finding and today's rule, the EPA is allowing States to implement the HON unchanged without averaging through the same processes available to States that wish to implement the HON unchanged with averaging. Before a title V operating permit program is in effect in a State, the State may implement the HON without change through a streamlined procedure in the section 112(l) rule encoded as 40 CFR 63.91. After the State's operating permit program is in effect, the State may request delegation of the HON without change without going through the section 112(l) delegation processes. Also, based on today's equivalency finding and rule, a State seeking approval for a State rule that differs from the HON and also lacks averaging will not have to make a demonstration related to averaging as part of their equivalency demonstration to satisfy EPA review under 40 CFR 63.92, 63.93, or 63.94.

Providing these clarifications at this time will benefit sources as well as States. Without the clarifications, sources might be uncertain during the section 112(l) approval process about whether averaging ultimately would be allowed or not, yet would be given no added time for compliance. The EPA predicts that because of their complex nature, many HON sources will need the full time period allowed for compliance.

Two commenters objected to the EPA's proposal to provide in the rule itself that States would have the discretion to not include emissions averaging in their implementation of the HON without having to go through a section 112(l) rule approval process. One of the commenters asserted that this proposal would circumvent the mandates of State legislatures that had limited the ability of their environmental agencies to enact requirements more stringent than Federal requirements. The other commenter stated that this proposal was unnecessary because the section 112(l) rule provides ample flexibility and that the proposal would create difficulties for States since they would have to choose whether or not to adopt averaging.

The EPA does not believe that either of these comments warrants departing from the supplemental proposal regarding this issue. First, by providing for State discretion to decide whether to implement the HON with or without averaging, the EPA is not circumventing any State laws or overriding the decisions of State legislatures that limit the ability of State environmental agencies to adopt requirements more stringent than Federal requirements. The EPA maintains that implementing the rule with averaging will achieve equivalent or better emissions reductions (in part due to the discounting provisions) than implementing the rule without averaging. Consequently, in the EPA's view, a decision to implement the rule without averaging would not be a decision to implement a more stringent program. Moreover, if a State law or constitution contained provisions that, in the State's view, prevented the State from adopting the rule without averaging, nothing in the rule would override that provision, i.e., in that situation, the State agency would not have the authority to implement the rule without averaging and the provision allowing the State to choose would not change that. Second, the EPA does not agree that providing for State discretion in the HON itself is either unnecessary or burdensome for States. Use of a section 112(l) rule approval process would also permit States to choose to implement the HON without averaging, providing for that choice in the HON itself streamlines the process by eliminating EPA review of the choice. In addition, since the section 112(l) rule permits States to make the choice, providing for the exercise of such discretion in the HON itself cannot be viewed as placing any new burdens on the States. Finally, the EPA maintains that the provision of an option will not impose a burden. The provision of an option increases choice and flexibility; it does not impose new requirements.

c. *Credit discount factors.* A discount factor of 10 percent is required in calculating credits for emissions averages in the final rule. An exception is provided for reductions accomplished by the use of pollution prevention measures. For pollution prevention measures, full credit with no discounting is allowed.

At proposal, the EPA sought comment on whether it is appropriate to require the use of a credit discount factor and what value between 0 to 20 percent should be selected for the discount factor. A number of commenters supported the use of a discount factor, contending that if the use of emissions averaging can enable sources to realize cost savings, the environment should benefit from that cost savings as well. The EPA is persuaded that credit discounting is one way to provide such a benefit to the environment. A discount factor would reduce the value of credits in the emissions average by a certain percentage before the credits are compared to the debits.

In considering a discount factor, the EPA examined the requirements for determining MACT in section 112(d) of the Act. Section 112(d)(2) specifies that MACT standards shall require the maximum degree of reduction in emissions of HAP's, taking into consideration, among other things, the cost of achieving those reductions. By defining the source broadly and including the option for emissions averaging in the final rule, it could be argued that the EPA is providing flexibility for source owners and operators that would lower the costs of compliance. The EPA is persuaded that, to carry out the mandate of section 112(d)(2), some portion of these cost savings should be shared with the environment by requiring sources using averaging to achieve more emission reductions than they would otherwise.

Several commenters opposed the idea of a discount factor for a variety of reasons. Several warned that a discount factor would reduce and could completely eliminate the incentive to use emissions averaging and to develop innovative technologies which, in turn, could defeat the EPA's efforts to encourage flexible compliance and innovation. However, the EPA

maintains that the discount factor is not large enough to provide such a disincentive. The value is consistent with those used in similar rules and programs. In addition, pollution prevention innovations are specifically exempted, which is discussed in the next paragraph. Other commenters viewed a discount factor as an inappropriate penalty or price for achieving cost savings through averaging, and some considered a discount factor to be inconsistent with the statutory intent that MACT be implemented in a flexible and cost-effective fashion. The EPA submits, however, that the emissions averaging program as a whole provides ample flexibility and opportunity for cost savings. Sources clearly have more flexibility to choose more cost-effective means of compliance through averaging than without it. A 10 percent discount on credits does not negate this.

Credits generated through use of a pollution prevention measure need not be discounted, because the EPA recognizes that encouraging pollution prevention will result in more overall emission reductions, possibly including multimedia reductions and lower overall releases into the environment. For the purposes of the rule, the EPA is referring to any pollution prevention activities described in the Agency's Pollution Prevention Strategy (56 FR 7849) that are applicable to this industry. The following activities are included in the description of pollution prevention: (1) Substitution of feedstocks in making a product that reduces HAP emissions; (2) alterations to the production process to reduce the volume of materials released to the environment; (3) equipment modifications; (4) housekeeping measures; and (5) in-process recycling that returns waste materials directly to production as raw materials. Other pollution prevention approaches that are identified in the EPA's Pollution Prevention Strategy and are applicable to this industry are also acceptable for credit.

4. Implementation and Enforcement

a. *Compliance period.* The EPA has decided to establish an annual compliance period for emissions averaging. The rule was originally proposed with an annual compliance period, and additional comment was solicited in the supplemental notice on four alternative bases for determining compliance:

(1) A quarterly block averaging period;

(2) A quarterly block averaging period with banking for up to one or two additional quarters;

(3) A semiannual block averaging period with banking for an additional six-month period; and

(4) A semiannual block averaging period.

Several commenters supported an annual compliance averaging period at proposal and in response to the supplemental notice claiming: (1) It is necessary to accommodate realistic operating scenarios in which production rates naturally vary; (2) it is consistent with compliance periods for programs promulgated under title I and title IV of the Act; and (3) concerns about the enforceability of an annual period are unwarranted. At the same time, several commenters criticized the proposed annual period as: (1) Too long, especially compared to other regulatory programs; (2) an administrative burden and thus, an obstacle to effective enforcement; and (3) not protective of public health because an annual compliance period could allow peak exposures for short periods during the year.

Some commenters recommended the quarterly block averaging period without banking as manageable, enforceable, and the best of the four proposed options in the supplemental notice. A few commenters supported quarterly averaging with banking. Other commenters supported semi-annual averaging with banking as a period that would ensure operational flexibility and reduce risk. No commenters recommended the semiannual period without banking. Some commenters contended that the compliance period should not be any longer than periods currently used in State programs.

The final rule requires that the credits and debits generated in emissions averages balance on an annual basis, and that debits do not exceed credits by more than 30 percent in any one quarter of the year. These two requirements are used together to establish an emissions averaging system that provides flexibility for changes in production over time without allowing for wide-ranging fluctuations in HAP emissions over time. The annual compliance period was selected to provide sources considerable latitude in selecting points for inclusion in emissions averages. With an annual compliance period, sources can average emission points that may not have the same emission rates during some periods of the year, as long as they are similar on an annual basis. This latitude will also be useful to accommodate averages with points that must undergo temporary maintenance shutdowns at different times during the year. Nevertheless, the annual compliance period required here is solely meant to accommodate the specific circumstances of the HON, and is not intended in any way as establishing a precedent for future rulemakings.

In selecting a compliance period for averaging, the EPA also considered the need to verify compliance and, when appropriate, take enforcement action in a timely fashion. One concern about an annual compliance period is that the EPA's authority to take administrative enforcement actions would be significantly reduced because section 113(d) of the Act limits assessment of administrative penalties to violations that occur no more than 12 months prior to the initiation of the administrative proceeding. Administrative proceedings are far less costly than judicial proceedings for both the EPA and the regulated community. The requirement that debits not exceed credits by more than 30 percent in any quarter enables the EPA to use this administrative enforcement authority by providing a shorter period in which to verify compliance.

b. *Quarterly emissions check.* As noted previously, the final rule also includes a quarterly emissions check whereby debits cannot exceed credits by more than 30 percent. The emissions check was proposed as a limit on the percent by which debits could exceed credits in a quarter. Comment was requested on what the limit should be within a range of 25–35 percent. The proposal preamble also presented another alternate quarterly limit suggested by industry which would structure the check as an absolute emissions limit.

Several commenters who supported an annual compliance period concurred that a quarterly check was reasonable to allay concerns over high emissions in short periods. However, several commenters opposed the proposal contending that:

(1) Debits should never be allowed to exceed credits in any time period;

(2) 25 to 35 percent is still not protective of health and welfare; and

(3) It would be difficult for inspectors to determine whether or not a facility is in compliance with its allowable emissions level.

The EPA did not adopt the suggestions of these commenters because the emissions averaging program is intended to allow flexibility within the quarterly and annual limits. This flexibility would be too severely restricted if the suggestions, such as never allowing debits to exceed credits

re adopted. The quarterly check will otect against emission peaks so that alth and welfare effects are avoided. e 30-percent differential between bits and credits should not result in significant increase in emissions cause only the emissions from the few nits in the average would increase. e EPA maintains that these quirements are enforceable on a arterly basis in that inspectors will be le to total the credits and debits and termine if the source is in compliance th the quarterly emissions checks and e annual balance of credits and debits.

Some commenters supported the ternative industry proposal for a arterly check because: (1) It avoids tuations where an emission point is erated simply to generate needed redit, and (2) it allows for easier, more exible planning because the source ould know what its allowable missions are for a fixed period. In ontrast, one commenter opposed the lternative proposal claiming that the llowable emissions level would bear no elationship to the emissions level ought to be achieved. The EPA maintains that a system of assigning credits based on allowable emissions requires a great deal more scrutiny of the source's prediction of operating levels. Operating levels for allowable emissions are based on representative predictions of realistic operating scenarios, and such a system creates an incentive to "game," i.e., to project higher utilization rates for credit-generating points than is representative or realistic.

The EPA did not adopt the industry alternative for the quarterly emissions check because of concerns about an absolute emissions limit based on projections. However, the EPA did select the midpoint of the proposed range of the quarterly check as a way of balancing industry's concerns about operational flexibility with other commenters' concerns about protection from peak emissions.

c. *Banking.* Credits cannot be banked for future use in emissions averaging. Provisions for banking were included in the proposed rule, and the EPA requested comment on whether or not allowing credit banking was appropriate.

A number of commenters opposed allowing banking of emission credits for several reasons, including:

(1) The requirement to achieve the maximum achievable emission reductions is violated when banked credits are used to offset debits;

(2) Sources with banked credits will plan and operate less carefully; and

(3) The use of banked credits will increase HAP exposures and create administrative difficulties.

Several commenters supported allowing credit banking, claiming that it would:

(1) Act as a safety valve for unexpected events and thus offer needed flexibility to sources and increase the likelihood of a successful averaging program; and

(2) Encourage sources to install more stringent controls earlier to begin creating surplus credits to be banked.

Banking of surplus credits was deleted from the final rule primarily due to the likelihood of significant administrative burden resulting from its use. The EPA believes that administration of the rule must be kept as simple as possible, and banking represented a complication that would have affected sources and implementing agencies alike. In addition, if banked credits were allowed to offset unexpected increases in emission debits, peak HAP exposures could be more likely, and in some years when banked credits would be used, sources could be emitting beyond the standard. The additional flexibility afforded sources through banking would have been offset by the increased administrative burden and potential for peak exposures such that little overall advantage could be gained from banking.

d. *Credits for previous actions.* Credit is not allowed in the final rule for any previous actions, which, for the purposes of the rule, are defined as any control actions taken prior to the passage of the 1990 Amendments to the Act on November 15, 1990. This is in contrast to the proposal, which allowed three exceptions:

(1) Pollution prevention measures taken after 1987 and qualifying under the EPA's Pollution Prevention Strategy; (2) 33/50 commitments; or (3) Early Reductions commitments other than equipment shutdowns. Control actions that meet the other requirements in the standard, and that were taken after November 15, 1990, such as actions taken as pollution prevention measures as part of the 33/50 program, can be used to generate credits for an averaging program. However, as outlined in the proposal, controls applied as part of an Early Reductions commitment can generate credits only if they are more stringent than HON requirements and only after the relevant point becomes subject to the rule, that is, after the expiration of the 6-year extension for the Early Reductions source.

Several commenters generally opposed allowing emissions averaging credit for previous actions, and several specifically opposed the proposal to allow the three exceptions. The commenters stated various reasons for their opposition to allowing credits for previous actions including:

(1) Participants in these programs had already derived sufficient regulatory, economic, and public relations benefits so that additional credit was unwarranted;

(2) Reductions under the 33/50 and Early Reductions Programs do not constitute emission reductions under the HON;

(3) The EPA would be granting credit for emission reductions that would have occurred anyway, possibly because of existing State or Federal requirements, and thus, these credits would be only "paper credits," not new emission reductions; and

(4) Such credits violate the maximum achievable reductions requirement.

On the other hand, a number of commenters argued that emissions averaging credit should be allowed for all previous actions. The commenters argued, for instance, that:

(1) Not allowing credit was unfair and penalized sources that installed controls early and that early actions should be rewarded instead; (2) it is a contradiction that a controlled emission point that meets the requirements of the rule can be in compliance no matter when it was controlled but is ineligible to generate credits for emissions averaging; and (3) if credit is not allowed, control devices already installed on Group 2 emission points will be removed and placed on Group 1 points. Many of these commenters considered other prior reductions to be appropriate as credit generators, such as: (1) any voluntary control measures; and (2) any verifiable control measures.

The EPA agrees that emission reductions achieved prior to November 15, 1990 were accomplished for reasons unrelated to the Amendments or the rule and thus constitute part of the baseline control of a source. This rule does not allow actions taken before passage of the 1990 Amendments to be used to generate emission credits because such reductions would have occurred anyway, for reasons unrelated to the 1990 Amendments or the proposed rule. If the EPA allowed these actions to generate emission credits, then the source would be able to generate more emission debits and, thus, more total emissions. Emissions averaging is a method for complying with subpart G and should not result in more emissions than the other compliance options.

With concern about the equivalency of emissions reductions from averaging and non-averaging in mind, the Administrator also imposed the limitation that controls applied to comply with a State or Federal rule or statute (other than the HON) cannot be used to generate emissions averaging credit. As with credits for controls applied before the HON baseline date, credits for controls applied to comply with another rule increase the source's ability to generate debits, but do not generate new emission reductions, thus creating more total emissions. At the suggestion of the public comment, the Administrator chose to disallow HON averaging credit for controls applied to comply with other requirements, thus ensuring that the source would not receive a "windfall" of credits. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the point is subsequently made subject to a State or Federal rule other than this subpart, the point can continue to generate emissions averaging credit for the purpose of complying with the previously approved average. This provision does not constrain a State's ability to establish any control requirements it believes are necessary for purposes of attaining the national ambient air quality standards or to reduce air toxic emissions. By including this provision in the final rule, the Administrator has taken yet another step to ensure that averaging provides equivalent or better air quality protection.

Although the three exceptions to the 1990 baseline that were included in the proposal were deleted from the final rule, the EPA is committed to the success of the 33/50 and Early Reductions Programs and encourages the use of pollution prevention wherever feasible. This rule does not diminish that commitment. Reductions achieved after November 15, 1990 under the 33/50 and Early Reductions Programs or by the use of pollution prevention are fully creditable towards an averaging program.

e. *Questionable monitoring.* In the final rule, when an emission point included in an average experiences an excursion, the presumption is that a sufficient malfunction has occurred such that no credits or maximum debits should be assigned to the point. As discussed in section V.E.2.b, "Excused Excursions," of this notice, an excursion occurs when either: (1) There are insufficient monitoring data; or (2) the operating parameter values are outside the permitted range. The final rule provides that no credits and maximum debits will be assigned for excursions because any other assumption would result in emission reductions that could not be verified or adequately enforced. However, if the source has data indicating that some partial credits or debits may be warranted, it can submit that information to the implementing agency with their next Periodic Report. Thus, partial credits and debits can be assigned with the approval of the implementing agency. The proposed rule did not contain these provisions, but comment was requested in the supplemental notice on the advisability of including these provisions.

A number of commenters supported the provisions to account for excursions because: (1) They create an incentive for sources to maintain and operate their monitoring equipment in good working order; and (2) other methods for estimating emissions are inadequate and should not be allowed as substitutes during these periods. On the other hand, several commenters considered the provisions too extreme, claiming that: (1) Even though excursions may occur, the control device may not have failed completely; and (2) the compliance provisions for points included in averages should not be more stringent than for the ones that are not included.

The EPA maintains that these provisions are necessary to ensure that averaging achieves equivalent reductions to point-by-point compliance at all times. Emissions averaging depends on emissions estimates made beforehand and the demonstration that debits and credits balance made after the fact. Compliance on a point-by-point basis requires only that the source demonstrate that the RCT was operated at the proper design specifications. Hence, these provisions are not more stringent; rather, they are more detailed to ensure the consistency of the debit/credit estimation.

The EPA agrees that there may be some cases or conditions under which the implementing agency can be satisfied that granting partial or full credits and debits is still warranted. Therefore, the final rule provides that the evaluation and issuance of credits and debits during questionable periods shall be at the discretion of the implementing agency.

f. *Reference Control Efficiencies.* The final rule does not allow sources to get emissions averaging credit for the use of RCT above its designated reference efficiency rating. In contrast, the proposed rule provided two exceptions in which credit would be allowed for control above rated efficiencies: (1) Storage vessels controlled with closed vent systems and a 98-percent efficient control device, and (2) process vents on which the source had demonstrated to the EPA that control can achieve 99.9-percent reduction. These two exceptions have been deleted in the final rule.

Several commenters supported allowing credit for the use of RCT at a more efficient level than its rated efficiency as long as more efficient control was demonstrable. Some commenters suggested that credit for potentially significant reductions would otherwise be lost. Other commenters warned that without such credit, sources would have no incentive to develop existing control technologies further to achieve greater efficiencies from RCT.

At the same time, some commenters supported not allowing credit for RCT achieving higher efficiencies and opposed the two exceptions included in the proposal. One commenter argued that allowing credit for overcontrol is inappropriate because the rated efficiencies are intentionally conservative and understate the actual reductions the RCT would achieve if properly operated. As such, more credit would be allowed for overcontrol than is warranted. Some commenters stated that the use of fixed reference control efficiencies simplifies the averaging process by applying uniform credits and debits.

Reference control efficiency ratings for RCT were established because each RCT has a minimum level of emissions reduction that can generally be achieved. The EPA acknowledges that RCT can sometimes achieve greater emission reductions. However, providing credits for these instances is inappropriate because the magnitude of debits, not just credits, is based on the RCT's reference efficiency ratings. If it could be determined that the RCT on a debit generator could achieve greater reductions than its rated efficiency, the magnitude of debits from the point would be greater. Thus, to give credit for reductions above an RCT's rated efficiency and not to increase the magnitude of debits as well would represent a windfall from averaging.

g. *Approval of New Devices.* The procedures that were proposed for approving new devices for compliance purposes or as reference control technologies have been maintained in the final rule without change.

Some commenters requested more guidance from the EPA on the process for approving innovative control technologies. Others were concerned with the time required to approve new technologies, including the time required to review for broader applicability.

The EPA considers it necessary to be deliberate in approving new technologies especially when proven reference control technologies are available. The design and operation of new technologies are certain to be unfamiliar, so the rule provides for a 120-day period for the EPA or the permitting authority to determine whether sufficient information to determine a nominal efficiency has been submitted. Then, the EPA or the permitting authority must decide within an additional 120 days after sufficient information has been submitted whether to approve a new technology and what nominal efficiency to assign.

Moreover, review of a new technology for broad applicability does not require any additional time beyond the time required for review and approval of the new technology. Where the EPA is responsible for approval, the approval and the review for broad applicability are one and the same. Where the permitting authority is responsible for approval, the rule provides that any further EPA review for broader applicability shall not delay the permitting authority's approval of the new technology for use in limited circumstances.

E. Compliance, Recordkeeping, and Reporting

1. General Burden

In the final rule, every effort has been made to reduce the recordkeeping and reporting burden of the HON. The EPA has streamlined the rule to include only the monitoring, recordkeeping, and reporting necessary to ensure compliance.

Many commenters stated that the proposed monitoring, recordkeeping, and reporting requirements of the HON would be excessive and burdensome. The commenters contended that the requirements would be very costly, are unnecessary for assessing a source's compliance status, and provide no environmental benefit.

The single most significant change made to reduce the burden is requiring retention of hourly average values of monitored parameters instead of 15-minute values. This change reduces by a factor of four the number of records that must be digitally converted by computer systems, copied onto tapes or printed as hard copy, duplicated, and stored.

There are a number of other areas where the burden has been reduced in the final rule. For instance, the transfer operation provisions were revised to no longer require 5-minute records and to allow design analyses instead of performance testing for racks that are used infrequently (see section V.G.3.b of this notice, "Transfer Operations—Testing and Monitoring").

Equipment leaks recordkeeping and reporting requirements have been reduced by streamlining the reporting system so there are two reports per year, which can be submitted at the same time as the subpart G reports. To reduce the leak detection burden, response factor adjustments to Method 21 results are not required in the final rule. The requirements to identify and document equipment not in VOHAP service and equipment in vacuum service have been deleted. (The rationale for these equipment leaks changes is contained in section VI.D and E of this notice.)

Wastewater operations monitoring, recordkeeping, and reporting requirements have also been reduced. Method 21 is now only required initially, instead of annually as proposed, and visual inspections are performed on a semi-annual basis. Monthly measurements required in table 11 of the proposed subpart G were deleted because the initial performance test is sufficient to determine compliance. A change to the location of point of generation sampling will reduce the testing, monitoring, reporting, and recordkeeping requirements for some sources because sampling may be done at fewer locations. The compliance requirements for maintenance wastewater and maintenance turnaround wastewater have been combined, which simplifies compliance and reporting. Very small containers (less than 0.1 m^3 capacity) are no longer subject to the rule, reducing the monitoring and recordkeeping burden. These and other changes to the wastewater provisions are discussed in sections V.C.3 and V.G.4 of this notice and in BID volume 2B.

In addition, the final rule allows sources to request approval to use alternative monitoring and recordkeeping systems (in addition to being able to request approval to monitor alternative parameters as allowed in the proposed rule). This will reduce the burden by allowing greater use of existing systems. Alternative monitoring systems specifically discussed in the rule include non-automated systems and data compression systems. These systems will be allowed on a site-specific basis, dependent upon approval of the permit authority, as described in section V.E.2.c of this preamble.

Some repetitive reporting has been eliminated. For example, new sources that submit an application for approval of construction do not need to submit an Initial Notification. Electronic submission of reports is also allowed, if acceptable to the permit authority.

For further discussion, see chapters 2 and 3 of BID volume 2E and the following sections of this preamble.

2. Monitoring and Relationship to Compliance

a. *Continuous parameter monitoring and compliance determination.* The final subpart G provisions, as did the proposed provisions, require monitoring of control device operating parameters and reporting of periods when parameter values are outside the site-specific ranges the source established in its operating permit or Notification of Compliance Status.

Some commenters agreed with the HON approach to establish site-specific parameter ranges to indicate proper operating conditions, but many industry commenters asserted that parameter values outside the established range should not be considered a violation of the requirements for proper operation. These commenters requested the removal of provisions stating that parameter range excursions indicate the operator has failed to properly operate the control device.

Several of these commenters requested that sources be able to demonstrate, through performance testing, that no violation of the emission standard has occurred. Several commenters stated that a direct correlation between the monitored parameter values and efficiency of the control device has not been established. Some environmental organizations and private citizens requested monitoring of the actual emission levels instead of monitoring whether the control equipment is operating properly.

Several commenters discussed the difficulty of knowing whether an emission limit has been exceeded using parameter monitoring because excursions are initially violations of a permit condition and not a violation of an emission standard. The commenters were also concerned that emission standards may be difficult to enforce using this system.

Several commenters requested clarification of the interaction of the Title VII Enhanced Monitoring program and HON and asked whether enhanced monitoring has been incorporated in the HON rule.

The part 64 enhanced monitoring rule does not apply to sources subject to 40 CFR part 63, and therefore does not apply to sources subject to the HON. However, rules developed under section 112 of the Clean Air Act will include

monitoring strategies that incorporate the concepts of enhanced monitoring established in section 114(a)(3) of the Act. This approach is designed to ensure that monitoring procedures developed for section 112 standards provide data that can be used as a determinant of compliance with each applicable standard, including emission standards.

For rules where CEM's are not technologically or economically feasible, the EPA will generally establish operating parameters which must be continuously monitored to determine a source's compliance status. In order to determine compliance, parameters must be monitored frequently enough to allow the source owner or operator to certify whether compliance was continuous or intermittent for each recordkeeping period associated with the applicable emission limitation or standard. Generally, the EPA will select the parameters that must be monitored; however, the sources will establish, through performance tests, engineering analysis, and manufacturer's recommendations, the levels which must be maintained in order to remain in compliance with the emission standard. These source-specific levels will be incorporated in a source's operating permit (or, in the absence of an operating permit, these established levels will be directly enforceable) and will be used to determine a source's compliance status. For future section 112 standards, deviations from the operating parameters are expected to be considered violations of the applicable emission standard.

However, in developing an operating parameter monitoring strategy for the HON, it became evident that the complexity of this particular standard, the wide range of processes and pollutants covered, and the potentially large numbers of emission points located at any one facility, would warrant a somewhat different approach in determining compliance based on monitored parameters. Specifically, when a daily average value of a monitored parameter is outside the established range, such an excursion would not be considered a violation of the emission standard, but rather, a violation of proper operating conditions. Further, the HON allows for a designated number of excused excursions, i.e., a predetermined number of average daily parameter values outside the source's established range, that would not constitute an operating parameter violation.

This variation to the Agency's standard approach of incorporating enhanced monitoring concepts into section 112 rules does not signal a change in underlying Agency policy, nor should it be viewed as a precedent for future standards developed under 40 CFR part 63. Rather, the method of compliance determination in the HON represents an exception to the normal enhanced monitoring requirements, and one that is deemed necessary because of the diversity of emission points and the unique nature of the facilities regulated under this standard. The EPA believes that for other MACT standards which will regulate a more narrow range of industrial sources, a more precise link between operating requirements and emission violations will be justified.

Many commenters requested that CEM's be included in the rule for use in monitoring HAP emission levels, instead of using continuous parameter monitoring.

The EPA considered CEM's for use in the HON, but found them to be technically infeasible due to the lack of CEM technology for all 112 HAP's regulated by the HON. This determination is discussed further in section 3.2.4 of BID volume 2E.

b. *Excused excursions.* The final provisions allow a maximum of six excused excursions for the first semiannual reporting period, decreasing by one excursion each semiannual reporting period, down to one excused excursion per period by the end of 3 years. Thereafter, sources are allowed one excused excursion per semiannual reporting period. Excused excursions are not considered violations.

The EPA requested comment in the proposal preamble on the number of days or percent of operating time that should be allowed as excused excursions, and whether the excused number of days should decrease over time. A range of 3 to 6 days was proposed.

Commenters supported a range of 0 to 6 days of excused excursions. A number of commenters stated that the excused excursions were necessary to account for inevitable and unanticipated operating parameter fluctuations.

The system of decreasing the number of excused excursions as the source becomes more familiar with the operation of their control device allows sources to benefit from the knowledge they gain over time.

The final rule states, as at proposal, that a malfunction that is included in the source's start-up, shutdown, and malfunction plan, required in § 63.6(e)(3) of the General Provisions, is not considered an excursion if the plan is followed. If the plan is not followed, or if the malfunction is not included in the plan, this is considered an excursion.

For the final rule, an excursion has occurred when the source's daily average falls outside the established ranges, or when monitoring data are insufficient to calculate valid hourly averages for at least 75 percent of the operating hours in a day. Monitoring data are insufficient to calculate a valid hourly average if measured values are unavailable for any of the 15-minute periods within the hour. If the excursion is not an excused excursion, it is a violation of the operating permit conditions (i.e., a violation of proper operation and maintenance of the control device). Each excursion is a direct violation of the operating conditions, but not the emission limit. As a violation of the operating conditions, the regulatory authority can take enforcement actions against the source. If the regulatory authority requests a performance test to determine compliance with the emission limit, and the test reveals the emission limit is exceeded, then the source has violated the emission limit and is subject to enforcement actions for violating the emission standard.

c. *Alternative monitoring and recordkeeping.* The proposed provisions allowing sources to request approval to monitor alternative parameters were retained in the final provisions and expanded to allow sources to request approval to use alternative monitoring and recordkeeping systems. These monitoring systems would be approved by the permit authority on a case-by-case basis, and would include requests to use non-automated monitoring and recording systems and data compression systems.

Many commenters requested that the rule allow the utilization of existing monitoring and recordkeeping equipment to the maximum extent possible, and discussed the need for these alternative monitoring and recordkeeping systems. A few commenters requested that sources that do not have automated monitoring and recording systems be allowed to continue to use manual recording systems and be granted a less frequent monitoring schedule.

The EPA expects that there will be few facilities that would choose not to use automated recording systems (e.g., strip charts or computer systems) in light of the labor costs of manual recordkeeping. However, there may be specific cases where use of a manual system would be less burdensome, for example, a smaller, older facility that does not have computerized recording and already has a manual monitoring

and recordkeeping system. Provisions were added to the final rule to allow sources with non-automated systems to request approval from the permitting authority to manually read the value of the relevant operating parameter less frequently than every 15 minutes. The rule provides specific criteria for such requests to ensure that the monitoring and recordkeeping system is sufficient to determine compliance. In particular, the system shall include manual reading and recording of operating parameter values no less frequently than once per hour and daily average values calculated from the hourly values. The request shall contain a description of the monitoring and recordkeeping system, documentation that the source does not have an automated system, reasons the source is requesting an alternative system, and demonstration that the monitoring frequency is sufficient to represent control device operating conditions. Approval of such systems will be decided on a case-by-case basis by the permit authority.

Many commenters requested that data compression be allowed in order to allow use of current systems, while still allowing determination of when exceedances have occurred. Data compression systems do not record monitored operating parameter values at a set frequency, but record all values that meet set criteria for variation from previously recorded values. The commenters stated that they currently used data compression systems or intended to install such systems, and that the advanteges of data compression include the ability to more accurately represent operating parameter variation, the ease of data retrieval from archived data, reduced data storage requirements resulting in reduced computer costs, automatic record generation, the ability to quickly detect operating problems, and access past data and predict future problems. The commenters provided technical information on data compression systems.

After considering technical information on data compression systems, the EPA concluded that properly designed data compression systems can provide sufficient information for determining compliance. The final rule allows a source to request approval from the permitting authority to use data compression as an alternative monitoring and recordkeeping system. The EPA has established minimum criteria for using data compression, including: Measuring the operating parameter value at least once every 15 minutes; recording at least four representative values each hour; recording the date and time when monitors are turned off and on; recognizing unchanging data, alerting the operator, and recording the incident; and computing daily averages from the recorded data. At the end of the operating day, if the daily average value is not an excursion, the data may be converted to hourly averages instead of retaining the four individual data values for each hour. Approval of such systems will be decided on a case-by-case basis.

Some commenters requested that sources be allowed to use interlock devices which monitor the control device operating parameters and shut down the process before an excursion can occur. The commenters suggested that if such systems are used, recordkeeping is not necessary.

While the EPA wishes to encourage innovative technologies such as interlock systems, the EPA has insufficient information on the variety of designs and applications of interlock systems to specify alternative recordkeeping procedures that would be appropriate for all such systems. Sources wishing to use other alternative monitoring methods, including sources using interlock devices, may apply to do so according to the process described in the General Provisions § 63.8(f).

d. *Inspections and non-continuous monitoring.* For some emission points, such as storage vessels and some wastewater operations, continuous parameter monitoring is not feasible in certain circumstances due to the design of the control device or other operational and system design characteristics of the emission points or control technologies. One example of non-continuous monitoring is the periodic visual inspection of storage vessels equipped with internal or external floating roofs. If a failure, such as a gap or tear in the seal, is detected, the vessel must be repaired or emptied within 45 days. In addition, two 30-day extensions may be requested from the Administrator. Violations occur only when a failure is detected and the vessel is not repaired or emptied within 45 days or the time provided with an extension. More information on inspections and non-continuous monitoring is provided in chapter 6 of BID volume 2B for wastewater operations and chapter 3 of BID volume 2A for storage vessels.

3. Records

a. *Continuous records.* The final rule allows retention of hourly average values of monitored parameters instead of 15-minute values for operating days when there is not an excursion. If there is a monitoring parameter excursion, the 15-minute values for the excursion period must be retained.

A number of commenters requested that only hourly or daily averages be required, as 15-minute values would require reprogramming their computer systems and would be costly. The commenters also contend that 15-minute values may not be necessary to demonstrate compliance with the rule because operational problems would occur over a period of several hours, and could be discovered through the hourly averages. Some commenters suggested that 15-minute records should only be kept for days when there are parameter excursions.

The EPA agrees with the commenters who suggested that hourly average values are generally sufficient to determine compliance, and that 15-minute records should be kept only if there is an excursion. As at proposal, compliance with the operating conditions is based on the daily average value of continuously monitored parameters. If the daily average value is outside the established range, this is an "excursion." The proposal required retention of 15-minute average data values to substantiate the daily average calculations and provide a record of trends in control device operation over a shorter time period. Records of hourly average values are sufficient to accomplish these purposes, and will greatly reduce the recordkeeping burden of the HON. This change will reduce by a factor of four the number of records that must be digitally converted by computer systems, copied onto tapes and/or printed as hard copy, duplicated, and stored. It will avoid the cost of reprogramming existing computerized recordkeeping systems that commenters said are currently programmed to retain hourly averages. The reduction in the number of records will also simplify review of these records by enforcement agencies.

The reduction in the number of records will not impair the ability to detect parameter excursions. The final rule requires continuous monitors to measure parameter values at least once every 15 minutes, as did the proposal, and many monitors are designed to measure more frequently. The final rule also requires recording of 15-minute average values or instantaneous readings taken at least once every 15 minutes. However, the final rule allows the 15-minute values to be converted to hourly average values at the end of the operating day if there was not an excursion. The 15-minute values can then be discarded, and only the hourly averages must be retained. For operating days when there is an excursion, the

final rule requires retention of the 15-minute values of parameters. This will provide a more detailed record of those periods when there are problems. Keeping 15-minute instead of hourly values for excursion periods will not significantly increase the recordkeeping burden because there should only be a couple of days per year when there are parameter excursions for any given emission point.

A few commenters stated that the requirement in the transfer operations provisions to take 5 (and 15) minute values was incompatible with their current data collection system, would be extremely costly, burdensome, and of no environmental benefit.

The transfer provisions have been revised for the final rule and no longer require retention of 5-minute and 15-minute records. Hourly records (and 15-minute records for excursions) are required for transfer as well as the other kinds of emission points. Transfer is discussed in more detail in section V.G.3.b and in the BID.

b. *Accessibility/storage.* A number of commenters requested that sources have the option of storing records at an accessible off-site location because retaining records on-site at a source for 5 years would be burdensome and expensive.

This is an issue addressed in the notice presenting the final General Provisions to part 63. The provisions of subpart F are consistent with the final General Provisions. For the first 2 years, records may be retained on-site or at a central location accessible by computer. For the following 3 years, records may be maintained at an off-site location.

c. *Retention time.* Several commenters maintained that retaining records for 5 years as required in the proposal would be burdensome and expensive. Instead, commenters suggested records be retained for 1 or 2 years.

The final rule requires retention of records for 5 years. This is consistent with the General Provisions and the operating permits rule. This issue is addressed in the notice presenting the final General Provisions to part 63. The Agency's rationale is contained in the preamble to the final General Provisions.

4. Compliance Schedule

a. *Group status changes.* The final rule establishes compliance dates for cases in which a Group 2 emission point becomes a Group 1 emission point. The final provisions differ from the proposed provisions.

Several commenters requested that a Group 2 emission point that becomes a Group 1 emission point be granted 3 years to come into compliance, as existing sources are allowed 3 years, and the proposed 150-day period may not be possible given the time needed for permitting and installation of controls.

The EPA decided that, in some cases, the proposed 150 days may not be sufficient to engineer, permit, purchase, and construct control equipment to comply with the requirements; whereas, in other cases, compliance could be achieved sooner. Therefore, the proposed 150 day period was deleted from the rule, and compliance date provisions were added to § 63.100 of subpart F. In certain cases specified in subpart F, the source is allowed to establish a site-specific schedule subject to the approval of their permit authority. To be consistent with section 112 of the Act, the schedule can be no longer than 3 years. The reader should refer to § 63.100 of subpart F to determine whether a site-specific schedule is allowed in a particular case.

b. *Compliance extensions.* The final rule, like the proposed rule, states that requests for extensions must be submitted as part of the operating permit application or as part of the Initial Notification or as a separate submittal no later than the date the Implementation Plan is due. In the preamble to the proposed HON rule, the EPA requested comment on the potential difficulties of complying with the HON in the 3-year compliance time and through use of the 1-year request for a compliance extension.

Many commenters stated that it would be difficult or impossible for some sources to meet the HON's 3-year compliance date due to both obvious and unforeseen circumstances and that the need for a compliance extension may not be recognized until after the Implementation Plan is due. The sources requested that they be allowed to apply for a compliance extension up until the compliance date.

The issue of whether compliance extensions can be requested up until the compliance date is an issue with broad applicability to all part 63 standards and was raised in the public comments on the General Provisions to part 63. The HON is consistent with the final General Provisions.

5. Other Comments

Many other comments were received on topics such as the five report system, electronic submittal of reports, recordkeeping and reporting consistency with other requirements, burden cost estimates, data collection and recording frequency, current use of automated and non-automated monitoring systems, record retention time and accessibility, impacts on regulatory agencies, site-specific ranges, performance testing, enforcement, and many other topics. A complete summary of the comments received and the EPA responses pertaining to monitoring, recordkeeping, reporting, and compliance may be found in chapters 2 and 3 of BID volume 2E. Comments and requirements pertaining to emissions averaging monitoring, recordkeeping, and reporting issues are discussed in section V.D of this notice and in section 2.8.2 of BID volume 2C.

F. Coordination with Other Clean Air Act Requirements

1. General Provisions

After proposal of the General Provisions (August 11, 1993; 58 FR 42760), the HON public comment period was reopened to take comment on several issues, one of which was the overlap between the HON and the General Provisions. Written comments were received from approximately 75 commenters. Many of these commenters contended that it was difficult to determine those instances when the General Provisions requirements apply to the HON. The commenters suggested that the HON specifically state those General Provisions sections that apply to the HON, instead of the current system which states which General Provisions sections do not apply. The commenters, some of whom also included the comments they had submitted to the General Provisions docket, provided tables and suggested text changes showing which specific General Provisions sections they thought were relevant to the HON, and which General Provisions sections they thought should not apply to HON sources. In response to these comments, the EPA has provided a table in subpart F of the rule which specifies which General Provisions sections do and do not apply to the HON.

2. Overlap with NSPS, NESHAP, and CTG

For the final rule, the EPA has clarified which requirements are to be met when an emission point is subject to other air regulations in addition to the HON. The EPA agreed with commenters that the proposed rule did not provide adequate guidance regarding what to do when the HON overlaps with other NESHAP and NSPS.

Several commenters contended that the proposed HON would lead to overlap with existing regulations, and because EPA did not provide details on which requirements are to be met when

such situations occur, the overlap between the HON and other regulations would lead to confusion, inconsistent application of the requirements, and possible compliance violations. The commenters claimed that the EPA's direction to comply with the most stringent regulation was inadequate. Several commenters specifically questioned whether the language on overlapping requirements was intended for all facets of the HON or only for recordkeeping and reporting, since the requirement appeared in the recordkeeping and reporting section of subpart F.

A number of commenters specifically stated that sources complying with the Benzene NESHAP or the Vinyl Chloride NESHAP should be exempt from complying with the HON because these standards are more stringent than the HON. A few commenters expressed concern that the wastewater provisions in the HON may conflict with the requirements of the Benzene NESHAP, particularly the use of biological oxidation units.

The EPA recognizes that the guidance in the proposed HON on determining which requirements to comply with when regulations overlap was confusing. In order to clarify these requirements, the EPA has listed in § 63.110 of the final rule which provisions owners or operators are required to comply with when they are subject to existing regulations.

The EPA believes that in most cases the HON contains more stringent requirements than in other existing regulations. For these cases, the EPA has decided to override the requirements of the existing regulations with the requirements of the HON. In other cases, the owner or operator must either comply with the HON and the overlapping regulation, with the overlapping regulation, or some combination of the two.

For most Group 1 emission points that are also subject to existing NSPS and NESHAP, the owner or operator is required to comply with the HON requirements. For wastewater, Group 1 and Group 2 streams must either comply with both the HON and the Vinyl Chloride NESHAP or submit a demonstration that compliance with the Vinyl Chloride NESHAP assures compliance with the HON. Group 1 and Group 2 wastewater streams subject to both the HON and the Benzene NESHAP must comply with both rules because it is not possible for one rule to override the other. The benzene rule cannot override the HON because the HON covers 112 organic HAP's whereas the benzene waste operations NESHAP only covers emissions of benzene. The EPA does not believe that in all cases demonstration of control of benzene will also demonstrate compliance with control requirements for all HAP's. The HON cannot override the benzene rule because the benzene rule applies to waste and wastewater and the HON only applies to wastewater. Thus, in the final HON, the EPA is requiring that a source subject to both rules must comply with both rules.

For Group 2 emission points that are also subject to existing NSPS and NESHAP, § 63.110 specifies which provisions of HON and which provisions of the other rules will apply. The EPA developed the specifications through a comparison of the rules and their monitoring, recordkeeping, and reporting requirements for each kind of emission point. When HON wastewater provisions overlap with RCRA regulations, the EPA has decided to allow owners or operators to either comply with the regulation they consider the most stringent, or to request a case-by-case determination by the Administrator of which requirements to comply with.

A few commenters expressed concern that if future MACT standards require more stringent control, facilities would have to replace technology required by one standard with that required by another.

The EPA's plan for implementing the Act is for each source category to have its own MACT standard. No two MACT standards should be applicable to the same emission point. The only future requirements that should apply to the emission points subject to the HON are those developed during the residual risk analysis for the HON. The EPA has done its best to clarify the applicability of the HON. However, it is difficult to anticipate all the potential overlaps with MACT standards that have not yet been drafted. In developing the applicability provisions of future MACT standards, the EPA will be as clear as possible and will avoid applying more than one MACT standard to the same emission point.

3. PSD/NSR

For the final rule, the EPA maintains that the approach for estimating secondary impacts that was presented in the proposed HON is sufficient for rulemaking purposes.

Several commenters argued that compliance with the RCT requirements of the HON would increase NO_x and CO emissions, thereby requiring PSD or NSR determination depending on non-attainment status of the source. The commenters also contended that PSD and NSR determination would require a BACT or LAER analysis, air emissions modeling, offsets for NO_x emission increases, and possibly a Federal Land Manager review. Several of the commenters claimed that the cost of these analyses and the control technologies they may require were not included in the cost analysis for the HON. The commenters contended that such costs would make compliance with the HON unaffordable.

The commenters are correct that costs for controlling secondary impacts were not analyzed in the HON. However, the EPA did analyze the extent of multimedia impacts of applying the RCT's. The results of the analysis indicated that controls on process vents would result in only 6 percent of the sources exceeding the PSD NO_x threshold of 40 tpy in non-attainment areas if combustion controls were applied, and none of the sources would exceed the CO emissions threshold of 100 tpy. None of the sources were determined to exceed the CO and NO_x emission levels as a result of controlling transfer operations. Based on these results and the great flexibility provided in compliance options, the EPA does not consider that control of secondary impacts of applying the RCT's will significantly impact the cost of the HON.

In addition, although the HON provisions for process vents and transfer operations require 98-percent control, they do not necessarily require combustion. A facility has the choice of applying the RCT or using any technology that achieves an equivalent emissions reduction. The process vents provisions also provide the option of modifying the process or using additional product recovery to raise the TRE to greater than 1.0, thereby converting the vent to a Group 2 vent.

Other commenters argued that the permit review process for PSD and NSR would increase the amount of time for complying with the HON, and cause some sources to miss compliance dates.

The EPA considers PSD and NSR concerns to be best handled on a site-specific basis. An individual source may cite the delays involved with obtaining PSD or NSR permits in requesting extensions from the EPA. Under the Pollution Control Project exclusion section of the NSR regulations, States will also have the flexibility to consider overall environmental benefits of pollution control and may not require a source to obtain preconstruction permits under PSD or NSR.

Several commenters requested that EPA exclude from the definition of modification, and thus from NSR

requirements, the installation of controls required in the HON that are considered environmentally beneficial.

The EPA is reviewing possible changes to the NSR/PSD program. Until such changes are made, the EPA has decided that sources requesting exemptions will be handled on a case-by-case basis. Where a source merits it, the EPA will consider exclusions from some NSR/PSD requirements.

4. Section 112(g)

Several commenters requested that the EPA clarify the relationship between the HON and requirements in section 112(g) of the Act. Some commenters requested that EPA provide definitions for modification and reconstruction as they apply to the HON. One commenter requested that the EPA incorporate a de minimis emissions increase concept for minor modifications.

Case-by-case MACT emission limitations under the proposed section 112(g) rule do not apply to SOCMI sources covered by today's rule. The EPA need not add a de minimis emissions increase concept for the HON because the HON has established procedures for determining which operational changes require control and what level of control must be applied when an operational change occurs. In addition, since section 112(a) of the Act provides a definition for modification and § 63.2 of the General Provisions (subpart A of 40 CFR part 63) provides a definition for reconstruction, these definitions need not be added to the HON. Sources subject to the HON are required to use the definitions in the Act and General Provisions, unless that part of the General Provisions is specifically overridden in the HON.

Sources subject to the HON should note that subparts F and G establish administrative procedures to cover a variety of operational changes that are likely to occur at SOCMI facilities. These procedures specify the notification and approval requirements for each type of change. As stated in the preamble to the proposed rule implementing section 112(j) of the Act, it is the EPA's intent that the control requirements of individual MACT standards established under section 112(d) or 112(j) of the Act should supersede the control requirements of the section 112(g) rule. The proposed rule for section 112(j) was published in the Federal Register at 58 FR 37777 (July 13, 1993). In addition, as stated in the proposed rule implementing section 112(g) of the Act, it is the EPA's intent that the administrative procedures of individual MACT standards established under section 112(d) or the Act will supersede the administrative procedures of the section 112(g) rule to the extent that the administrative procedures of a section 112(d) rule satisfy the requirements of section 112(g) of the Act. [As proposed (58 FR 37778), standards established under section 112(j) of the Act would rely on the administrative procedures in the section 112(g) rule.] The question of whether MACT standard administrative procedures, such as those in the HON, supersede the administrative procedures of the section 112(g) rule is one on which comment is being requested in the section 112(g) rulemaking. Consequently, the application of section 112(g) administrative procedures to HON sources will not be finally resolved until the promulgation of the section 112(g) rule. Until final action on the section 112(g) rule, sources subject to the HON should follow the administrative procedures in subparts F and G, and, as appropriate, the General Provisions of 40 CFR part 63 subpart A, and the title V operating permits rule.

One commenter requested that the EPA clarify whether emission points that are not regulated by the HON, but are part of the same plant site, would be considered area sources and what emissions would be available for offsets under section 112(g).

The Act defines both major source and area source. If a plant site meets the definition of major source, it will be regulated as a major source under any applicable MACT standard. Plant sites that do not meet the definition of major source are considered area sources and could be covered under emission standards that regulate area sources. For example, if within a petroleum refinery that is a major source plant site, there are emission points associated with SOCMI processes, the SOCMI emission points would be regulated under the HON, whether or not they alone would constitute a major source. The refinery emission points would be regulated under the refinery MACT standard. The rule implementing case-by-case MACT emission limitations under section 112(g) will address sources that are not covered by a promulgated MACT standard. Only emission points that are not subject to a promulgated MACT standard could be available for offsets. If a source is regulated by a promulgated MACT standard such as the HON, the controls applied to comply with the promulgated MACT will not be available for offsets under section 112(g), as proposed. At plant sites with sources subject to the equipment leak provisions in subparts I and H, only the equipment leaks are covered by the HON. Thus, the section 112(g) control requirements could apply to the other actions and equipment at the plant site.

5. Residual Risk

A number of commenters expressed concern with calculating residual risk on a plant-wide basis because once a MACT standard is promulgated for one source category within a facility, residual risk requirements could be triggered before other MACT standards are established for other source categories at the facility. In contrast, one commenter asserted that the legislative history of the Act requires that residual risk be calculated on a plant-wide basis.

A number of other commenters expressed concerns with calculating residual risk on a source category basis because public health could be compromised if emissions were artificially split up for purposes of risk assessment, rather than considered as a whole. However, two commenters contended that implementation would be simplified if a source category approach were taken.

Several other commenters argued that the basis for estimating residual risk should not be addressed in the HON or at this time. The commenters contended that Congress intended to defer risk-based standards until better methods of risk analysis have been defined. Some commenters requested that the EPA begin to investigate the appropriate methodology for determining residual risk.

As many of the commenters have noted, residual risk will be determined at a later time. The EPA's intent in requesting comments on residual risk was to facilitate ideas on how residual risk should be analyzed.

6. RCRA and OW Regulations

Several commenters asserted that the HON did not consider overlaps with RCRA rules. The EPA disagrees with the commenter's assertion that the EPA has not considered the implications associated with regulatory overlap between the HON and the RCRA regulations. In fact, the EPA has made every effort to identify areas in which these regulatory programs may overlap. The commenter did not express any particular concerns about specific areas of overlap. The EPA has identified several potential areas in which both the RCRA and the HON could apply to the same situation. To avoid dually regulating these areas, the EPA has tried to make the regulatory language in the HON consistent with existing RCRA requirements and, where appropriate, has designated which regulations the owner or operator must comply with to satisfy the requirements of both

egulatory programs. For example, in he provisions that specify the required reatment processes for managing wastewater at SOCMI sources, the EPA will accept demonstration of compliance with RCRA requirements as demonstration of compliance with the HON for the following treatment processes: (1) hazardous waste incinerator permitted under 40 CFR part 270, (2) boilers and industrial furnaces either permitted under 40 CFR part 270 or certified as an interim status facility in compliance with 40 CFR part 266, and (3) underground injection wells permitted under 40 CFR part 207 and in compliance with 40 CFR part 122. These treatment processes are not subject to the treatment process requirements in the HON because the EPA recognizes that such treatment processes are already strictly regulated under the RCRA program. However, emissions from the wastewater stream must still be suppressed up to these treatment processes according to §§ 63.133 through 63.137 of the HON.

7. Pollution Prevention

For the final rule, the EPA maintains that the proposed HON sufficiently promotes pollution prevention for the various chemical manufacturing process units in the SOCMI.

One commenter did not consider the HON to meet the requirements of the Act because it does not consider pollution prevention activities. Several other commenters contended that the HON discourages pollution prevention activities because it promotes use of pollution controls and safety measures instead of redesign of processes or material substitutions to eliminate emissions. Some of the commenters believed that industry will innovate and apply pollution prevention only if EPA forces them to do so. Many of the commenters recommended that the EPA revise the HON to encourage more pollution prevention. The commenters suggested that EPA:

(1) Incorporate pollution prevention approaches in existing State programs;

(2) Set a timetable for the elimination of emissions; and

(3) Require evaluation of process and product changes prior to end-of-pipe controls.

Pollution prevention activities, particularly process redesign, are site-specific. Therefore, it would not be practical or possible to stipulate specific requirements for the large number of chemical production processes subject to the HON.

The EPA also considers that elimination of pollution through material substitution will not be possible in all cases because SOCMI products (many of which are listed as HAP's in section 112 of the Act) cannot be eliminated from use without adverse economic impact. Specifically, because the products of the SOCMI are used in the production of polymers, resins, pesticides, pharmaceuticals, etc., elimination of a SOCMI product would affect not only the SOCMI producer but also the downstream user of that SOCMI product. Many of the end-use products (e.g., resins, pharmaceuticals, etc.) could not be made from other materials. Thus, the EPA maintains that material substitution is better left determined by the marketplace rather than by mandate through a specific Federal requirement.

The EPA believes that the HON sufficiently encourages pollution prevention. For example, within the provisions for process vents, storage vessels, transfer operations, and wastewater collection and treatment operations, there are compliance options that only specify a percent reduction of HAP emissions. To comply with most of these options, a source may use any means, including process changes or recovery devices, to reduce emissions by the specified percent. While process vent provisions do not allow use of recovery devices to achieve the 98-percent reduction, the process vents provisions encourage the use of process changes and recovery devices by including an option for achieving a specified TRE value instead of adding control. Thus, the owner or operator does not have to combust emissions to comply with the standards. The storage vessel provisions encourage the use of floating roofs to control emissions. Many of the requirements in the equipment leaks and wastewater provisions also encourage pollution prevention options to control emissions. The emissions averaging provisions encourage pollution prevention by: (1) Not applying a discount factor to credits generated by pollution prevention measures and (2) allowing an additional five emission points to be included in an average if pollution prevention measures are used.

G. Miscellaneous Technical Comments

1. Process Vents

a. *Monitoring for Group 2 vents with TRE between 1 and 4.* For the final rule, the EPA maintains the same position as at proposal for monitoring for process vents with a TRE between 1 and 4.

Several commenters recommended that the same monitoring provisions for vents with a TRE between 1 and 4 be applied to vents with a TRE greater than 4 due to process fluctuations. Several other commenters requested that monitoring requirements for vent streams with a TRE between 1 and 4 be reduced or eliminated because of the burden without emissions reduction.

The rule requires monitoring, recordkeeping, and reporting requirements for Group 2 vent streams with TRE index values between 1 and 4 to ensure those vents do not become Group 1 vents due to process or recovery device operating variations and remain uncontrolled. Group 2 vents with TRE index values greater than 4 are not required to monitor. An analysis was performed prior to proposal that shows that a vent with TRE greater than 4 is unlikely to become Group 1 due to process or recovery device operating fluctuations or measurement uncertainties, whereas if TRE is greater than 4, it is important to monitor recovery device operating parameters, because variations in process or recovery device operations could cause such streams to become Group 1. The EPA recognizes the uncertainty present in TRE calculations, but decided that a sufficiently large safety factor has been included for vents with a TRE greater than 4. The decision not to require monitoring for process vents with a TRE greater than 4 reduces the burden of regulation for both the industry and regulatory agencies.

b. *Product accumulator vessels.* For the final rule, the EPA has deleted the term "product accumulator vessel," and will regulate equipment previously described as product accumulator vessels as follows: (1) Vents from distillate receivers and product separators will be regulated as process vents under subpart G; (2) hot wells will be regulated by the wastewater provisions under subpart G; and (3) surge control vessels and bottoms receivers will remain in subpart H. The definition of process vent has been revised to include distillate receivers and product separators.

Several commenters expressed concern due to the inconsistencies in the proposed provisions for product accumulator vessels. The major concerns included: (1) Multiple standards (process vents under subpart G and equipment leaks under subpart H) would apply to the same vent; (2) there are different compliance dates in subparts G and H; (3) the proposed definition did not distinguish between product accumulator vessels and storage vessels or other in-process vessels; and (4) product accumulator vessels, which are point sources, would be regulated under provisions that were intended for fugitive emissions (i.e., equipment leaks). The commenters suggested

eliminating the inconsistencies by: (1) Deleting the subpart H requirements for product accumulator vessels and regulating them as process vents under subpart G; (2) allowing sources to select whether to comply with the requirements of subpart G or subpart H; or (3) regulating product accumulator vessels as storage vessels under subpart G. Several commenters also suggested deleting from the HON the requirements for product accumulator vessels associated with the non-SOCMI processes subject to subpart H. The commenters preferred regulating such vessels under future MACT standards for the appropriate source category.

The EPA agrees that there is need to clarify the applicability of the HON to product accumulator vessels. Previous definitions and control cost analyses for process vents have included indirect releases, such as those from distillate receivers and product separators. These emissions were clearly intended to be process vents requiring 98-percent control under subpart G. Condensates from hot wells were included in the proposed definition of wastewater and were intended to be controlled at 95 percent under the subpart G provisions for wastewater. Surge control vessels and bottoms receivers are typically smaller than storage vessels subject to the HON, and have relatively low emissions. Also, previous analyses on process vents have not been clear on the inclusion of these vessels. Thus, the EPA decided that surge control vessels and bottoms receivers will remain in subpart H to be controlled at 95 percent. The term "product accumulator vessel" has been deleted from the HON, and replaced with "surge control vessels and bottoms receivers." The above clarification reflects the EPA's original intent regarding how the various equipment types should be regulated and is not designed to alter the stringency of the HON.

2. Storage Vessels

a. *Time allowance for planned routine maintenance of control devices.* In the final rule, the EPA has increased the allowance for sources to complete planned routine maintenance of a control device from 72 hours per year to 240 hours per year.

Several commenters asserted that the proposed 72 hours per year for routine maintenance of a control device would be insufficient for reasons including: (1) Routine maintenance of a flare may require up to 7 to 10 days per year; (2) rebricking a thermal oxidizer requires at least 7 days; (3) some States have included in incinerator air permits an allowance of 10 days per year for routine maintenance; and (4) in general, repair of boilers and water scrubbers requires more than 72 hours per year for routine maintenance. Several commenters requested that the rule allow for longer routine maintenance periods by: (1) Increasing the time allowance; (2) allowing extensions from the permitting authority; or (3) requiring that storage vessels not be filled during any routine maintenance that exceeds the 72-hour allowance.

The EPA concluded that the 72-hour allowance for routine maintenance is inadequate. After reevaluating the available information, the EPA determined that increasing the time allowance to 240 hours (i.e., 10 days) would be the most reasonable approach to address the need for more time to complete routine maintenance and to be consistent with State air permitting activities. The EPA did not choose either of the other two approaches suggested by the commenters because of the additional burden associated with them. Specifically, requiring that storage vessels not be filled during any routine maintenance exceeding 72 hours would require the addition of equipment to monitor liquid level for enforcement purposes. Further, allowing for extensions for routine maintenance beyond the 72 hours would require added reporting burden for both sources and permitting authorities.

While the EPA is allowing sources to utilize the full 240 hours to perform routine maintenance on each control device, the EPA does not expect that sources will utilize all 240 hours for all control devices, because many types of control devices do not require 240 hours of maintenance time per year. The EPA has included provisions in the regulation that make sources accountable for their utilization of this allowance. Sources are required to periodically (i.e., every six months) report the routine maintenance performed and the amount of time used to complete that routine maintenance. In addition, sources must indicate the routine maintenance they expect to perform during the following six months.

b. *AP–42 Equations for emissions averaging with storage vessels.* For the final rule, the EPA will include the September 1985 version of the AP–42 equations; however, the EPA will allow sources to utilize either the September 1985 version or the October 1992 version (i.e., referenced as American Petroleum Institute Publication 2518, second edition, October 1991) of the AP–42 equations for estimating breathing losses from fixed roof storage vessels, for the purposes of emissions averaging. Whichever set of equations a source selects, the source must utilize the same set of equations for calculating breathing losses of fixed roof storage vessels for estimating both credits and debits.

Two commenters recommended that the EPA update the storage vessel emissions equations in the emissions averaging section of the final rule in order to reflect the latest changes in the EPA document "Compilation of Air Pollutant Emission Factors (AP–42)" included in chapter 12 of supplement E, entitled "Storage of Organic Liquids."

The EPA agrees that sources should be given the option to use the latest AP–42 equations for estimating breathing loss emissions from fixed roof storage vessels. However, the EPA will not require that sources use these latest equations because it could be more burdensome for some sources. The EPA determined that the October 1992 equations are more site-specific and will require that sources make more measurements of tank parameters because the EPA cannot provide default values for some of the variables in the equations. Although the EPA will allow sources to choose either the 1985 or the 1992 version of the equations for estimating breathing losses from fixed roof storage vessels, the source must use the same set of equations for estimating both credits and debits from storage vessels for the purposes of emissions averaging.

3. Transfer Operations

a. *Determination of applicability and group status.* For the final rule, the EPA has clarified many of the applicability and group determination provisions regarding transfer operations in the proposed HON. The intent of these provisions has not changed.

Many commenters expressed confusion regarding whether the transfer provisions refer to arms or transfer racks being loaded. Several commenters requested that the EPA clarify that the HON is only applicable to transfers of materials from SOCMI processes and not all materials transferred at any given rack or arm.

The intent of the language in proposed § 63.100(b)(5) of subpart F and in the final § 63.100(i) of subpart F is to assign loading racks, loading arms, or loading hoses to a chemical manufacturing process unit. If the chemical manufacturing process unit is subject to the HON, then the loading rack, arm, or hose is also subject to the HON.

Once it is determined that a rack, arm, or hose is subject to the HON, group status must be determined. Group status

is determined for a transfer rack. A transfer rack is defined as the collection of all arms or hoses that are assigned to a chemical manufacturing process unit that is subject to the HON. For example, if a facility has a rack that consists of eight arms and six of these arms are assigned to chemical manufacturing process units subject to the HON and the other two load petroleum refinery products not subject to HON, then the "transfer rack," as defined for the HON, is made up of the six arms that are assigned to the chemical manufacturing process unit subject to the HON. Group status must be determined based on the vapor pressures and throughputs of the HAP's loaded at the arms that are subject to the HON. In cases where a rack or arm(s) has been assigned to a chemical manufacturing process unit subject to the HON, the rack or collection of arms must be controlled during transfers of all HAP's regardless of whether those HAP's were associated with SOCMI chemical manufacturing process units.

The EPA determined that assigning equipment to be subject to the HON would be easier from an enforcement and control perspective, as opposed to assigning transfer operations. Also, by assigning equipment, applicability will be more obvious when other rules are promulgated affecting transfer operations under other source categories.

One commenter suggested that the organic HAP partial pressure considering all the materials loaded at a specific loading arm or rack should be used to determine applicability instead of the rack-weighted vapor pressure.

The EPA agrees with the commenter's suggestion. The final transfer provisions have been revised to replace the definition of rack-weighted average vapor pressure with a definition for rack-weighted average partial pressure.

b. *Testing and Monitoring.* The following changes have been made to the testing and monitoring provisions for transfer operations:

(1) 15-minute monitoring of operating parameters is required regardless of loading cycle time;

(2) The requirement for a performance test has been replaced with design analysis for racks that load less than 11.8 million liters/yr; and

(3) Performance test requirements have been clarified for facilities using common control devices for both process vent and transfer emissions or for emissions from multiple arms loading simultaneously.

Several commenters contended that 5-minute monitoring and recordkeeping requirements for loading cycles less than 3 hours were overly burdensome and would serve no purpose. The commenters suggested that the 15-minute monitoring and recordkeeping requirements of loading cycles be made standard for all cycles in the final rule.

The EPA agrees with the commenters that 5-minute monitoring intervals are not necessary. The EPA considers 15-minute monitoring to provide sufficient statistical confidence in the performance of a control device. Fifteen-minute monitoring intervals will also adequately identify performance that is outside of the approved operating parameter ranges.

Two commenters contended that it was unduly burdensome to require a performance test duration of three loading cycles for infrequent loading operations. Both commenters suggested that the EPA allow owners or operators to conduct performance testing over only one loading cycle for infrequent loading operations. One commenter expressed concerns regarding simultaneous loadings and suggested that the EPA provide performance test provisions for control devices shared between racks or other emission points.

The EPA agrees with the commenters' assertion that the proposed provisions for performance tests for infrequent loading operations were burdensome. The EPA determined that for owners and operators loading less than 11.8 million liters/year (3.12 million gal/yr) at a single transfer rack, requiring a performance test on three loading cycles could extend the completion of the performance test to 2 weeks or longer. The EPA's intent in requiring testing during three different loading cycles was to acquire sufficient data to ensure that a control device was operating properly. The EPA has determined that a test of one loading cycle would not provide sufficient data on the performance of the control device; thus, requiring one loading cycle to be tested would not be meaningful. Therefore, in the final rule a design evaluation is allowed instead of a test for those racks with infrequent loading (i.e., less than 11.8 million liters/year of materials loaded).

Although the proposed rule did not preclude shared control devices, it was not clear how an owner or operator would demonstrate compliance. Provisions have been added to the rule to clarify that in the case of a control device being shared with process vents, the performance test required under the process vent provisions is adequate for the transfer provisions. For control devices shared among transfer racks or arms, and where materials are simultaneously loaded, the performance test requirements have been revised to be similar to the process vent provisions: three one-hour performance test runs. Simultaneous loading occurs when the beginning and ending times of loading cycles coincide and overlap such that there is no interruption in vapor flow to the control device; as one loading cycle is completed, another one begins or has already begun.

4. Wastewater

a. *Design steam stripper specifications.* For the final rule, the EPA has revised several of the specifications for the design steam stripper. The following changes are incorporated into the final rule:

(1) The design steam stripper must have ten actual trays;

(2) The minimum wastewater feed temperature to the design steam stripper must be 95 °C;

(3) The requirement to use a water-cooled condenser has been deleted;

(4) The steam-to-feed ratio for the design steam stripper is 0.04 kilogram of steam for every one kilogram of wastewater;

(5) The steam heat value must be at least 2,765 kJ/kg (equivalent to 690 kPa); and

(6) The maximum liquid tray loading is 67,000 l/hr-m2.

(i) *Actual number of trays.* Several commenters requested clarification regarding the EPA's intent to specify theoretical or actual trays. Based on additional analyses after the proposed rule was published, the EPA has determined that a steam stripper that is operated using 10 actual trays will achieve the required HAP target removal efficiencies. These analyses are summarized in the promulgation BID volume 2D and details of the analysis are in docket A–90–23.

(ii) *Minimum wastewater feed temperature.* The proposed rule specified 35 °C as the feed temperature of wastewater to the steam stripper. However, in the design analysis for the wastewater provisions in both the proposed and final HON, the EPA has assumed that the feed stream is heated to 95 °C before it enters the design steam stripper. The feed stream is pre-heated to 95 °C by using a heat exchanger to recover heat from the treated wastewater. The temperature of 35 °C, which was inadvertently designated as the feed temperature in the proposed rule, refers to the temperature of the wastewater before it is pre-heated by the heat exchanger and sent to the design steam stripper. The EPA has corrected this error and included 95 °C in the final rule as the minimum wastewater feed

temperature to the steam stripper after the wastewater has been pre-heated.

(iii) *Condenser.* The proposed rule required that a water-cooled condenser with a maximum primary condenser outlet vapor temperature of 50 °C be used in conjunction with the design steam stripper. Several commenters questioned why the EPA required the use of a water-cooled condenser as part of the design steam stripper specifications. The commenters suggested that the requirements for treatment devices in section 63.138(h) were sufficient to control HAP emissions from treatment devices. While the EPA agrees to eliminate the condenser from the design steam stripper, it is clarified that a primary condenser, if used, does not count toward the 95-percent control requirement because this control requirement applies to non-condensibles.

(iv) *Steam-to-feed ratio.* Although no specific comments were received on this issue, the EPA updated this number as part of the analysis to revise the design steam stripper. The proposed rule required a steam-to-feed ratio of 0.096 kilograms of steam for every one kilogram of wastewater. The revised steam-to-feed ratio of 0.04 kilograms of steam for every one kilogram of wastewater optimizes the efficiency of the design steam stripper to remove HAP's from wastewater. The steam heat value specified for the design steam stripper is 2765 kJ/kg, which is based on saturated steam at 690 kPa. This parameter is specified in the design because use of a lower quality steam would reduce the fraction of HAP's removed from the wastewater treated by the design steam stripper.

(v) *Maximum liquid tray loading.* The maximum liquid tray loading in the proposed rule was 39,900 *l*/hr-m ^{2}. Because the liquid tray loading is dependent on several other steam stripper parameters, including the steam-to-feed ratio, the EPA has revised this input parameter for the design steam stripper as a result of the revised design analysis. The design analysis indicates that the revised maximum liquid tray loading is 67,000 *l*/hr-m^2.

(vi) *Materials of construction.* Although the rule does not specify a particular type of steel that the SOCMI must use to construct the design steam stripper, the cost estimates for the final rule include the cost of stainless steel construction. The cost estimate for the steam stripper in the proposed rule was based on carbon steel construction. Numerous comments on this issue requested that the EPA reevaluate the cost of constructing a design steam stripper based on the use of stainless steel for construction. Commenters in favor of stainless steel construction stated that stainless steel was stronger, more durable, and more reliable than carbon steel. Also, stainless steel is the minimum grade of building material that would be used by the industry because of corrosion problems associated with carbon steel. The EPA received no comments in favor of carbon steel construction. The EPA has revised the cost estimate for the design steam stripper using stainless steel and has determined that the design steam stripper remains a cost-effective option for treating wastewater.

b. *Fraction removed (Fr).* In the final rule, the EPA has revised the required Fr values (i.e., strippabilities) and assigned an Fr for each of the individual compounds regulated by the wastewater provisions (i.e., compounds listed on table 9). Several commenters requested that the EPA:

(1) Re-evaluate the Fr estimates in the proposed rule using actual Henry's law constants at 100 °C; and

(2) Assign a better estimate of individual compound-specific Fr values rather than use the strippability groups.

In response to comments, the EPA conducted a literature search to determine peer-reviewed Henry's law constants at 25 and 100 °C, and selected the best estimates available for each compound. The revised Henry's law constants at 100 °C were used to estimate Fr values for each of the 76 compounds in the wastewater provisions of the final rule. The report documenting the development of the constants is titled "Henry's Law Constants for the 83 HAP's Regulated in the Proposed HON Wastewater Provisions," and is provided in Docket A–90–23. In the proposed rule, each of the compounds listed on table 9 was assigned to one of these strippability groups. The strippability groups represented a range of actual strippabilities with a single target removal efficiency (i.e., strippability). The EPA agreed with commenters that assigning HAP's to a specific strippability group could preclude compliance with the standard for some compounds. Therefore, the EPA generated compound-specific Fr values based on the revised Henry's law constants for each of the compounds listed in table 9 of subpart G. Additionally, the EPA has revised the proposed compliance option that required compounds listed on table 9 of subpart G to meet the target removal efficiencies that were associated with the strippability groups. The compliance option in the final rule requires that the owner or operator treat compounds to meet their individual Fr's, which are assigned in table 9 of subpart G.

c. *Emission estimates*—(i) *Wastewater models.* For the final rule, the EPA has revised the emission models for lift stations, junction boxes, open sumps, trapped drains, and weirs using a study provided by one commenter, in which the emissions of organic HAP's were measured. The EPA reviewed the information and determined that the report and source data were appropriate to use to improve the emission models. The air emission model for weirs was modified to account for gas-phase resistance. These revised models also incorporate an approach for modeling site-specific configurations of lift stations, junction boxes, sumps, drains, and weirs that are currently used by the SOCMI. The models used to calculate the Fe's are described in "Estimation of Air Emission Factors from Airflow in Wastewater Collection Systems," November 30, 1993.

(ii) *Collection and treatment scenarios.* The EPA also revised the SOCMI source wastewater collection and treatment scenarios based on information provided by one commenter, EPA staff observations, and State and EPA environmental regulatory enforcement representatives from Texas, Louisiana, and New Jersey. Several commenters stated that baseline emission estimates should be revised based on emission data and SOCMI source scenarios that were submitted to the EPA during the public comment period. The EPA considered and incorporated, where appropriate, data that were submitted by commenters.

(iii) *Fraction emitted (Fe) values.* The revised Fe's in the final rule are based on two different wastewater collection and treatment system scenarios with three different levels of control, and with each control level weighted based on the expected level of occurrence. The three control levels and the corresponding fraction of occurrence are: (1) Uncontrolled = 0.50; (2) medium degree of control = 0.40; and (3) higher degree of control = 0.10. Values for Fe for individual compounds were calculated for each of the two scenarios and the control distributions summarized above. The resulting two control weighted average Fe's for each individual compound (one for each scenario) were averaged together, resulting in the final Fe values. This procedure is described in detail in the memorandum, "Estimation of Air Emissions from Model Wastewater Collection and Treatment Plants Systems," February 2, 1994.

The EPA used revised scenarios and emission models in conjunction with the revised Henry's law constants to revise the Fe values for each compound listed on table 9. The EPA used the revised Fe values to calculate the baseline emission estimates for the final rule and to re-evaluate which organic HAP's should be subject to the wastewater provisions of the HON. Based on the revised Fe's, the EPA has deleted seven compounds from the final rule. Each of these compounds is unlikely to be emitted in significant quantities from the collection system (due to the low Fe value) and will be readily biodegraded upon reaching the biological treatment unit.

Several commenters stated that some of the HAP's regulated by the proposed HON are non-volatile or semi-volatile, are not likely to be emitted from wastewater, and should be deleted. Based on the revised Fe values, the EPA has removed the following seven compounds from the wastewater provisions of the final rule: Aniline (62533); 2-chloroacetophenone (532274); o-cresol (95487); 3,3-dimethylbenzidine (119937); diethylene glycol diethyl ether (112367); diethylene glycol dimethyl ether (111966); and ethylene glycol monoethyl ether acetate (111159). An increase in baseline emission estimates for wastewater of 9 percent resulted from the emission estimate revisions. The primary reasons for the change were:

(1) Revised Henry's law constants;

(2) Revised wastewater emission models for lift stations, junction boxes, open sumps, and open drains; and

(3) Revised scenarios and Fe values.

d. *Wastewater tanks.* In the final rule, the EPA requires any owner or operator of a SOCMI source who is subject to the wastewater tank provisions in § 63.133 of subpart G to calculate the vapor pressure and the capacity of the tank in order to determine the applicable compliance options. The proposed rule did not require the owner or operator to determine the vapor pressure or the tank capacity, but rather required the same compliance options for wastewater tanks regardless of size and vapor pressure.

Several commenters requested the following changes to the proposed wastewater tank provisions including:

(1) That wastewater tanks be managed in accordance with the proposed storage vessel provisions;

(2) That wastewater tank requirements be based on the partial pressure of the liquid in the tank;

(3) That wastewater tank requirements be based on the capacity of the tank; and

(4) That wastewater tanks operated under negative pressure be exempt from using Method 21 for leak detection.

In response to comments, the EPA has incorporated several changes to the wastewater tank provisions. The EPA continues to require emission controls on all wastewater tanks that manage Group 1 wastewater streams or residuals generated from Group 1 wastewater streams. However, the EPA has included capacity and maximum partial vapor pressure thresholds that are consistent with those of the storage vessel provisions. The EPA also is allowing the owner or operator to demonstrate compliance with the wastewater tank provisions by installing only a fixed roof if the tank meets any of the following criteria: (1) Is less than 75 m^3; (2) is greater than or equal to 75 m^3 and less than 151 m^3 and has a maximum true vapor pressure less than 13 kPa; or (3) is greater than or equal to 151 m^3 and has a maximum true vapor pressure less than 5.2 kPa. The EPA has determined that a fixed roof is sufficient to suppress emissions from any wastewater tank that meets the preceding criteria. In addition, the EPA has dropped the requirement for annual Method 21 inspections on wastewater tanks. In the final rule, Method 21 inspections are required initially and annual visual inspections are required. Furthermore, the EPA has added a provision to the final rule which states that any wastewater tank operated and maintained under negative pressure is not required to comply with the requirements for leak detection by Method 21 of 40 CFR part 60, appendix A because it cannot emit.

e. *Containers.* In the final rule, the EPA has included a *de minimis* capacity of 0.1 m^3 (i.e., approximately 26.4 gal) in the definition of container, below which the container is not subject to the HON. For the purpose of monitoring and submerged filling, the EPA distinguishes between containers that are less than or equal to 0.42 m^3 (i.e., approximately 110 gal) and those that exceed 0.42 m^3. Furthermore, the EPA has changed the requirements for a submerged fill pipe. In the final rule, a submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled. Submerged filling is not required for containers with capacities less than or equal to 0.42 cubic meters.

The proposed rule did not distinguish between container capacities. All containers regardless of size were required to meet the same requirements. The EPA received comments in favor of changing the monitoring requirements and establishing a *de minimis* container size. Specifically, commenters asserted that the HON should not apply to either very small containers which include lab sample bottles or containers with small capacities such as 30 gallons or 55 gallons. Commenters also claimed that the requirement to use Method 21 for containers, particularly those that are on site for a short time, would be burdensome.

In response to comments, the EPA has established a *de minimis* capacity of 0.1 m^3, which exempts lab bottles and other very small containers from the HON. The EPA has also provided an additional compliance option for leak detection monitoring for containers with capacities less than or equal to 0.42 m^3. If a container has a capacity less than or equal to 0.42 m^3, the owner or operator may either: (1) Use Method 21 initially to demonstrate that the container is not leaking; or (2) document that the container meets DOT specifications and testing requirements in 49 CFR part 178. The EPA has determined that if an owner or operator is in compliance with the DOT specifications and testing requirements in 49 CFR part 178, no additional requirements are necessary to ensure that the containers do not leak. The owner or operator must maintain records documenting the Method 21 test for non-DOT containers. For DOT-approved containers, the owner or operator does not need to keep a record because compliance may be determined by a visual inspection.

The EPA also has reduced the monitoring burden for larger containers with a capacity greater than 0.42 m^3. Whereas the proposed rule specified the use of Method 21 initially and annually, the final rule requires the use of Method 21 initially and allows annual visual inspections thereafter.

f. *Method 304 and method 305.* No major changes have been made to Method 304. However, the EPA has included both Method 304A and 304B in the final rule. Commenters requested that Method 304 allow more flexibility in choice of laboratory equipment, clarifier design, and some operating parameters. The EPA agreed with the commenters and has added options to increase the flexibility of the method, such as allowing air cylinders in addition to oxygen cylinders to aerate the microbial population. The additional flexibility added to the method does not reduce the accuracy or precision of the method results and could in some cases improve the results by better representing the actual biological treatment process. Changes made to the final Methods 304A and

304B are in section 4.0 of BID volume 2E.

Several commenters misunderstood the requirements of Method 305. The EPA discusses clarifications to the method in volume 2B of the BID. One commenter questioned why the EPA developed Method 305 when other methods, such as the 600 series for water and wastewater, were available. Another commenter was concerned whether the test method results are realistic.

To determine the significance of HAP emissions from wastewater, it is more important to know how likely a HAP is to leave the wastewater and go into the atmosphere than to know the actual concentration of the HAP in the wastewater. The EPA developed Method 305 to provide a relative measure of the emission potential of wastewater. Other methods measure the actual concentration of pollutants; no other methods define the relative measure of emission potential. Although the results of Method 305 do not necessarily represent the actual pollutant concentration in wastewater, the test method results are realistic—the results measure the relative emission potential. The parameters of the test method were chosen to define emission potential based on mathematical modeling of actual data collected from various sources throughout the country. In addition, the regulation requires that concentration be reported in terms of Method 305 results; it does not require the owner or operator to use Method 305. The owner or operator may use any method that has been validated by section 5.1 or 5.3 of Method 301 and converted to Method 305 results using the appropriate F_m factor.

g. *Water seal controls.* The EPA revised the requirements for water seals. In § 63.137(e) of the final wastewater provisions if a water seal is used on a drain hub receiving a Group 1 wastewater stream, the owner or operator shall either extend the drain pipe discharging the wastewater below the liquid surface in the water seal, or install a flexible cap (or other enclosure which restricts wind motion) that encloses the space between the drain discharging the wastewater to the drain hub receiving the wastewater.

VI. Summary of Significant Comments and Changes To Proposed Subpart H

Approximately 60 letters commenting on proposed subpart H were received; most of these letters contained multiple comments. The EPA's responses to these comments can be found in the BID referenced in the ADDRESSES listing in this preamble. The most significant comments and responses for the equipment leak standard (subpart H) are summarized in this section of the preamble.

A. Applicability

1. SOCMI Processes

Many commenters requested that EPA make the list of SOCMI processes in subpart H consistent with the list in subpart F and that the EPA correct errors in nomenclature and CAS numbers provided. Some of these commenters also recommended consolidation of all the applicability provisions for SOCMI processes in subpart F. As discussed in section V.A.1 of this preamble, the lists of SOCMI processes have been consolidated into a single list in subpart F and errors in CAS numbers have been corrected. The revised subpart F presents all the criteria for determining applicability of the HON for SOCMI processes. The EPA believes this revised organization will be easier and more efficient to use.

2. The Seven Non-SOCMI Processes

At proposal, the provisions of subpart H applied to both SOCMI processes and to equipment handling specific chemicals for seven listed non-SOCMI processes. Subparts F and H in the proposed rule presented the applicability provisions for both SOCMI and non-SOCMI processes. In the final rule, the applicability provisions for the non-SOCMI processes are presented in a separate subpart, subpart I, from the SOCMI applicability provisions which are specified in subpart F. Subpart I identifies the specific non-SOCMI processes that are subject to the provisions of subpart H. In addition, subpart I presents definitions and general information on compliance, reporting, and recordkeeping.

a. *Separate from SOCMI category.* A number of commenters thought that the non-SOCMI processes subject to subpart H should be regulated separately from the SOCMI processes. These commenters thought that combining the non-SOCMI processes in a standard for SOCMI processes could result in piecemeal regulation, overlapping section 112(d) regulations, and confusion for regulatory agencies. A few of these commenters also argued that regulation of the non-SOCMI processes should be deferred until the rest of the section 112(d) emission standard is issued for each specific non-SOCMI process.

The EPA agrees with the commenters' suggestions for reorganization of the regulatory provisions into separate subparts. The applicability provisions for the non-SOCMI processes have been placed in subpart I. Subpart I refers to subpart H for the substantive requirements. As discussed in section VI.A.2.b through e of this preamble and in the BID, subpart I contains revised definitions for some of the non-SOCMI processes. The definitions were revised to specifically identify the intended processes and to directly correspond to the categories listed in the source category list (57 FR 31576). The EPA expects that these changes will minimize the possibility for confusion and development of overlapping regulations. The EPA does not agree with the suggestion to defer the applicability of the equipment leak standard to the non-SOCMI processes until requirements for the other emission points are issued. This change suggested by the commenters is not consistent with the spirit of the negotiated agreement.

b. *Chlorine production.* Under the negotiated agreement, chlorine production processes that used carbon tetrachloride as a diluent for nitrogen trichloride or as scrubbing liquid to recover chlorine from the liquefaction of tail gas would implement the equipment leak provisions for equipment in 5 percent, or greater, carbon tetrachloride service. At the Fourth Meeting of the Parties to the Montreal Protocol in November 1992, the United States Government and the Other Parties agreed to accelerate the phase-out schedule for carbon tetrachloride by requiring a reduction from 1989 levels of 85 percent in 1995 and a complete phase-out by January 1, 1996. Because of this development, chlorine producers will cease use of carbon tetrachloride by January 1, 1996. Therefore, several commenters questioned the value of continued application of subpart H to chlorine production processes.

The EPA agrees that the reasons for application of the negotiated equipment leak rule to chlorine production processes have significantly diminished and will disappear entirely in the next 2 years. Therefore, to avoid essentially duplicative regulation of the same operations, chlorine production has been removed from the list of seven additional processes subject to subpart H.

c. *Pesticide production.* One commenter argued that the proposed definition of "pesticide production" defines a source category that is broader than any category in the agricultural chemical production industry grouping identified in the List of Source Categories (57 FR 31576), or in the proposed Schedule for Promulgation of Emission Standards (57 FR 44147). The

commenter noted that only the production of Captafol, Captan, Chlorothalonil, Dacthal(tm), and Tordon(tm) were listed in 57 FR 31576 or 57 FR 44147 as being specifically regulated by the HON equipment leak standard. The commenter argued that if EPA wants to update the source category list, EPA must comply with statutory requirements to include only categories of major sources and area sources where a finding of adverse health effects has been made. The commenter recommended that the definition of pesticide production in subpart H be modified to regulate equipment leaks only from the production of Captafol, Captan, Chlorothalonil, Dacthal™, and Tordon™.

The definition for pesticide production in proposed subpart H was developed in the regulatory negotiation before creation of the source category list. The source category list and schedule (57 FR 31576 and 57 FR 44147) identifies the pesticide production processes that EPA had information on at the time of the negotiations on the equipment leak standard. Therefore, subpart H is being applied only to the five production processes identified in the source category list (production of Captafol, Captan, Chlorothalonil, Dacthal™, and Tordon™). As EPA obtains information on other pesticide processes, these processes will be added to the source category list in the future and standards will be developed.

d. *Chlorinated hydrocarbon use.* Numerous inquiries have been received from members of the public questioning whether, through the "chlorinated hydrocarbon use category" in subpart H, the EPA intended subpart H to apply to all operations that use chlorinated organic solvents. A few written comments were also received requesting clarification that this definition applied to production operations only.

The term "chlorinated hydrocarbon use" was a label created in the regulatory negotiation to refer to a number of specific miscellaneous chemical manufacturing processes that used chlorinated solvents as a solvent or processing aid. Examples of the specific processes included under this term are production of polycarbonate and production of polysulfide rubber. The provisions of subpart H were intended to apply only to the specific types of processes listed in the definition and not to all use of chlorinated organic solvents. Because of the confusion created by the label applied to these processes, the final rule does not use the term chlorinated hydrocarbon use. Instead, subpart I specifically identifies the processes subject to subpart H.

e. *Miscellaneous butadiene use.* Comments were received requesting that the definition of this term clarify that these are processes producing chemicals or chemical products.

The EPA agrees that "miscellaneous butadiene use" refers to a number of miscellaneous chemical manufacturing processes that use butadiene to produce other chemicals or chemical products. To eliminate the possibility of confusion regarding the applicability, subpart I lists the specific processes subject to H and the term "miscellaneous butadiene use" is not used in the final rule.

B. Compliance Schedule

1. Consistency with Subpart G

Unlike most standards, compliance with the provisions of subpart H is phased in by type of chemical manufacturing process. The proposed subpart H divided the regulated processes into five distinct groups to which the provisions would apply beginning 6 months after publication of the final rule in the Federal Register. Thereafter, the rule would apply to another group of processes every 3 months. The final rule for subpart H uses the same approach. In the proposed and final provisions in subpart G, sources are required to comply by 3 years from date of publication of the final rule in the Federal Register.

Many commenters requested a compliance schedule for subpart H similar to the 3-year schedule provided under subpart G. Several commenters argued that the 6-to-18-month compliance period in proposed subpart H did not take into consideration the implementation problems that could arise during installation of required equipment. A few commenters thought that proposed subpart H did not permit applications for compliance extensions.

The EPA does not agree with the commenters that sources should be allowed up to 3 years to comply with the provisions in subpart H. Subpart H consists of a combination of work practice requirements for many equipment components and equipment standards for compressors, sampling systems, open ended lines or valves, and pressure relief valves. Unlike the requirements in subpart G, the equipment required by subpart H should not involve long periods of time for design, construction, and installation. The commenters did not provide any information that would justify establishing a source-category-wide compliance schedule for subpart H similar to that provided for subpart G. The EPA recognizes that there may be circumstances present in individual facilities where an extension is appropriate for compliance with certain requirements in subpart H. In such cases, the owner or operator may request an extension of compliance through the provisions of 40 CFR 63.6(i)(4). Section 63.182(a)(6) has been added to subpart H to clarify that extensions of compliance may be requested if additional time is necessary for installation of equipment required by subpart H.

2. Phase-In of Valve Provisions

The proposed standard for valves was structured to be implemented in three phases, with lower leak definitions in each phase. In the first and second phases of the proposed standard, monitoring was to be conducted quarterly. In the third phase of the proposed standard, the monitoring frequency would be determined by the percent leaking valves, with the best performers having an annual monitoring requirement. The final standard retains the phased-in implementation of the proposed standard and the proposed monitoring frequencies.

Many commenters requested that the rule be modified to allow facilities to begin Phase III of the valve provisions on the applicability date. Some of these commenters thought facilities that qualify for reduced monitoring frequency should be allowed to do so at the earliest possible date. Other commenters thought the rule should allow the owner or operator to elect the monitoring frequency based on the source's current status since records may not have been retained. The commenters submitted that disallowing early adoption of Phase III would penalize facilities that have implemented the proposed rule before required or that have established low leak rates through existing programs.

The EPA agrees that the final rule should allow owners or operators the flexibility to initiate Phase III at any time, and it was intended that this option would be available. Subpart H has been revised to clarify this point. This clarification does not, however, allow an owner or operator to elect to use reduced monitoring frequencies without Method 21 data to document achievement of lower leak rates for the required periods.

C. Selection of Requirements

1. Closed Vent Systems and Control Devices

At proposal, both subparts G and H contained requirements for monitoring

inspections of closed vent systems. In the final rule, the inconsistencies between the proposed provisions in subparts G and H have been eliminated and the two sets of provisions have been coordinated. The final subparts G and H each include provisions for closed vent systems.

Several commenters recommended that all provisions for closed vent systems be consolidated in subpart H and all inconsistencies eliminated. These commenters speculated that different provisions for closed vent systems serving different operations would increase confusion, recordkeeping costs, and potential for recordkeeping violations. Some of these commenters questioned the basis for treating valves, connectors, and compressors in closed vent systems separately from the same equipment in the process. The commenters noted that the equipment is either in low pressure or vacuum service and the annual inspection requirements are of no environmental benefit.

The EPA evaluated the commenters' suggestions and agrees that it would be appropriate to have a consistent set of provisions for closed vent systems in the rule. A uniform set of provisions for closed vent systems will benefit both State and Federal enforcement programs and industry by both reducing review time and complexity of record systems. Because subpart G also included requirements for inspections of equipment other than closed vent systems, the closed vent system provisions in subpart G were not consolidated into subpart H.

The EPA also reevaluated the provisions requiring annual Method 21 monitoring of closed vent systems. Closed vent systems in chemical plants and refineries are constructed of piping and connections and are operated at low pressures or under vacuum. An assessment of recent data and experience from implementation of existing standards under 40 CFR part 60 and part 61 showed that only rarely are leaking connectors and other equipment identified through the annual Method 21 inspections of closed-vent systems. As discussed in the preamble to the proposed rule (57 FR 62666 and 57 FR 62676), connectors have very low leak frequencies and once leak-tight they remain leak-tight. Consequently, the final rule only requires an initial Method 21 demonstration that all connections and other equipment in closed vent systems are operated with instrument readings less than 500 ppm and annual inspections for indications of leaks (visual, olfactory, or audible). The EPA believes that this requirement along with the requirement for flow indicators or car seals on by-pass lines that could divert emissions from the control device to the atmosphere will ensure emissions are controlled as required.

The EPA would like to clarify that the provisions for inspections of closed vent systems do not apply if the closed vent system is operated in vacuum service. The closed vent systems provisions in section 63.148 of subpart G and section 63.172 of subpart H have been revised to clarify that these provisions do not apply if the system is operated under vacuum.

2. Inaccessible Connectors

Proposed subpart H excluded connectors that "were unable to be reached from a 7.6-meter (25-foot) portable scaffold on the ground, and were greater than 2 meters above a support surface" from the monitoring provisions. In the final rule, EPA has revised this definition to reflect concerns with safety of monitoring connectors accessible only via portable scaffolds and to clarify the original intent.

Several commenters requested that the definition of inaccessible connectors be revised to be any that are greater than 2 meters above a support surface and, thus, the same as the difficult-to-monitor valve definition. The commenters objected that portable scaffolds presented safety and practical concerns due to limitations on access due to equipment spacing, explosion hazards, and risks of damaging electrical cables and piping.

During the Committee discussions in negotiation of these provisions, the portable scaffolding envisioned was a wheeled scissor-lift platform that would sit on the ground below the monitoring or repair location. Portable scaffolding was not envisioned as including field-erected scaffolding or movement over grassed or unstable stone covered areas below pipelines because of concerns these operations would endanger the monitoring personnel's lives. Because the proposed rule's language was not clear on this point, the EPA agrees that clarification of the term "portable scaffold" is warranted. A definition has been added to the final rule. The EPA believes that clarifications in subpart F to the definition of production process should also address commenters' concerns regarding monitoring connectors in interunit pipelines.

3. Response Factor Adjustments

The proposed standard required correction of the Method 21 instrument readings if the response factor for the process fluid was 3 or greater, and documentation of the response factor for every process stream subject to the standard. The proposed standard also specified the use of methane as the sole reference gas for the response factors. The final standard retains the use of methane as the sole basis for response factors, but revises the requirements for response factor adjustment to ensure the instrument meets specifications of Method 21. The final standard, thus, does not require process stream response factor adjustments.

Several commenters objected to the proposed requirement to determine response factors for process streams arguing that most factors are less than 3, the difference in number of leaks detected will be small, and the program complication will be immense. Another issue with the proposed requirement was that the equation for calculating response factors of mixtures was applicable only to gas mixtures. For mixtures of liquids, the equation would have to be adjusted by the vapor pressure of each component. A number of commenters were also concerned that the stipulation of methane as the sole reference gas would preclude the use of some monitoring instruments.

As discussed in the proposed notice (57 FR 62682), the Committee decided to limit the acceptable range of response factors to ensure that the effect of the standard could not be significantly altered by the monitoring instrument used or by the composition of streams monitored. At the time of the negotiations, few response factors at 500 ppm were available and it was believed that most SOCMI processes would have no more than four to five compounds present in any given stream. Based on these assumptions, the Committee thought that the requirement to correct any response factors greater than 3 would not impose unproductive costs or be especially burdensome.

The EPA reevaluated this proposed requirement in light of the public comments and the experience gained by chemical plants that have implemented the negotiated rule. Experience with the correction for response factors has shown the proposed provisions to be significantly more burdensome than originally anticipated. Specifically, several facilities have reported that instead of quantifying 4 to 5 compounds in some streams, they are quantifying 50 to 100 compounds. In some cases, owners or operators have elected to correct all instrument readings by the highest response factor for any compound in the process rather than undertake the effort associated with the stream specific corrections.

The EPA also reviewed the reasons the Committee originally considered requiring adjustment of screening values by response factors. The response factor adjustment originated in Committee discussions on studies to improve the emission estimates. (Response factors are used to correct instrument readings to indicate actual concentrations for developing emission estimates.) The appropriateness of adjusting screening values in the leak detection and repair provisions was not considered. These adjustments will not change the emission reductions achieved from implementing the standard. Therefore, EPA believes that eliminating this provision does not change the effect of the standard and preserves the Committee's intent of minimizing unproductive effort.

The final standard requires the owner or operator to use a monitoring instrument that meets the specifications of Method 21 of appendix A of 40 CFR part 60. The proposed provisions in § 63.180(b)(6) have been removed from the standard. It has been clarified that the leak definitions are expressed in terms of total VOC, and not speciated concentration readings.

A number of commenters also objected to the specification of methane as the calibration gas for the Method 21 monitoring. These commenters were concerned that this specification precluded the use of photoionization detectors and recommended the rule allow use of calibration gas best suited to the detector.

The provisions in § 63.180(b)(4) designate methane as the calibration gas to identify methane as the sole reference gas for calculation of response factors. If an instrument has a poor response or no response to methane, a calibration gas other than methane may be used. In cases where the instrument's response factor is greater than 10, the instrument readings must be converted to a methane basis as described in section 3.2 of Method 21. Section 63.180(b)(4) has been clarified on this point.

D. Recordkeeping and Reporting

1. Consistency With Subpart G and General Provisions Reporting Requirements

Proposed subpart H required owners or operators of sources to submit an initial report and semiannual reports thereafter. The initial reports were to be submitted within 90 days of the applicability date for each group of chemical production processes. In the final rule, the system of reports in subpart H has been revised to be compatible with the five-report system of subpart G, and the relationship of the general provisions to subpart H has been clarified.

Several commenters suggested that subpart H use a system of reports similar to that specified in subpart G and that the final standard should provide a means to coordinate reporting for processes in different applicability groups. The commenters urged EPA to make these changes to facilitate management and enforcement of the provisions. A few commenters questioned the need for semiannual reporting when 70 to 95 percent of the components at a facility would be monitored on an annual basis. Additionally, the need for certain reports was questioned by several commenters.

The EPA agrees that, to the extent possible, reporting requirements for subpart H should be consistent with those of subpart G. A consistent system will, as noted by the commenters, make management of the program easier for the permit authority as well as the source. As proposed, an owner or operator of a source with processes in each of the five applicability groups could be required to submit as many as eight reports each year. Therefore, to streamline reporting requirements and minimize potential confusion, the following changes have been made to the proposed requirements:

(1) Submit the compliance notification report no later than 90 days after the applicability date for the group of chemical processes and the periodic reports every 6 months thereafter;

(2) Allow the source to adjust the reporting schedule to combine the periodic reports for subpart H with those for subpart G once the source comes into compliance with the provisions in subpart G; and

(3) Consolidation of several special reports into the periodic report.

The final standard does not allow annual reporting as requested by several commenters. Although many components may be monitored on an annual basis, the monitoring frequency for pumps and agitators is monthly and annual reporting would not be consistent with the reporting system in subpart G. The operating permit provisions of the Act, section 504(a), also requires reporting to be at least semiannual. Additionally, unless all units at a source are on the same monitoring schedule, the source would have to submit multiple annual reports. The EPA believes that consolidating the reporting into semiannual reports for G and H is more efficient for both industry and enforcement agencies.

2. Burden of Recordkeeping and Reporting Requirements

The vast majority of the comments received on proposed subpart H concerned the burden of the recordkeeping and reporting requirements. Some commenters argued that the proposed subpart H would require from 1.5 to 2.5 person-years effort for the initial report and from 1 to 1.5 person-years effort for subsequent reports. These commenters thought that the proposed requirements were not necessary to ensure enforceability of or compliance with the provisions. Many comments were received regarding documentation of equipment not subject to the provisions, compatibility with computerized systems, and duplicative records and reports. The detailed summary of these comments and EPA's response is provided in chapter 5 of promulgation BID volume 2A.

In light of these comments, EPA reevaluated the proposed requirements to ensure that only those records and reports essential for enforcement of the standard are required. This review showed that some of the commenters' concerns arose from a lack of clarity in the proposed standard regarding actual records required for some of the provisions and other concerns arose from overlapping or duplicative requirements. It was also determined that some provisions should be redrafted to be compatible with computerized data management systems and the revised provisions would still provide the information necessary to demonstrate compliance. Examples of such changes include: allowing a source to maintain on file a written procedure outlining the conditions for delay of repair and requiring certain records only for nonautomated systems. The EPA also reviewed the proposed standard to identify implied recordkeeping requirements and to specify all the required records in § 63.181.

VII. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow the public to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and the EPA's responses to significant comments, the contents of the docket,

except for interagency review materials, will serve as the record in case of judicial review [section 307(d)(7)(A)].

B. Executive Order 12866

This regulation has been reviewed in accordance with Executive Order 12866. Under the terms of the Order, the Administrator has assessed the potential costs and benefits of this regulatory action. The methods for and results of these cost and benefit analyses are described in the HON's Regulatory Impact Analysis (RIA). The RIA was included in the HON docket at proposal, and thus it was made available for public comment.

Executive Order 12866 also requires that the record for "significant" rules include an assessment of the potentially effective and reasonably feasible alternatives to the planned action. The potentially effective and reasonably feasible alternatives to the control requirements in the HON were also analyzed as part of the rule development process. The methods for and results of these analyses are described in the HON's Background Information Document (BID). The BID was included in the HON docket at proposal, and thus it was also available for public comment. In addition, many of the alternative requirements considered by the Administrator were described in the preamble for the HON proposal.

The potential costs associated with alternatives selected by the Administrator for this rule are primarily the result of statutory requirements. All elements of the cost that are not directly attributable to statutory requirements were deemed appropriate because the Administrator determined that they were necessary for administering this program effectively and efficiently. In assessing the potential costs and benefits—both quantitative and qualitative—of this rule, the Administrator has determined that the benefits justify the costs. Burdens specifically associated with information collection requirements are identified and explained in the next section of this preamble under the heading Paperwork Reduction Act of 1980.

The Administrator has also determined that this regulatory action does not unduly interfere with State, local and tribal governments in the exercise of their governmental functions.

C. Paperwork Reduction Act

The information collection requirements in this rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An Information Collection Request document has been prepared by the EPA (ICR No. 1414.02), and a copy may be obtained from Sandy Farmer, Information Policy Branch, EPA, 401 M Street, SW. (2136), Washington, DC 20460; or by calling (202) 260–2740. These requirements are not effective until OMB approves them and a technical amendment to that effect is published in the Federal Register.

This collection of information has an estimated reporting burden averaging 1,400 hours per response, and an estimated annual recordkeeping burden averaging 5,400 hours per respondent. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, EPA, 401 M Street, SW., (Mail code 2136); Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires EPA to consider potential impacts of proposed regulations on small "entities." If a preliminary analysis indicates that a proposed regulation would have a significant economic impact on 20 percent or more of small entities, then a regulatory flexibility analysis must be prepared.

Regulatory impacts are considered significant if any of the following criteria are met:

(1) Compliance increases annual production costs by more than 5 percent, assuming costs are passed on to consumers;

(2) Compliance costs as a percentage of sales for small entities are at least 10 percent more than compliance costs as a percentage of sales for large entities;

(3) Capital costs of compliance represent a "significant" portion of capital available to small entities, considering internal cash flow plus external financial capabilities; or

(4) Regulatory requirements are likely to result in closures of small entities.

Firms in the chemical industry are classified as small by the Small Business Administration (SBA) if employment is less than 500 to less than 1,000 employees depending on the particular Standard Industrial Classification (SIC) of the firm. The firms classified as small by this definition are only small in a relative way because an average firm with 500 employees in the SOCMI industry has an average sales of over $180 million.

Of the 66 firms analyzed in the economic impact analysis, only 10 have fewer than 1,000 employees. Since these 10 are only 15 percent of the firms analyzed, they do not constitute a substantial number (usually 20 percent).

The economic analysis also projected generally small impacts (87 percent of the analyzed sample are projected to have output changes of less than 2 percent). Therefore, the standard is not expected to have a significant economic impact on a substantial number of small firms.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small business entities.

E. Review

This regulation will be reviewed 9 years from the date of promulgation. This review will include an assessment of such factors as evaluation of the residual health risks, any overlap with other programs, the existence of alternative methods, enforceability, improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

TABLE 1.—NATIONAL PRIMARY AIR POLLUTION IMPACTS IN THE FIFTH YEAR[a]

Emission points	Baseline emissions (Mg/yr)		Emission reductions			
			(Mg/yr)		Percent	
	HAP	VOC[b]	HAP	VOC[b]	HAP	VOC[b]
Equipment leaks	62,000	79,000	54,000	69,000	87	87

TABLE 1.—NATIONAL PRIMARY AIR POLLUTION IMPACTS IN THE FIFTH YEAR[a]—Continued

Emission points	Baseline emissions (Mg/yr)		Emission reductions			
	HAP	VOC[b]	(Mg/yr)		Percent	
			HAP	VOC[b]	HAP	VOC[b]
Process vents	310,000	600,000	300,000	500,000	97	83
Storage vessels[c]	14,000	14,000	7,300	7,300	52	52
Wastewater collection and treatment operations	130,000	490,000	100,000	370,000	77	76
Transfer loading operations	900	900	500	500	56	56
Total[c]	520,000	1,200,000	460,000	950,000	88	79

[a] These numbers represent estimated values for the fifth year. Existing emission points contribute 84 percent of the total emission reduction. Emission points associated with chemical manufacturing process equipment built in the first 5 years of the standard contribute 16 percent of the total emission reduction.
[b] The VOC estimates consist of the sum of the HAP estimates and the non-HAP VOC estimates.
[c] As discussed in section III.B.3 of the preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels at existing sources. Therefore, the emission reductions for storage vessels shown above, and consequently for the total, may be slightly overstated.

TABLE 2.—NATIONAL CO AND NO_x EMISSIONS IMPACTS IN THE FIFTH YEAR

Emission points	Increase in CO emissions[a] (Mg/yr)	Increase in NO_x emissions[a] (Mg/yr)
Equipment leaks	0	0
Process vents[b]	1,600	16,000
Storage vessels	0	0
Wastewater collection and treatment operations[c]	100	800
Transfer loading operations[b]	[d]	[d]
Total	1,700	17,000

[a] Emissions of these criteria pollutants are caused by operation of control devices.
[b] Emissions result from the combustion of natural gas along with the organic HAP emission streams in incinerators and flares.
[c] Emissions result from the combustion of various fossil fuels to generate steam for use in a steam stripper.
[d] Emissions are less than 5 Mg/yr.

TABLE 3.—NATIONAL ENERGY IMPACTS IN THE FIFTH YEAR

Emission points	Increase in electricity consumption[a]		Increase in Natural gas consumption[b]		Increase in steam consumption[b,c]		Total[d]	
	10^6 kw-hr/yr	10^3 BOE/yr	10^9 Btu/yr	10^3 BOE/yr	10^9 Btu/yr	10^3 BOE/yr	10^3 BOE/yr	TJ
Equipment leaks	0	0	0	0	0	0	0	0
Process vents	260	430	6,900	1,100	0	0	1,500	9,600
Storage vessels[e]	16	26	0	0	0	0	26	170
Wastewater collection and treatment	13	21	3	0.5	3,000	500	520	3,300
Transfer loading operations	[f]	0	45	7	0	0	7	45
Total[e]	290	480	6,900	1,100	3,000	500	2,100	13,000

[a] Conversion to BOE assumed a power plant heat rate of 10,000 Btu/kw-hr, heating value for oil of 144,400 Btu/gal, and 42 gal/bbl.
[b] Conversion to BOE assumed a heating value for oil of 144,400 Btu/gal and 42 gal/bbl.
[c] Steam use is calculated by multiplying the total volume of wastewater (lpm) from new and existing sources by the steam to feed ratio in the steam stripper (0.04) and assuming the steam stripper operates 351 days per year. It is assumed that the latent heat of the steam is 1131 Btu/lb and the boiler has an efficiency of 80 percent (Memorandum from Kristine Pelt, Radian Corporation, to Mary Tom Kissell, EPA/SDB, "Secondary Environmental Impact Factors used in the Framework for Steam Stripping Wastewater." February 1, 1994.)
[d] Due to rounding, column totals may be slightly different.
[e] As discussed in section III.B.3 of this preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels at existing sources. Therefore, the energy impacts for storage vessels, and consequently for the total, may be slightly overstated.
[f] Electricity usage is less than $1 * 10^6$ kw-hr/yr.

TABLE 4.—NATIONAL CONTROL COST IMPACTS IN THE FIFTH YEAR

Emission points	Total capital costs (10^6 S)	Total annual costs (10^6 S/yr)	Average HAP cost effectiveness[a] (S/Mg HAP)	Average VOC cost effectiveness[a] (S/Mg VOC)
Equipment leaks	120	(0.26)	(5)	(4)
Process vents	100	86	290	170
Storage vessels[b]	77	20	2,800	2,800

TABLE 4.—NATIONAL CONTROL COST IMPACTS IN THE FIFTH YEAR—Continued

Emission points	Total capital costs (10^6 $)	Total annual costs (10^6 $/yr)	Average HAP cost effectiveness[a] ($/Mg HAP)	Average VOC cost effectiveness[a] ($/Mg VOC)
Wastewater collection and treatment operations	140	50	490	130
Transfer loading operations	12	5	10 000	10,000
Total[b, c]	450	160	360	170

[a] Average cost-effectiveness values are determined by dividing total annual costs by total annual emissions reduction.
[b] As discussed in section III.B.3 of the preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels at existing sources. Therefore, the cost impacts associated with storage vessels, and consequently the total, may be slightly overstated.
[c] Except for the Total Capital Costs column, the total figures do not include an element for equipment leaks because the analysis of equipment leak requirements indicated a cost savings.

TABLE 5.—SUMMARY OF CHARACTERISTICS OF EMISSION POINTS SUBJECT TO PROPOSED SUBPART G

Emission point	For existing sources	For new sources
Process vents	Vent streams from continuous (non-batch) process that: (1) contain ≥50 ppmw HAP's and (2) have a flowrate ≥0.005 scmm and (3) have a cost effectiveness ≤$2,000/Mg	Vent streams from continuous (non-batch) process that: (1) contain ≥50 ppmw HAP's and (2) have a flowrate ≥0.005 scmm and (3) have a cost effectiveness ≤$11,000/Mg.
Storage tanks[a]	Storage vessels having: (1) a capacity ≥75 m^3 and <151 m^3 with a vapor pressure ≥13.1 kilopascal; or (2) A capacity ≥151 m^3 with a vapor pressure ≥5.2 kilopascal	Storage vessels having: (1) a capacity ≥38 m^3 and <151 m^3 with a vapor pressure ≥13.1 kilopascal; or (2) A capacity ≥151 m^3 with a vapor pressure ≥0.7 kilopascal.
Transfer operations	Transfer racks that load ≥0.65 million liters of HAP-containing liquids with a vapor pressure ≥10.3 kilopascal.	Same as existing source.
Wastewater treatment operations[b]	Wastewater streams that: (1) contain a total VOHAP concentration of table 9 HAP's of ≥10,000 ppmw; or (2) have a flowrate ≥10 lpm and contain a total VOHAP concentration of table 9 HAP's of ≥1,000 ppmw	Wastewater streams that: (1) have a flowrate ≥10 lpm and contain a total VOHAP concentration of table 9 HAP's of ≥1,000 ppmw; or (2) have a flowrate ≥0.02 lpm and contain VOHAP concentration of any table 9 HAP ≥10 ppmw.

[a] As discussed in section III.B.3 of the preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels (i.e., ≥76 m^3 and <151 m^3). The applicability criteria specified in this table represent option 1 in table 6.
[b] Wastewater treatment operations are exempt if the total source mass HAP flow rate from all of these streams, determined prior to exposure to the atmosphere and prior to treatment, is less than 1 metric ton per year.

TABLE 6.—CONTROL ALTERNATIVES FOR EXISTING SOURCES SUBJECT TO SUBPART G[a]

Kind of emission point	Control option	Emission reduction Mg/yr	Percent emission reduction	Cost $1,000/yr	Avg. $/Mg	Inc. $/Mg
Process vents[b]	1	235,000	93	55,000	234	.....
	2	236,000	93	58,000	245	1,800
	3	238,000	94	62,000	260	2,500
	4	239,000	94	66,000	276	3,900
	5	241,000	95	97,000	404	23,000
Wastewater[c]	0	0	0	0	0	.....
	1	68,400	79	29,200	430	430
	2	69,100	80	32,100	470	4,300
	3	69,600	81	39,100	560	13,000
	4	73,100	85	123,000	1,700	24,000
Transfer[d]	1	360	65	3,100	8,700	.....
	2	420	77	6,500	15,000	54,000
Storage: Small[e]	1	0	0	0	0	.....
	2	380	95	22,000	58,000	56,000
Storage: Medium[f, g]	1	370	72	2,400	6,600	.....

TABLE 6.—CONTROL ALTERNATIVES FOR EXISTING SOURCES SUBJECT TO SUBPART G[a]—Continued

Kind of emission point	Control option	Emission reduction Mg/yr	Percent emission reduction	Cost $1,000/yr	Avg. $/Mg	Inc. $/Mg
	2	450	68	6,400	14,200	48,000
Storage: Large[h]	1	2,000	19	5,300	2,600	
	2	5,100	48	10,300	2,000	1,600
	3	8,900	84	25,300	2,800	3,900
	4	9,000	84	27,100	3,000	122,000
Total: Floor[i]		238,000	68	66,000	280	
Selected option[i]		312,000	89	107,000	340	556
Total control[i]		324,000	92	282,000	870	14,600

[a] The impacts in this table are based on well-characterized chemical manufacturing processes and were estimated using the model emission point approach described in Section V of the proposal (57 FR 62621–62622).
[b] Process vent options are:
1 TRE = $1,500/Mg
2 TRE = $2,000/Mg
3 TRE = $3,000/Mg
4 TRE = $5,000/Mg
5 Control of all process vents.
[c] Wastewater options are:
1 10 lpm and 1,000 ppm
2 5 lpm and 800 ppm
3 1 lpm and 500 ppm
4 Control of all wastewater streams.
[d] Transfer options are:
1 0.65 million liter and 10.3 kilopascal
2 Control of all transfer racks
[e] Small denotes storage vessels with capacity greater than or equal to 38 m³ (10,000 gal), but less than 75 m³ (20,000 gal). Option 1 is no control; and option 2 is control of all storage vessels.
[f] Medium denotes storage vessels with capacity greater than or equal to 75 m³ (20,000 gal), but less than 151 m³ (40,000 gal). Option 1 is 1.9 psia; and option 2 is control of all storage vessels.
[g] As discussed in section III.B.3 of the preamble, the EPA has deferred the final decision regarding control of medium-sized storage vessels at existing sources. Therefore, figures for emission reduction and cost may be slightly overstated for storage vessels, and consequently for the totals.
[h] Large denotes storage vessels with capacity greater than or equal to 151 m³ (40,000 gal). Option 1 is 1.9 psia; option 2 is 0.75 psia, and option 3 is control of all storage vessels.
[i] These totals do not include control impacts for equipment leaks. The floor is represented by the first option for each emission point, except storage.

TABLE 7.—CONTROL ALTERNATIVES FOR NEW SOURCES SUBJECT TO SUBPART G[a,b]

Kind of emission point	Control option	Emission reduction Mg/yr	Percent emission reduction	Cost $1,000/yr	Avg. $/Mg	Inc. $/Mg
Process Vents[c]	1	46,000	95	14,000	300	
	2	46,000	95	18,000	400	47,000
Wastewater:[d]	1	10,300	63	10,000	975	
	2	13,500	82	12,800	948	860
	3	13,900	85	23,500	1,690	28,000
Transfer[e]	1	68	65	590	8,700	
	2	80	77	1,200	15,000	54,000
Storage	1	64	86	1,800	28,400	
Small[f]	2	71	95	4,100	58,100	336,000
Storage	1	70	72	450	6,400	
Medium[g]	2	86	88	1,200	13,800	47,000
Storage	1	970	48	1,600	1,600	
Large[h]	2	1,700	84	2,900	1,700	1,900
	3	1,700	84	3,200	1,900	89,000
Total: floor		57,500	86	28,400	490	
Selected option		61,400	92	32,500	530	1,100
Total control		61,800	92	51,200	830	46,800

[a] The impacts in this table are based on well-characterized chemical manufacturing processes and were estimated using the model emission point approach described in Section V of the proposal (57 FR 62621—62622).
[b] Estimated control impacts for fifth year after promulgation of the HON based on an assumed industry growth of 3.5 percent each year.
[c] Process vents options are:
1 TRE = $11,000/Mg
2 control of all process vents
[d] Wastewater options are:
1 10 ppmw
2 0.02 lpm and 10 ppmw
3 control of all wastewater streams
[e] New and existing transfer options are the same
[f] Small denotes storage vessels with capacity greater than or equal to 38 m³ (10,000 gal), but less than 75 m³ (20,000 gal). Option 1 is 1.9 psia; and option 2 is control of all storage vessels.
[g] Medium denotes storage vessels with capacity greater than or equal to 75 m³ (20,000 gal), but less than 151 m³ (40,000 gal). Option 1 is 1.9 psia; and option 2 is control of all storage vessels.

Lt R. Trabocchi, Project Manager, Captain of the Port, New York, (212) 668–7933.

SUPPLEMENTARY INFORMATION:

Drafting Information

The drafters of this notice are LT R. Trabocchi, Project Manager, Captain of the Port, New York and CDR J. Astley, Project Attorney, First Coast Guard District, Legal Office.

Regulatory History

Pursuant to 5 U.S.C. 553, a notice of proposed rulemaking was not published for this regulation and good cause exists for making it effective less than 30 days after Federal Register publication. Due to the date this application was received, there was not sufficient time to publish a proposed rule in advance of the event. Publishing a NPRM and delaying the event would be contrary to public interest since the fireworks display is for public viewing.

Background and Purpose

On March 10, 1994, the Town of North Hempstead submitted an application to hold a fireworks display in Hempstead Harbor north of Bar Beach. This regulation establishes a temporary safety zone in all waters of Hempstead Harbor within a 300 yard radius from the center of three fireworks barges anchored together north of Bar Beach, New York. This safety zone is being established to protect boaters from the hazards associated with fireworks exploding in the area. No vessel will be permitted to enter or move within this safety zone unless authorized to do so by the Coast Guard Captain of the Port, New York.

Regulatory Evaluation

This rule is not a significant regulatory action under Executive Order 12866 and is not significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11040; February 26, 1979). No vessel traffic is permitted to transit within a 300 yard radius of three fireworks barges anchored together north of Bar Beach in Hempstead Harbor, New York. This safety zone will completely block the navigable waters in this area; however, due to the limited duration of the event, the extensive, advance advisories that will be made to allow recreational and commercial traffic to make necessary transits before or after the event, and the limited traffic routinely operating in the area at the time of the event, the Coast Guard expects the economic impact of this regulation to be so minimal that a Regulatory Evaluation is unnecessary

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard must consider whether this regulation will have a significant economic impact on a substantial number of small entities. "Small entities" include independently owned and operated small businesses that are not dominant in their field and that otherwise qualify as "small business concerns" under Section 3 of the Small Business Act (15 U.S.C. 632).

For the reasons given in the Regulatory Evaluation, the Coast Guard expects the impact of this regulation to be minimal. The Coast Guard certifies under 5 U.S.C. 605(b) that this regulation will not have a significant economic impact on a substantial number of small entities.

Collection of Information

This regulation contains no collection of information requirements under the Paperwork Reduction Act (44 U.S.C. 3501).

Federalism

The Coast Guard has analyzed this action in accordance with the principles and criteria contained in Executive Order 12612 and has determined that this regulation does not raise sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Environment

The Coast Guard has considered the environmental impact of these regulations and concluded that under section 2.B.2.c. of Commandant Instruction M16475.1B, it is an action under the Coat Guard's statutory authority to promote maritime safety and protect the environment, and thus is categorically excluded from further environmental documentation. A Categorical Exclusion Determination is included in the docket.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

Regulations

For reasons set out in the preamble, the Coast Guard amends 33 CFR Part 165 as follows:

PART 165—[AMENDED]

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

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

2. A temporary section, 165.T01–022 is added to read as follows:

§ 165.T01–022 North Hempstead Memorial Day Fireworks, Hempstead Harbor, New York.

(a) *Location.* This temporary safety zone includes all waters of Hempstead Harbor within a 300 yard radius from the center of three fireworks barges anchored together north of Bar Beach, New York, at or near 40°49'50" N latitude and 73°39'10" W longitude.

(b) *Effective period.* This section is effective from 8 p.m. until 10 p.m. on May 27, 1994, with a rain date of May 28 1994, at the same times.

(c) *Regulations.*

(1) The general regulations contained in 33 CFR 165.23 apply to this safety zone.

(2) All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port or the designated on scene patrol personnel. U.S. Coast Guard patrol personnel include commissioned, warrant, and petty officer of the Coast Guard. Upon being hailed by a U.S. Coast Guard vessel via siren, radio, flashing light, or other means, the operator of a vessel shall proceed as directed.

Dated: May 5, 1994.

T. H. Gilmour,

Captain, U.S. Coast Guard, Captain of the Port, New York.

[FR Doc. 94–12404 Filed 5–19–94; 8:45 am]

BILLING CODE 4910–14–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[FRL–4881–9]

RIN 2060–AE00

Hazardous Air Pollutants: Regulations Governing Equivalent Emission Limitations by Permit

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is promulgating regulations governing the establishment of equivalent emission limitations by permit, pursuant to section 112(j) of the Clean Air Act (Act), as amended. This rule establishes requirements and procedures for owners or operators of major sources of hazardous air pollutant(s) (HAP), and permitting authorities, to follow in order to comply with section 112(j). After the effective date of a title V permit program in a State, each owner or operator of a major

source in a source category for which the EPA was scheduled to, but failed to promulgate a maximum achievable control technology (MACT) standard will be required to submit a permit application 18 months after the EPA's missed promulgation date. This rule establishes requirements for the contents of these applications. In addition, the rule contains provisions governing the establishment of MACT-equivalent emission limitations by the permitting authority.

EFFECTIVE DATE: The rule and guidance announced herein take effect on June 20, 1994.

ADDRESSES: *Docket.* Supporting information used in developing the proposed and final rules contained in Docket Number A-93-32. The docket is available for public inspection and copying from 8:30 a.m.-12 p.m. and 1:30 p.m.-3:30 p.m., Monday through Friday, at the EPA's Air Docket Section, Waterside Mall, room M1500, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information on today's final rule, please contact Ms. Katherine Kaufman, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, telephone (919) 541-0102. For information about the guidance document "MACT Determinations under Section 112(j)" (EPA 450/3-92-007a), please contact Ms. Lynn Hutchinson, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, telephone (919) 541-5624.

SUPPLEMENTARY INFORMATION: The information presented in this preamble is organized as follows:

I. Summary of Final Rule
II. Background Discussion
  A. Clean Air Act Amendments: Section 112
  B. Clean Air Act Amendments: Provisions for Equivalent Emission Limitation by Permit.
  C. Implementation Principles
III. Significant Comments and Changes to the Proposed Rule
  A. § 6.50—Applicability
  B. § 6.51—Definitions
  C. § 6.52—Approval Process for New and Existing Emission Units
  D. § 6.53—Application Content for a Case-by-Case MACT Determination
  E. § 6.54—Preconstruction Procedures for New Emission Units
  F. § 6.55—Maximum Achievable Control Technology (MACT) Determinations for Emission Units Subject to Case-by-Case Determination of Equivalent Emission Limitations
  G. § 6.56—Requirements for Case-by-Case Determination of Equivalent Emission Limitations After Promulgation of a Subsequent MACT Standard
IV. Discussion of the Relationship of the Proposed Requirements to Other Requirements of the Act
  A. Section 112(g) Requirements for Constructed, Reconstructed, and Modified Major Sources; and Subsequent Standards under Section 112(d) or Section 112(h).
  B. Section 112(l) Delegation Process
  C. Section 112(i)(5) Early Reductions Program
V. Administrative Requirements
  A. Docket
  B. Executive Order 12866
  C. Regulatory Flexibility Act
  D. Paperwork Reduction Act

This preamble provides an overview of the rule implementing the requirements of the section 112(j) program, and a detailed discussion of the changes made to the proposed regulation.

The first section provides an overview of the requirements of the regulation being promulgated today.

The second section provides background information on section 112(j) in the context of the 1990 amendments to the Act.

The third section provides a detailed discussion of the requirements of the rule, including significant comments as well as significant changes made since the proposal.

The fourth section of this preamble discusses the relationship of the requirements of section 112(j) to other requirements of the Act under other subsections of section 112 of the Act.

The fifth section of this preamble demonstrates that the rulemaking is consistent with a number of federal administrative requirements.

This preamble makes use of the term "State," usually meaning the State air pollution control agency which will be the permitting authority implementing the section 112(j) program. The reader should assume that use of the word "State" also applies, as defined in section 302(d) of the Act, to the District of Columbia and territories of the United States, and may also include reference to a local air pollution control agency. These agencies can either be the permitting authority for the area of their jurisdiction or assist the State or the EPA in implementing the section 112(j) program. In some cases, the term "permitting authority" is used and can refer to both State agencies and to local agencies (when the local agency directly makes the determinations or assists the State in making the determinations). The term "permitting authority" may also apply to the EPA, in rare cases where the EPA is the title V permitting authority responsible for the program.

This preamble makes a number of references to a regulation which has not yet been promulgated. That is the rule governing constructed, reconstructed, or modified major sources under section 112(g) of the Act, which EPA has proposed on April 1, 1994, in the Federal Register at 59 FR 15504.

I. Summary of Final Rule

Today's rule implements the requirements of section 112(j) of the Clean Air Act, as amended in 1990. Section 112(j) establishes requirements for regulation of major sources of hazardous air pollutants in the event that EPA lags more than 18 months behind schedule in issuing a control technology standard for an industry.

Section 112 requires EPA to set MACT standards for all categories of major sources of hazardous air pollutants. Specifically, the Act has required EPA to issue a schedule for regulating all source categories within 2, 4, 7, or 10 years of enactment. The source category schedule for standards was published on December 3, 1993 (58 FR 63941).

Section 112(j) is triggered on the date 18 months after the deadline listed in the final schedule for a source category, if the EPA has failed to promulgate a MACT standard for that source category by that date. These deadlines are displayed in Table 1. Upon this 18-month deadline, the owner or operator of each major source with emission units in that category must apply for a case-by-case MACT determination by the title V permitting authority. There are four possible section 112(j) deadlines, as displayed in Table 1 below.

TABLE 1.—SECTION 112(J) DEADLINES

MACT standard deadline	Section 112(j) deadline	Comments
2-year standards: November 15, 1992	May 15, 1994 [but not before effective date of Title V permit program].	The EPA has promulgated the 2-year standards. This deadline will not be triggered.
4-year standards: November 15, 1994	May 15, 1996	This is the earliest that section 112(j) could be triggered.
7-year standards: November 15, 1997	May 15, 1999	
10-year standards: November 15, 2000	May 15, 2002	

The EPA has fulfilled its requirements with respect to the 2-year MACT standards, so there are essentially three possible dates upon which section 112(j) requirements could take effect: (1) May 15, 1996, (2) May 15, 1999, and (3) May 15, 2002. Section 112(j) cannot take effect before the effective date of a title V permit program in a State; the EPA expects that permit programs will be operative in all States by May 15, 1996.

If the deadline for a particular category passes, section 112(j) requires that any source associated with that category, that is part of a major source, must obtain an "equivalent emission limitation by permit." "By permit" means that the emission limitation is recorded in the title V operating permit. "Equivalent emission limitation" means a limitation, determined on a case-by-case basis by the permitting authority, that is judged to be equivalent to the limit the EPA would have established had the federal MACT standard been published.

The rule uses the term "emission unit" rather than the term "source" which appears in section 112(j). The term "source" is used to describe the extent of coverage of standards issued pursuant to section 112(d) and section 112(h). The EPA is concerned that if the term "source" is used in reference to section 112(j), there may be potential misperceptions that section 112(j) determinations could constrain the EPA's definition of "source" in a subsequent rulemaking.

A. Requirements for Existing Emission Units

For emission units in existence at major source plant sites as of the section 112(j) deadline, today's rule contains some important clarifications of the Act. The statute is clear that applicants must submit an application by the section 112(j) deadline, and that the title V permitting process must be followed in establishing permit conditions within an 18-month time frame thereafter. Within this overall framework, the statute is less prescriptive regarding: (1) The contents of the permit application, (2) the process that is used within the 18-month permit issuance time frame to establish equivalent emission limitations, and (3) the nature of the terms and conditions that must be established in the permit.

Section 6.52 is intended to provide further clarity to the permit review process. The requirements for permit application content are listed in § 6.53. Principles governing the establishment of MACT emission limitations, including the nature of the terms and conditions, are outlined in § 6.55, and in a more detailed guidance document titled: "MACT Determinations under Section 112(j)" (EPA 450/3–92–007a), which EPA is making available today.

B. Requirements for New Emission Units

For new emission units subject to the requirements of section 112(j), today's rule provides a number of important statutory interpretations, and provides a clarification of the minimum administrative requirements of the Act.

When newly constructed emission points are added to an existing major source plant site, those emission points could be considered as either: (1) An addition to an existing "emission unit" for which an existing source level of control would be required, or (2) an entirely new "emission unit" for which new source MACT would be required. Today's rule contains a definition of "emission unit" which gives broad discretion to the permitting authority to determine whether a given emission point or points should be treated as "new."

Another important clarification in the rule is the date which triggers new source requirements. Today's rule defines as "new" an emission unit for which construction commences after the section 112(j) deadline or after proposal of a section 112 (d) or (h) MACT standard, whichever comes first.

Section 112(j) of the statute does not mandate a preconstruction review for new emission units subject to section 112(j). However, the EPA recognizes that there are important reasons for permitting authorities and affected source owners and operators to follow a preconstruction or pre-operation review process. The rule contains, as § 6.54, an optional preconstruction or pre-operation review process that can be used for this purpose.

C. Relationship to Subsequently Promulgated MACT Standards

The Act provides for a compliance extension when an emission unit covered by a case-by-case MACT emission limitation under section 112(j) is later affected by a subsequent federal MACT standard promulgated pursuant to section 112(d) or section 112(h) of the Act. This provision is addressed in § 6.56 of today's rule.

II. Background Discussion

A. Clean Air Act Amendments: Section 112

The Clean Air Act Amendments of 1990 [Pub. L. 101–549] contain major changes to section 112 of the Act pertaining to the control of HAP emissions. Section 112(b) includes a HAP list that is composed of 189 chemicals, including 172 specific chemicals and 17 compound classes. Section 112(c) requires publication of a list of source categories and subcategories of major sources emitting these HAPs, and also requires the listing of area sources that the EPA determines warrant regulation. Section 112(d) requires promulgation of emission standards for each listed source category or subcategory according to a schedule set forth in section 112(e).

B. Clean Air Act Amendments: Provisions for Equivalent Emission Limitation by Permit

1. General Requirements of Section 112(j)

The amendments to section 112 include new section 112(j). This section is entitled "Equivalent Emission Limitation by Permit." Subsection 112(j)(2) of the Act provides that section 112(j) applies if EPA misses a deadline for promulgation of a standard under section 112(d) established

in the source category schedule for standards. In the event that the Administrator fails to promulgate a standard for a category or subcategory of major sources by the date established pursuant to subsection (e) (1) and (3), and beginning 18 months after such date (but not prior to the effective date of a permit

program under title V), the owner or operator of any major source in such category or subcategory shall submit a permit application.

Subsection 112(j)(3) requires the owner or operator to submit a permit application 18 months after the missed promulgation deadline:

> By the date established by paragraph (3), the owner or operator of a major source subject to this subsection shall file an application for a permit.

Subsection 112(j)(3) also requires EPA to establish requirements for permit applications, including content and criteria for the reviewing agency to determine completeness. In addition, subsection 112(j)(3) provides that if the reviewing agency deems the application incomplete, or disapproves the application, then the applicant has up to 6 months to revise and resubmit the application.

Subsection 112(j)(5) establishes a requirement for case-by-case MACT determinations:

> The permit shall be issued pursuant to title V and shall contain emission limitations for the hazardous air pollutants subject to regulation under this section and emitted by the source that the Administrator (or the State) determines, on a case-by-case basis, to be equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection (d).

Subsection 112(j)(5) also establishes compliance dates:

> No such pollutant may be emitted in amounts exceeding an emission limitation contained in a permit immediately for new sources and, as expeditiously as practicable, but not later than the date 3 years after the permit is issued for existing sources or such other compliance date as would apply under subsection(i).

Finally, subsection 112(j)(5) specifies that if the applicable criteria for voluntary early reductions, established under section 112(i)(5), are met, then this alternative emission limit satisfies the requirements of section 112(j), provided that the emission reductions are achieved by the missed promulgation date.

In the event that EPA promulgates a given MACT standard for the applicable source category before the permit application is approved, the permit must reflect this promulgated standard, rather than the case-by-case MACT determination. The source is required to comply with this standard by the date provided under subsection(i). In this case, the owner or operator of an existing source has no more than 3 years to comply, and the owner or operator of a new source must comply immediately upon startup, except that a new source that commenced construction or reconstruction between proposal and promulgation of the MACT standard may elect to comply with the proposed standard for 3 years in lieu of the promulgated MACT standard, if the promulgated MACT standard is more stringent than the proposal.

In the event that EPA promulgates a given MACT standard after the permit containing case-by-case emission limits is issued, section 112(j)(6) allows a longer compliance period:

> If the Administrator promulgates a standard under subsection (d) * * * after the date on which the permit has been issued, the Administrator (or the State) shall revise such permit upon the next renewal to reflect the standard promulgated by the Administrator providing such source a reasonable time to comply, but no longer than 8 years after such standard is promulgated or 8 years after the date on which the source is first required to comply with the emissions limitation established by paragraph (5), whichever is earlier.

C. Implementation Principles

In designing guidance for case-by-case MACT determinations, the EPA's thinking is guided primarily by the need for section 112(j) standards to be substantively equivalent to section 112(d) MACT standards. Subsection 112(j)(5) requires that a case-by-case MACT determination be "equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection (d)," and subsection 112(j)(6) requires eventual compliance with subsequently promulgated section 112(d) standards. Consistency in standard-setting will smooth a major source's eventual transition from compliance with section 112(j) to compliance with section 112(d), making implementation of toxics control easier on both States and industry.

The EPA's other major goal in establishing section 112(j) requirements is to achieve and maintain consistency across section 112 programs. The EPA intends for administrative and operational requirements under section 112(j) to be consistent with the requirements of section 112(g) rules for construction, reconstruction, and modification of major sources (proposed at 59 FR 15504 on April 1, 1994, as § 63.40 through 63.49 of subpart B) and with the general provisions for section 112 (published at 59 FR 12408 on March 16, 1994, as subpart A of this part). Section IV. A. of this preamble discusses likely overlapping requirements and major substantive differences across these programs.

III. Significant Comments and Changes to the Proposed Rule

This section of the preamble is organized by each topic area in subpart B, and contains a detailed discussion of the principal regulatory issues and changes made in the final rule, particularly in response to public comments. It also discusses some comments that did not result in regulatory changes.

A. Section 63.50—Applicability

1. Section 63.50(a)—Applicability

Paragraph 63.50(a) of today's rule indicates that the intent of the rule is to implement section 112(j) of the Act. This paragraph indicates that section 112(j) applies to the owner or operator of a major source of HAPs after the "effective date of a Title V program" in each State, but not before May 15, 1994.

(a) *Effective date of title V.* The meaning of "effective date of a Title V program" is indicated in the final regulations for implementation of title V of the Act. Under these regulations, States were required to submit a permit program for review by the EPA on or before November 15, 1993. The EPA is required to approve or disapprove the permit program within one year after receiving the submittal. The EPA's program approval date is termed the "effective date."

The effective date of title V permit programs is defined in section 502(h) of the Act, which says "The effective date of a permit program, or partial or interim program, approved under * * * [Title V] * * * shall be the date of promulgation." This language refers to two types of title V programs: One type where the EPA "approves" the title V program under 40 CFR part 70 and another type where the EPA "promulgates" a program. Programs "approved" by the EPA under part 70 will be developed by the State or local area and submitted to the EPA for approval. The language in section 502(h) of the Act makes these programs immediately effective upon EPA approval. Programs "promulgated" by the EPA are anticipated to be rare, and they occur only where a State failed to submit a program, submitted a program that EPA could not approve, or has failed to adequately administer an approved program. For example, the EPA is required by section 502(d)(3) of the Act to promulgate and administer a title V program if, by November 1995, the EPA has not approved the State program. The language in section 112(j), because it refers to the effective date of a title V program in any State (and not by any State), means that the program

will apply to both the EPA "approved" and "promulgated" programs.

The title V regulations provide for approval of "interim" and "partial" programs in certain limited circumstances. The EPA believes that, because partial programs must ensure compliance with "all requirements established under section 112 applicable to 'major sources' and 'new sources'," and interim programs must "substantially meet the requirements of [title V]," an interim or partial program would trigger the requirements of section 112(j) for those sources covered by the interim program.

(b) *Major source.* Section 112(j) applies only to an owner or operator of a major source. Section 112(a)(1) of the Clean Air Act defines major source as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The requirements of section 112(j) apply to all sources that comprise a major source, but do not apply to nonmajor sources—i.e. "area sources."

The determination of whether a source is major is based on the source's "potential to emit", which is defined in subpart A of this part. A source's potential to emit is based on its capacity to emit hazardous air pollutants considering federally enforceable limits on that capacity. If a source's potential to emit is equal to or greater than 10 tons/yr of a single HAP, or 25 tons/yr of any combination of HAPs, the source is a major source. The EPA is currently developing a rule to further define a source's potential to emit for section 112 standards. This rule will also provide ways for an owner or operator of a source to establish voluntary, federally-enforceable restrictions to limit the source's potential to emit below the major source threshold. This rule will also address the requirements for major sources that subsequently reduce their emissions to less than major amounts. If a source meets conditions in subpart A of this part for limiting its potential to emit to below the major source threshold within the timeframe established in the potential to emit rule, then it will not be subject to the provisions of section 112(j) as long as the source maintains its emission status.

2. Section 63.50(b)—Relationship to State and Local Requirements

Many State and local regulatory agencies maintain regulatory programs that involve toxic air pollutant reviews for stationary sources. This paragraph clarifies that the requirements of section 112(j) do not pre-empt any requirements of these programs that are at least as stringent as today's rule.

3. Section 63.50(c)—Retention of State Permit Program Approval

Some States may not currently have specific legislative or administrative authority sufficient to establish the case-by-case emission limitations required by section 112(j). Paragraph 63.50(c) requires that States obtain such statutory authority as a condition of retaining their part 70 permit program approval.

B. Section 6.51—Definitions

1. Terms Defined in the General Provisions

A number of terms used in the proposed rule are defined for all of 40 CFR Part 63 in subpart A of this Part. The terms defined in subpart A include:

* * * Administrator
* * * Area source
* * * Effective date
* * * Federally enforceable
* * * Hazardous air pollutant
* * * Major source
* * * Permit program
* * * Potential to emit
* * * Relevant standard
* * * Title V permit

The Subpart A General Provisions include a definition of "federally enforceable" which lists the types of limitations and conditions that are considered federally enforceable. The preamble to Subpart A outlines a set of principles that States and sources should follow in order to ensure practicable enforceability. The EPA believes that Subpart B should ensure that the case-by-case determinations are practicably enforceable in the same way that Subpart A does for section 112(d) and section 112(h) MACT standards. Therefore, the EPA refers the reader to the discussion of "practicable enforceability" in the preamble to Subpart A for a discussion of the kinds of requirements that the EPA would consider sufficient to ensure practicable enforceability for case-by-case MACT determinations. In addition, a more detailed discussion of the elements necessary to ensure federal enforceability is contained in section III.E. of this preamble.

2. Terms Related to Maximum Achievable Control Technology

Definitions for the following terms related to levels of control technology are included in § 63.51 of today's rule:

* * * Maximum Achievable Control Technology
* * * Control Technology
* * * Maximum Achievable Control Technology (MACT) Floor
* * * Maximum Achievable Control Technology (MACT) Emission Limitation for Existing Sources
* * * Maximum Achievable Control Technology (MACT) Emission Limitation for New Sources

The basis for all of these definitions is statutory language contained in section 112(d) of the Act. The term "maximum achievable control technology" appears only in section 112(g) of the Act, and does not appear elsewhere in section 112. There is, however, considerable legislative history indicating that this term refers to the level of control required by section 112(d) emission standards. This term was used in this context in the House Bill, H.R. 3030. For purposes of the definitions in today's rule, the EPA assumes that "maximum achievable control technology" is a reference to the "maximum degree of reduction in emissions" language contained in section 112(d)(3). The minimum control technology requirements of section 112(d), often referred to as the "MACT floor" are cited a number of times in today's rule. To avoid repeating these requirements each time, the regulation includes a definition of "MACT floor."

3. Terms Affecting the Extent of Coverage by Maximum Achievable Control Technology

The following terms are used to describe equipment subject to a MACT determination:

* * * Emission point
* * * Emission unit
* * * Emission limitation
* * * New emission unit

An "emission point," in this regulation, is defined narrowly to refer to any individual point of release to the atmosphere. However, an individual MACT determination will often be made at once for a number of emission points. The term "emission unit" is used to refer to the collection of all emission points considered when a MACT determination is made. The term "emission limitation" retains the meaning given to it in section 302(k) of the Act.

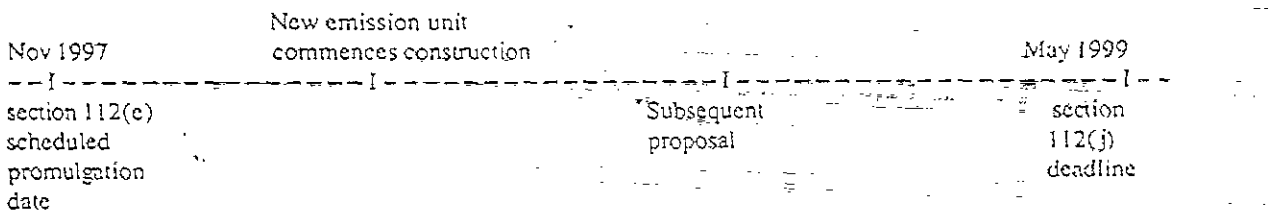
New emission unit. The term *new emission unit* refers to an emission unit for which construction or reconstruction is commenced after the section 112(j) deadline for a relevant standard, or after proposal of a relevant standard under section 112(d) or section 112(h) of the Act, whichever comes first. For the purposes of section 112(j), new emission

units are those emission units that trigger new source MACT requirements (see discussion of the definition of "emission unit" below). *New source* is defined in Clean Air Act section 112(a)(4) as follows:

> "* * * a stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations under this section establishing an emission standard applicable to such source."

Section 112(j) requires States to establish case-by-case MACT limitations where EPA has failed to promulgate a relevant standard, and there may be instances when a section 112(j) MACT limitation is required for a source category for which a standard has not yet been proposed under section 112(d). Since section 112(j)(5) refers explicitly to case-by-case standards for new sources, the EPA has determined that the Act did not intend that the EPA's failure to propose a standard implies that no sources in that source category, no matter what the date of construction, could ever be considered "new." At proposal the EPA had selected the section 112(e) scheduled deadline as the date, under a section 112(j) case-by-case MACT determination, most closely equivalent to the section 112(d) proposal date for the purposes of defining "new emission unit," because had EPA met the schedule in setting a standard under section 112(d) the proposal could not have been any later than the date in the schedule. The EPA requested comment on this definition. Three commenters supported the proposed definition. However, upon consideration of the practical concerns raised by this definition, the EPA has determined that the section 112(j) deadline would be a more reasonable date beyond which commencing construction of an emission unit would be considered "new."

The following timeline illustrates the EPA's reasoning:



Under the proposed rule, a source would have needed to know, up to 2 years or more in advance of the section 112(j) deadline, that the EPA was going to miss its scheduled promulgation deadline by 18 months. If "new source" requirements were triggered by the section 112(e) deadline, owners and operators would need to know this in order to plan what control to build in to their new emission units, and perhaps in order to apply for preconstruction review. In addition, if an owner or operator plans to construct between the scheduled promulgation date and the section 112(j) deadline, and there is a subsequent proposal (as illustrated in the timeline), then whether the emission unit will be considered new would depend upon a later event—whether the section 112(j) deadline will pass with no federal MACT standard. The EPA believes that it is not reasonable to expect owners and operators to be able to predict the likelihood of EPA missing a promulgation deadline by 18 months; nor is it reasonable to expect them to make such a prediction as much as 2 years before its occurrence.

Thus, if EPA proposes a MACT standard before the section 112(j) deadline, any emission unit for which construction commences after that proposal will be considered new. If the section 112(j) deadline is reached without EPA having proposed a standard, then an emission unit for which construction commences after the section 112(j) deadline will be considered new. This approach removes the uncertainty raised by the possibility of EPA proposing a MACT standard during the 18 months between the section 112(e) schedule deadline and the section 112(j) deadline. The EPA believes this to be the most reasonable and equitable way to define which emission units are new for purposes of section 112(j).

Emission unit definition; applicability to new source MACT. MACT determinations must be made on a wide variety of emitting equipment at major sources in different source categories. Today's rule defines *emission unit* in a way designed to allow permitting authorities broad flexibility in designing case-by-case MACT emission limitations. This flexibility is essential because of the variety of source categories, diverse in size and complexity, that may be subject to section 112(j). A narrower definition of *emission unit* would make it difficult for permitting authorities to tailor MACT determinations to the equipment specific to a particular source category. *Emission unit* as defined in this rule is intended to be synonymous with the term "source" as used in section 112(d). Thus, the State permitting authorities implementing section 112(j) will have as much flexibility in defining *emission unit* as EPA has in defining "source." The definition of source used in section 112 originated in section 111 a number of years ago. That definition—any building, structure, facility, or installation which emits or may emit any (hazardous) air pollutant—has been interpreted over the years to encompass a broad range of things including individual process units, production lines and entire plants.

The EPA requested comment both on the desirability of requiring or not requiring new source MACT on all new emission units, and on the question of whether new source MACT should be required only on those emission units that are in and of themselves "major" at a major source.

An approach the EPA considered, but rejected, would be to require new source MACT only on those emission units that are in and of themselves "major" at a major source—i.e. those emission units at a major source which themselves emit at least 10 tons per year or more of a single HAP, or 25 tons per year or more of a combination of HAPs. This approach generated significant comment. Some commenters disagree with this approach and support the approach taken in the rule. Many commenters support the alternative approach.

The EPA agrees with the commenters who support application of new source MACT to all constructed and reconstructed emission units. Section 112(j) is intended to stand in place of section 112(d) where EPA has missed the section 112(e) scheduled date for a category of major sources. Under section 112(d), when a MACT standard is

written for a major source category it will apply to all sources within that category. Depending on how the category is defined many of the covered sources will be a less than 10 ton portion of a major source. These are not area sources.

Many major sources will be covered by multiple MACT standards, and the portion of a major source covered by any one MACT standard may well be less than major by itself. In addition, a major source could contain several emission units that are all covered by the same MACT standard, but are separate sources that in combination exceed 10 or 25 tons but do not exceed the major source threshold individually. In contrast, area sources in the same category will not be subsets of major sources. Section 112(j) does not apply to categories of area sources.

Other commenters assert that EPA's interpretation runs counter to either the Clean Air Act itself, or to the Congressional intent behind the language in the Act. For the reasons discussed below and in the preamble to the proposed rule (58 FR 37778), the EPA disagrees with these commenters.

Prior to a missed promulgation deadline, through section 112(g) the statute clearly requires new source MACT only on constructed or reconstructed major sources. Any other equipment added to an existing major source would be a modification (unless specifically exempted from regulation by section 112(g)), and would be subject to existing source MACT levels of control. However, the language of section 112(j) is somewhat different from that of section 112(g). Section 112(j), while applying only to major sources, does not limit the application of new source MACT to new major-emitting equipment, as section 112(g) does.

The EPA believes that the standards developed through section 112(j) must anticipate and reflect the likely requirements of section 112(d) and section 112(h). The basis for the applicability of new source MACT selected is the section 112(j)(5) requirement that case-by-case MACT standards must be:

> Emission limitations for the hazardous air pollutants * * * emitted by the source that the Administrator (or the State) determines, on a case-by-case basis, to be equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection (d).

It is the judgment of EPA that section 112(j) case-by-case MACT standards must require new source MACT to be applied to those same sources, within a covered major source, to which a standard promulgated under section 112(d) would apply new source MACT. Therefore, it is necessary to determine what entity is considered a new source under section 112(d) for the purpose of implementing MACT standards.

Section 112(a) provides that *new source* shall mean a "stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations under this section establishing an emission standard applicable to such source." Section 112(a)(3) gives "stationary source" the same meaning as under section 111(a), i.e. any new "building, structure, facility, or installation"; thus the term stationary source clearly is not limited to major sources under section 112(a)(3). Section 112(d) requires MACT standards to be set for "sources," and "sources" can be major, area, or portions of a major source. Once there is a section 112(d) standard in place, any new source will be required to meet new source MACT emission limitations, as defined by the standard. Thus, under section 112(j), any new emission unit that is either part, or all, of a major source will be required to meet new source MACT.

If, however, the language of section 112(g) were interpreted as dispositive of whether new or existing source MACT must be applied to any given increase in emissions, new sources within the definition in section 112(a)(4) would escape having to comply with new source MACT under section 112(j). If a MACT standard under section 112(d) may establish a definition of source that would apply to a portion of a "major source," then section 112(j) case-by-case MACT determinations would not satisfy the requirement that they be "equivalent to the limitation that would apply to such source * * *"

In addition, under this reading, major sources adding new sources that are not major by themselves could avoid new source MACT on those new sources. But if MACT is then set under section 112(d) for area sources in that category, any new area source would have to meet new source MACT, while new parts of a major source would not. This would be an anomalous result. Therefore today's rule requires new source MACT on all emission units that are constructed or reconstructed at a major source plant site.

C. Section 6.52—Approval Process for New and Existing Emission Units

Existing emission units. Section 6.52 of the rule requires that case-by-case MACT determinations for existing emission units be established through the title V permit process. The owner or operator of an existing major source must submit a permit application for all emission units in a source category not later than 18 months after the missed promulgation date for that source category. The State must then review and approve or disapprove the permit in accordance with the procedures and principles set out in Part 70 and in § 63.55 of today's rule. Section 63.52(b)(1) of today's rule implements the requirement in section 112(j)(4) of the Act that if an owner or operator's permit application is deemed incomplete or disapproved by the permitting authority, the owner or operator has up to 6 months to resubmit and meet the requirements of the permitting authority. The final rule clarifies the intent of the Act that the owner or operator provide complete information within 6 months of the date the permitting authority "first" identifies its objections. The addition of the word "first" is intended to clarify that the applicant may not prolong the process by resubmitting an incomplete application. In order to ensure that the application indeed satisfies this 6-month deadline, applicants will probably wish to respond sooner than 6 months.

For existing emission units, the permitting authority at its discretion may require compliance as expeditiously as practicable, but no later than 3 years from permit issuance. In addition, the permitting authority may allow an extra year, on a case by case basis, when necessary for the installation of controls. This approach is consistent with section 112(j)(5), which requires the case-by-case MACT standards to ensure compliance "* * * immediately for new sources and, as expeditiously as practicable, but not later than the date three years after the permit is issued for existing sources or such other compliance date as would apply under subsection (i)."

New emission units. Section 63.52 describes the relationship of the MACT review process for new emission units to the operating program requirements pursuant to Title V of the Act Amendments. The requirements for title V permits, contained in 40 CFR part 70, were published on July 21, 1992 (57 FR 32250). For existing emission units, the approach to establishing an administrative process for determinations under section 112(j) of the Act is to rely on the title V review process as the mechanism for establishing MACT requirements. For new emission units, however, the EPA believes that reliance on the title V permit process may not be sufficient.

First, the title V requirements clearly do not require a new "greenfield" plant to apply for an operating permit until 1 year after the plant begins operation. Because the title V permit must be issued within 18 months of the application, it could be up to 30 months after commencement of operation before section 112(j) requirements would be incorporated into the permit. Second, the title V requirements do not ensure that a MACT determination will be conducted before construction. While in some cases permitting authorities with title V programs may require preconstruction reviews as part of the operating permit process, this will not always be the case.

Therefore, while for existing emission units the title V permit process is sufficiently comprehensive to handle section 112(j) reviews, the EPA believes, based upon the above considerations, that when the title V process does not occur until after construction has begun, new emission units should be subject to preconstruction or at least pre-operation review. However, the statutory language of section 112(j) does not authorize EPA to mandate either process.

While many commenters also challenged the legality of requiring preconstruction review, several others agreed with EPA's reasons, as stated in the proposed rule, in support of a preconstruction review. Commenters noted that without preconstruction review, owners and operators will not know their requirements before startup, making it more difficult for them to design equipment with controls that the permitting authority is guaranteed to approve. In addition, some permitting authorities will be deprived of the authority they need to make appropriate new source MACT determinations. In addition, it was noted that some permitting authorities will be prohibited from adopting preconstruction review programs unless they are federally mandated.

The EPA believes that most new equipment covered by section 112(j) will require some type of State preconstruction permit, for criteria pollutants if not for HAP. Although the Act does not mandate the communication of section 112(j) requirements until the eventual operating permit process, the EPA believes that it would be in the best interests of both the owner or operator and the permitting authority to resolve section 112(j) issues as part of its upfront review.

Regardless of the timing for incorporation of section 112(j) new source MACT determinations into the operating permit, there are certain requirements that apply. The title V permit must be revised or issued according to procedures set forth in § 70.7 and 70.8, or issued as a general permit. In addition, the permit must incorporate the compliance provisions of § 70.6. If, during the EPA's review of the section 112(j) determination, it becomes apparent that the determination is not in compliance with the Act, then EPA must object to the issuance or revision of that permit.

These requirements are obviously satisfied either when part 70 requires revision to an existing title V permit before construction, or when the permitting authority otherwise requires incorporation of conditions into a title V permit as a step in the section 112(j) new source case-by-case MACT determination process. However, even when there is no formal incorporation of conditions into a title V permit before operation, subsequent additional title V review may effectively be avoided if the State's section 112(g) or optional section 112(j) process is "enhanced" to include the important title V procedures, thereby allowing for later incorporation into the title V permit by administrative amendment. (The optional procedures contained in § 63.54 of the rule are intended to provide an example of such an "enhanced" process).

Section 70.7(d) of the operating permits rule defines an "administrative amendment" to include a revision that "[i]ncorporates into the part 70 permit the requirements from preconstruction review permits authorized under an EPA-approved program, provided that such a program meets procedural requirements substantially equivalent to those contained in § 70.7 and 70.8 of this Part . . . and compliance requirements substantially equivalent to those contained in § 70.6 of this part." This process of "enhancement" of preconstruction procedures was discussed in the preamble to the operating permits rule in the context of existing State new source review programs (see 57 Fed. Reg., at 32289), but was not discussed in relation to section 112(j) because the procedures associated with section 112(j) determinations had not yet been articulated. However, the language of § 70.7(d)(v) would allow for use of administrative amendments for an enhanced preconstruction review process, and the EPA believes such use is clearly within the intent of that provision.

Enhancement of the preconstruction review process may be partial only, incorporating some elements of the required part 70 review or compliance provisions in the preconstruction review process itself, with the remaining elements occurring during the title V process. For instance, public review of the MACT determination that meets the requirements of § 70.7(h) need not be repeated at the time of incorporation into the title V permit. However, for the administrative amendment procedures to be available for determinations that have been through an enhanced process, the public, EPA and affected States must have had the opportunity to review all aspects of the MACT determination, including any compliance provisions required under § 70.6. Thus, public review during the preconstruction review process would not suffice for purposes of title V if the process did not specify the application of compliance provisions substantially equivalent to those in § 70.6, including monitoring, reporting, recordkeeping, and compliance certification.

Finally, § 6.52(d) of today's rule establishes that new emission units must comply with case-by-case MACT determinations at permit issuance. This requirement is unchanged from proposal. At proposal the EPA solicited comment on the implementation consequences for sections section 112(j) and section 112(d) when preconstruction review is not required, and on the likely consequences of the lack of an adequate enforcement mechanism at the federal level for compliance earlier than permit issuance. Commenters noted the need to prevent situations in which some sources might have to retrofit in response to subsequent rulemaking under section 112(d). Commenters also pointed out the likely negative effect on the public of the compliance delays inherent in section 112(j) for new emission units, as well as the inability of some permitting agencies to adopt requirements more stringent than mandated by the federal government.

In addition, precedent across the board in federal air regulation requires new sources to comply with control requirements upon startup. The EPA believes that new emission units should undergo preconstruction or pre-operation review. However, the EPA believes that the language of section 112(j)(5), which specifies that "[n]o such pollutant may be emitted in amounts exceeding an emission limitation contained in a permit immediately for new sources," does not give the Agency authority to require compliance with case-by-case MACT by new emission units until a permit is issued.

The EPA believes that, especially when project lead time is sufficient, that

the best approach would be for a permitting authority to provide for an "enhanced" preconstruction review process that would assure the source that it would be in compliance with section 112(j). Because the "enhanced" review would yield terms and conditions that could be incorporated into the title V permit by administrative amendment, "permit issuance" would thus be accomplished upon startup rather than 12–30 months later. In this case, the source would be in compliance with federally enforceable case-by-case MACT at the time of administrative amendment to its title V permit.

Subsequent changes to a major source. The EPA believes that section 112(j) emission limitations apply to subsequent changes made at major sources already complying with case-by-case MACT limitations under section 112(j), when EPA has not promulgated a final standard for the source category under section 112(d). The EPA requires, in subpart A of this Part, that subsequent changes to a major source already complying with a section 112(d) or (h) standard shall comply with established MACT emission limitations for the source to which changes are made. Therefore requiring subsequent changes to portions of major sources already meeting case-by-case MACT emission limitations under section 112(j) satisfies the section 112(j)(5) statutory requirement that case-by-case MACT determinations under section 112(j) be "equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection(d)." Emission limitations governing those changes would be incorporated into a source's title V permit according to procedures established pursuant to title V.

The EPA requested comment on this approach, as well as on the alternative approach of treating section 112(j) as a one time permitting requirement applicable 18 months after EPA fails to set a relevant MACT standard. This would require subsequent changes at major sources with section 112(j) permits to comply only with section 112(g). The EPA received a few comments on this issue, most of which agree with EPA's approach, and one which asserts that prior determinations under section 112(g) should be deemed to satisfy section 112(j). The EPA believes that determinations made under section 112(g) that require MACT control should be considered by the permitting agency to be sufficient to satisfy the control requirements of section 112(j). Therefore the EPA retains the interpretation contained in the proposed rule. (See also the discussion of potential differences in section 112(g) and section 112(j) requirements in section IV. A. of this preamble).

General permits. The EPA recognizes that there are cases for which sources would prefer to minimize delays in the process, particularly for operations which change relatively frequently, and when the owner or operator is willing to control emissions from those changes with technologies that could be recognized as best available controls (i.e. those controls which achieve "the emission control that is achieved in practice by the best controlled similar source" (section 112(d)(3) of the Act)). General permit procedures, outlined in 40 CFR 70.6(d), could be available for such situations.

The general permit would have application for section 112(j) determinations when the permitting authority is able to make a presumptive determination of MACT for a given type of source. The general permit would have to set forth the controls required by Part 70. Once the general permit is issued, application of the MACT determination to a particular emission unit would involve merely a determination that the emission unit falls within the source category covered by the general permit. In this way, a single permitting process could be used to address the section 112(j) requirements for a number of facilities, rather than conducting a separate process for each facility. Such a general permit process would not relieve the owner or operator from the obligation of submitting an "application" by the section 112(j) deadline. The EPA envisions, however, that permitting authorities could provide guidance to the affected facilities, before the section 112(j) deadline, of its intention to use the general permit process such that the burdens of the application are minimized.

As discussed in the preamble to the operating permit regulation, general permits may be issued to cover discrete emissions units at permitted facilities. 57 Fed. Reg., at 32279. While a general permit cannot be used to modify the terms of an existing title V permit, it may be issued to cover a change at an existing plant, such as addition of a new emission unit, that would otherwise be eligible to apply for a new individual permit. In that case, the requirements of the general permit could be incorporated into the permit for the facility at permit renewal.

Several commenters agree that using the general permit procedures is a good idea, in order to streamline MACT determinations under section 112(j). The EPA agrees that general permits could be used both for existing and new emission units.

Area sources that become major sources. Today's rule states that section 112(j) requirements apply to all major sources in a source category for which EPA has missed its scheduled promulgation deadline. Implicit in that requirement is the assumption that the requirements of section 112(j) apply to area sources that increase their emissions or their potential to emit such that they become major sources after the section 112(j) deadline.

Subpart A of this part, recently promulgated, explicitly establishes, for MACT standards under section 112(d) or (h), that area sources which increase their emissions, or their potential to emit, such that they become major sources after the applicable date of a relevant standard, are subject to the requirements of that standard. Therefore EPA has added § 63.52(f)(1) to today's rule to clarify that the requirements of section 112(j) likewise apply to area sources that increase their emissions or their potential to emit such that they become major sources after the section 112(j) deadline.

One commenter requests clarification on the status of area sources which, after the section 112(j) deadline, become major sources when EPA determines that a "lesser quantity" of emissions defines "major source" for that source category (see section 112(a)(1)). Therefore EPA has added § 63.52(f)(2) to today's rule to clarify that the requirements of section 112(j) apply to *all* major sources at the point at which they are determined to be "major sources" under section 112(a). These sources are required to submit permit applications within 6 months of becoming major sources. Given the relative siginificance of the regulation these sources, the EPA believes that requiring permit applications within 6 months is reasonable.

As discussed previously, the rule generally treats emission units as "new" if constructed after the section 112(j) deadline. However, in the case where that area source becomes major because the EPA has set a lesser quantity emission rate after the section 112(j) deadline for the relevant source category, the EPA recognizes that it would be inequitable to require new source MACT for such an emission unit at an existing area source plant site. It would be difficult for any source constructed at an earlier date to immediately meet new source MACT upon permit issuance. Such a position would require sources to retrofit to a new source MACT level of control,

despite the fact that, at the time of a MACT proposal or the section 112(j) deadline, those sources would not have any reason to anticipate that section 112(j) would appply. Therefore today's rule has been clarified to provide that, where a source is not subject to section 112(j) on the section 112(j) deadline, but becomes subject to section 112(j) at a later date by becoming a major source, new source MACT will be limited to those emission units for which construction or reconstruction has commenced after the date that the source becomes major. This avoids the inequitable outcome of requiring such sources to retrofit new source MACT.

The rule provides two exceptions to this approach. Consistent with subpart A (59 FR 12408), if the owner or operator wishes to construct or reconstruct an emission unit that would cause the plant site to now become a major source, that emission unit would be treated as "new." Or, if a source, which has been constructed or reconstructed after the section 112(j) deadline and which has been an area source by virtue of a limitation on its potential to emit, becomes a major source by virtue of a relaxation of its emission limitation, then the emission units whose emission limitations increase would be treated as "new." (This latter exception is intended to be consistent with subpart A of this part, and with provisions in § 52.21(r)(4) in the criteria pollutant program). For these reasons, the definition of new source says ". . . except as provided for in § 63.52(f)(1)," and § 63.52(f)(1) clarifies these exceptions.

D. Section 63.53—Application Content for a Case-by-Case MACT Determination

Section 63.53 of today's rule describes the information the owner or operator is required to provide with an application for a MACT determination. These information requirements are designed to identify the emission units to be controlled and to demonstrate that MACT will be met.

E. Section 63.54—Preconstruction Procedures for New Emission Units

Section 112(j), when read together with title V, presents certain ambiguities which must be resolved in this rulemaking. Section 112(j) requires case-by-case determinations of MACT for new as well as existing sources. Section 112(j)(5) directs that case-by-case MACT is to be "equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection(d)." The timing for application for new sources subject to any standard promulgated under section 112(d) is in turn articulated in section 112(i)(1), which prohibits the construction of a new major source or reconstruction of an existing major source except when there has been a determination that the construction or reconstruction will meet the MACT standard.

However, the timing of this determination for new sources under section 112(j) is different than the timing required by the statute for section 112(d) standards. Section 112(j) requires that the permit containing the case-by-case determination of MACT be "reviewed and approved or disapproved according to the provisions of section 505" (section 112(j)(4)) and issued "pursuant to Title V," (section 112(j)(5)). This conflicts with a requirement for preconstruction or pre-operation review for new sources subject to only section 112(j), because title V does not give EPA discretion to require applications for sources newly subject to the title earlier than 12 months after commencing operation. (Section 503(c)). (States may, however, opt to do so). Because the Part 70 permit must be issued within 18 months of the application, it could be up to 30 months after operation before section 112(j) requirements would be incorporated into the title V permit.

While several commenters state that section 112(j) MACT determinations should be subject to preconstruction review, a number of others argued that section 112(j) contains no authority for preconstruction review. A number of commenters addressed the relationship of section 112(j) to section 112(g). Several of these commenters argued that both sections should be reviewed, and the more stringent requirement applied in each case. Other commenters stated that the two sections should be applied consistently.

The EPA agrees that section 112(j) determinations for new sources should be subject to preconstruction or pre-operation review. However, the Agency acknowledges, as pointed out by other commenters, that section 112(j) does not provide the EPA with independent authority to require such review. Therefore, in the final rule EPA is not changing its proposal that section 112(g) provide the mechanism for review for modifications to major sources and construction of new major sources. An optional preconstruction review process is provided in this rule for the benefit of new emission units not covered by section 112(g).

As noted above in Section III.C. of this preamble, the EPA believes that sources subject to case-by-case MACT determinations should undergo upfront review. While in some cases States may require review under the Part 70 program to occur in the preconstruction phase (or an "enhanced" preconstruction process deemed equivalent), the Act does not authorize EPA to mandate this result. It follows that, while title V is sufficiently comprehensive to handle the section 112(j) review process for existing emission units, it is not broad enough in its mandatory coverage to implement section 112(j) for new emission units. EPA believes that the preconstruction or pre-operation review requirements for control technology determinations under section 112(g) will be applicable to many new sources subject to section 112(j). For example, construction of all new major sources, and all new emission units constructed as part of a modification to an existing major source, would require preconstruction or pre-operation review under section 112(g). Permitting authorities also have the option of establishing an administrative process for preconstruction or pre-operation review of new emission units subject to section 112(j), to cover those emission units not subject to the requirements of section 112(g). In addition, section 112(j) requirements should be considered for new emission units requiring other preconstruction permits under a permit authority's overall air quality program.

As an alternative to relying on the upfront review procedures of section 112(g) for new major sources, EPA had considered relying on the language of section 112(i)(1) to require preconstruction review of new sources under section 112(j). However, section 112(i)(1) requires preconstruction review only for major-emitting sources. Such major-emitting sources would already be required to undergo preconstruction review under the requirements of section 112(g). Therefore adding a requirement for preconstruction review under section 112(j) based on section 112(i)(1) adds nothing to the process. For this reason EPA rejected reliance on section 112(i)(1) authority.

Section 63.54 of today's rule describes an optional preconstruction review process for new emission units not required to undergo upfront review under section 112(g). Permitting authorities need not provide this additional preconstruction review opportunity. Moreover, since the preconstruction review process set forth in § 63.54 is optional, permitting authorities may provide for a different process. The procedures set forth in § 63.54 contain the elements EPA

believes to be necessary for an "enhanced" review process that can be incorporated into the title V permit by administrative amendment. One important aspect of such "enhanced" procedures is to ensure Federal enforceability. In addition to the discussion in this preamble, the preamble to subpart A of this part discusses the kinds of requirements that the EPA would consider sufficient to ensure federal enforceability for MACT determinations under Clean Air Act sections section 112(d) and (h); the EPA believes that these same requirements would ensure federal enforceability for case-by-case MACT determinations under section 112(j), and refers the reader to that discussion.

The EPA believes that the majority of new emission units subject to section 112(j) will be subject to section 112(g) preconstruction or pre-operation review requirements prior to filing their permit applications under Part 70. The overall process for MACT determinations contained in § 63.54 of today's rule is shown in Figures 1 and 1a. For those sources not subject to review under section 112(g), the optional "enhanced" review process begins with a MACT application consistent with the principles described in § 63.55. The owner or operator provides an application for a MACT determination to the permitting authority. The contents of this application are outlined in § 63.53. This application for a MACT determination is then evaluated by the permitting authority according to procedures described in § 63.54(b). If approved, the permitting authority would issue a Notice of MACT Approval containing the basic elements described in § 63.52(c). Provisions dealing with compliance with the requirements of the Notice of Approval are described in § 63.54(c) through (g). Terms and conditions of this Notice could be incorporated into the operating permit by an administrative amendment.

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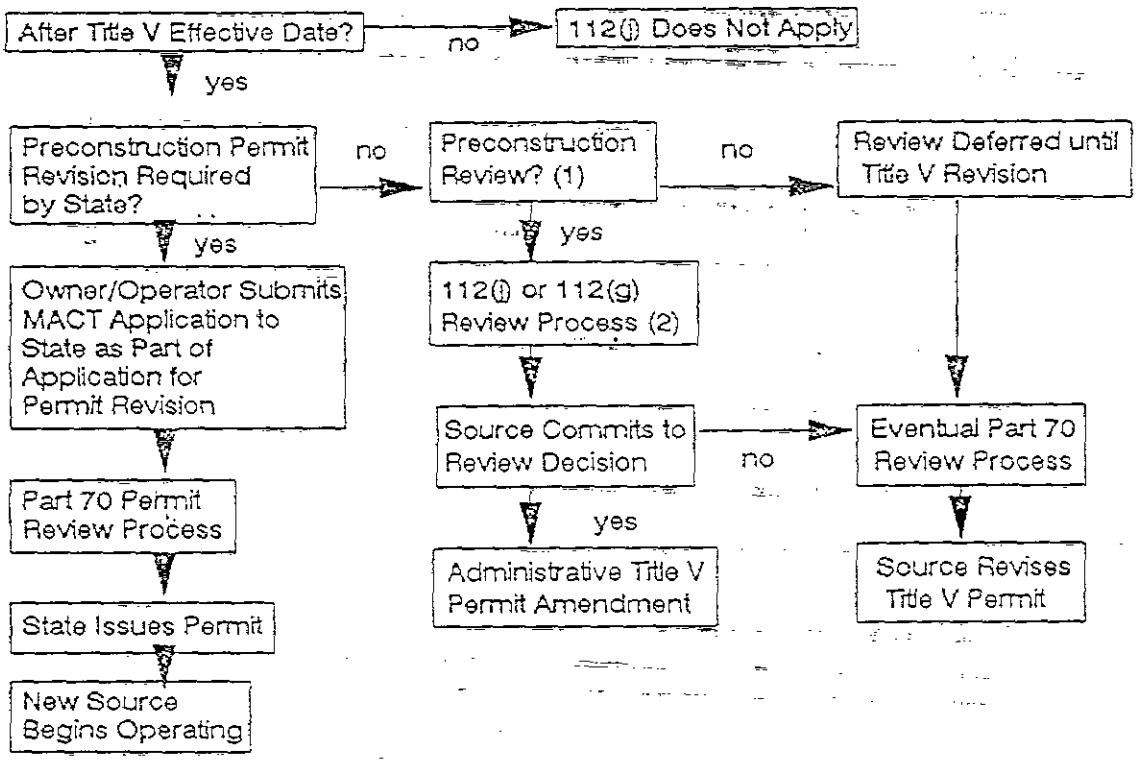
ADMINISTRATIVE PROCESS FOR NEW SOURCES



(1) Preconstruction Review May Be Required under 112(g) for Some Sources or May Occur at the Applicant's Request

(2) 112j Review Process Detailed in Figure 1a

Figure 1

OPTIONAL 112J REVIEW PROCESS FOR NEW SOURCES

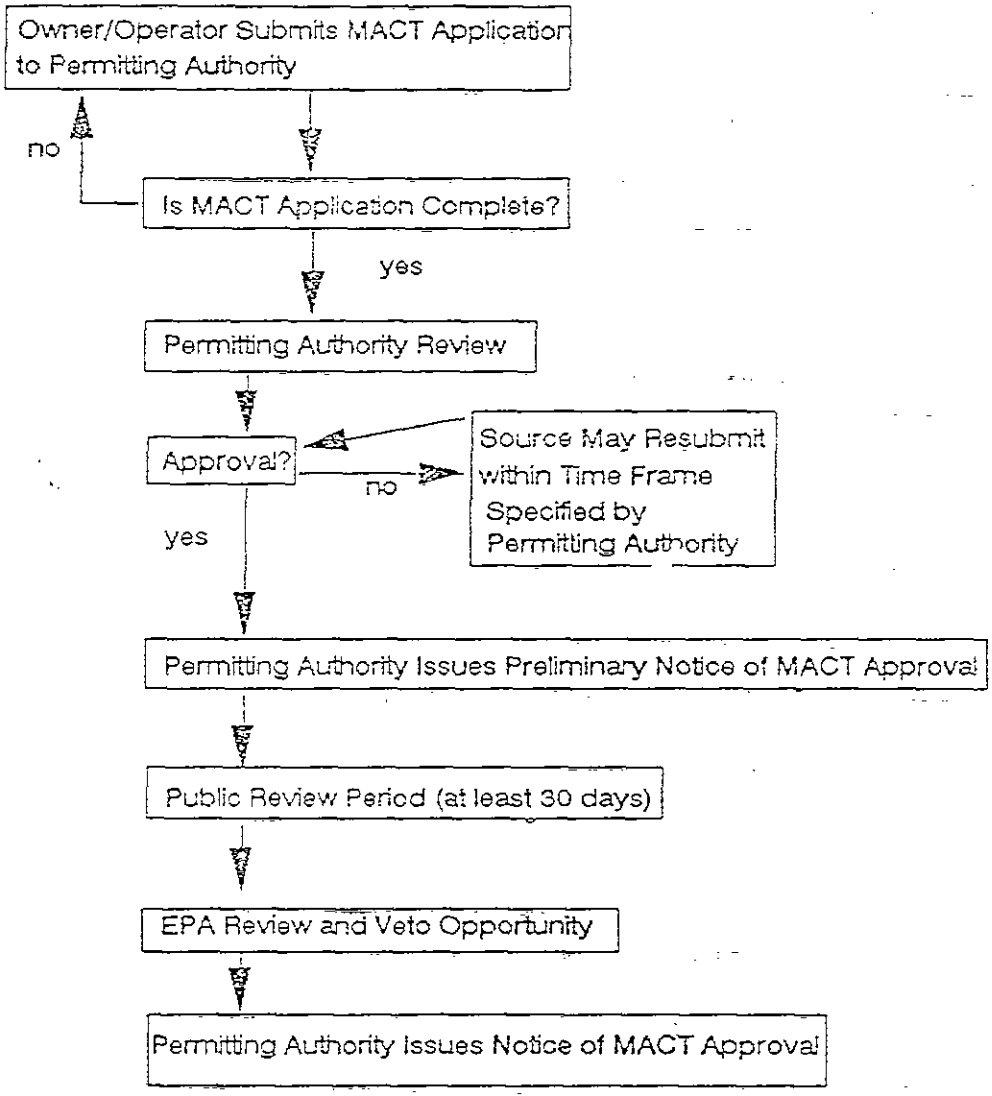


Figure 1a

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The EPA believes that there are substantial implementation advantages to upfront review for emission units subject to section 112(j), as noted above in section III.C. of this preamble. Without such review, owners and operators cannot be assured that they will meet a "new source MACT" level of control when submitting a title V permit application.

The preconstruction or pre-operation process outlined in § 63.54 begins with a completeness determination. Once a complete application is received, approval or an intent to disapprove the application is required. If an intent to disapprove is issued, the owner or operator is given the opportunity to provide further information.

Section 63.54(b) establishes an administrative process for reviewing a request by an owner or operator for a MACT determination. The proposed decision to either approve or disapprove the application is then subject to public review. (See discussion in the proposed rule at 58 FR 37778.) Today's rule would provide for public review through issuance of a notice containing all the relevant background information about the application and 30 days for the public to comment on whether the application should or should not be granted. Section 63.54(d) establishes the opportunity for EPA to review and veto the application consistent with the requirements of the title V process. In order to expedite approval of noncontroversial case-by-case MACT determinations, today's rule would allow such determinations to be made final following the close of the comment period if no adverse comments have been received. If adverse comments are received, a final notice should be published either approving or disapproving the application and addressing the comments. The EPA envisions that the permitting authority would exercise its discretion in determining, where warranted, that a public hearing should be held.

Emission limits that are federally enforceable include limits on the allowable capacity of the equipment; requirements for the installation, operation and maintenance of pollution control technologies; limits on hours of operation; and restrictions on amounts of materials combusted, stored, or produced. These limitations or conditions should be practicably enforceable and ensure adequate testing, monitoring, and recordkeeping to demonstrate compliance with the limitations and conditions. These conditions are based on the five criteria for Federal enforceability established in 40 CFR parts 51 and 52 (54 FR 27274). Part of the criteria for conferring Federal enforceability to a State or locally established emission limitation requires the emission limitation to undergo some public scrutiny and be kept in standardized files in EPA's Regional Offices. In addition, the emission limitation must be enforceable as a legal and practical matter. The preamble to the proposed rule contains a more detailed discussion of the kinds of permit conditions the EPA considers necessary to establish Federal enforceability.

The end result of the administrative review process for new emission units is a determination set forth in a document that is termed a "Notice of MACT Approval." Necessary elements for this Notice are provided in paragraph 63.52(c) of today's rule. This Notice should contain the emission limitations, notification, operating and maintenance; performance testing, reporting, recordkeeping, compliance dates, and any other requirements needed to ensure that the case-by-case MACT emission limitation will be met.

The Notice of MACT Approval serves to ensure that the new emission unit is built with controls that meet the requirements of section 112(j). If the Notice is approved through an "enhanced" process, it can be incorporated into the title V permit through administrative amendment.

F. Section 63.55—Maximum Achievable Control Technology (MACT) Determinations for Emission Units Subject to Case-by-Case Determination of Equivalent Emission Limitations

As discussed previously, § 63.52 requires case-by-case MACT determinations after the effective date of a title V permit program in a State. MACT determinations will be conducted for all HAP-emitting equipment that is located at a major source and is in a source category for which the Agency has failed to promulgate a relevant maximum achievable control technology (MACT) standard within 18 months of the scheduled promulgation date. This section of the preamble discusses principles and procedures for making these MACT determinations. These include procedures needed to establish a MACT emission limitation and a corresponding MACT control technology. In the rule, the overall process for MACT determinations is outlined in § 63.55.

The primary emphasis is on the procedures for case-by-case MACT determinations when no applicable MACT standard has been proposed by the EPA. The procedures for determinations after MACT standards have been proposed are more straightforward.

Section 63.55 contains general principles that would govern MACT determinations under today's rule. In general, the purpose of a case-by-case MACT determination is to develop technology-based limitations for HAP emissions that the Administrator (or a permitting agency to whom authority has been delegated) approves as equivalent to the emission limitations required for the source category if promulgated MACT standards were in effect under section 112(d) or section 112(h) of the Act.

The EPA believes that if a MACT standard has been proposed, but not yet promulgated, this proposed standard is the best estimator of the Agency's final action, and therefore should be considered in establishing a case-by-case MACT emission limitation. Accordingly, paragraph 63.55(a)(1) requires that in the absence of a supportable alternative, the equivalent emission limitation should be at least as stringent any such proposed standard. (Permitting authorities retain the option of requiring MACT that is different from EPA's MACT determination, provided that the alternative can be supported. An example of such a supportable alternative would be the case where a permitting authority possesses additional data that would support amending EPA's floor finding).

When no MACT standard has been proposed, the rule requires that the case-by-case MACT determination be consistent with the overall requirements described in section 112(d) of the Act.

Section 112(d)(3) of the Act describes the general considerations for a MACT determination. A MACT level of control is "the maximum degree of reduction in emissions of the hazardous air pollutants * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new and existing sources in the category or subcategory * * *" This paragraph of the Act continues to describe a number of items that might be considered in designing MACT standards such as material substitutions, enclosure of processes, capture and control of emissions, design and work practice standards, and operational standards. This list of items is included in the definition of "control technology" in § 63.51 of today's rule.

Section 112(d) also imposes certain minimum requirements on the determination of "maximum achievable

control technology." Collectively, these minimum requirements are defined in the rule as the "MACT floor."

For existing emission units, the MACT floor for the case-by-case determination, consistent with section 112(d) of the Act, is an emission limitation equal to the average emission limitation achieved by the best performing 12 percent of existing sources in the category for categories or subcategories with 30 or more sources, or the average emission limitation achieved by the best 5 sources for categories with fewer than 30 sources.

In rules currently under development, the EPA is considering two interpretations of the statutory language concerning the MACT floor for existing sources. One interpretation groups the words "average emission limitation achieved by" the best performing 12 percent. This interpretation places the emphasis on "average." It would correspond to first identifying the best performing 12 percent of the existing sources, then determining the average emission limitation achieved by these sources as a group. Another interpretation groups the words "average emission limitation" into a single phrase and asks what "average emission limitation" is "achieved by" all members of the best performing 12 percent. In this case, the "average emission limitation" might be interpreted as the average reduction across the HAP emitted by an emission point over time. Under this interpretation, the EPA would look at the average emission limits achieved by each of the best performing 12 percent of existing sources, and take the lowest. This interpretation would correspond to the level of control achieved by the source at the 88th percentile if all sources were ranked from the most controlled (100th percentile) to the least controlled (1st percentile).

The EPA has proposed to adopt the first interpretation and has solicited comment in other rulemakings on its interpretation of "the average emission limitation achieved by the best performing 12 percent of existing sources" (section 112(d)(3)(A) of the Act). The guidance document, MACT Determinations under Section 112(j) (EPA–450/3–92–007a), explains how a MACT floor might be determined using EPA's proposed interpretation. Should the EPA adopt a different methodology for determining the MACT floor, the guidance document will be amended to explain this approach.

The MACT floor for existing sources also takes into account sources achieving the "lowest achievable emission rate" (LAER) as defined for the criteria pollutant new source review program under section 171 of the Act, and excludes these limitations from the floor calculation for sources who have achieved LAER within 18 months before proposal or within 30 months before promulgation of a standard. The EPA interprets the "best performing 12 percent" to mean the best performing 12 percent of sources in the United States, because all sources in each category are in the United States. The phrase "in the United States" is added to the existing source MACT floor definition in order to clarify that territories and possessions of the United States are included.

When a MACT floor has been determined by EPA or the permitting authority, the rule requires that the MACT emission limitation achieve an equal or greater level of control than that MACT floor. In determining whether to require a MACT emission limitation that achieves a level of control greater than the MACT floor, the permitting authority should consider the costs, non-air quality health and environmental impacts and energy requirements of achieving that level of control. (See section 112(d)(2) of the Act).

For new emission units, the MACT floor for a case-by-case MACT determination, consistent with section 112(d), is the level of control that is achieved in practice by the best controlled similar source. The EPA believes that the legislative history of section 112 suggests that the "best controlled similar source" could be located outside of the United States. See, Statement of Senator Durenberger, Cong. Rec. S. 17239 (October 26, 1990). The definition of MACT floor for new source MACT is therefore not restricted to sources in the United States, but could instead be based on a technology known to be used in practice on a similar source located anywhere.

The Act states that "the maximum degree of reduction that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as defined by the Administrator." The Act does not specifically define the term "best controlled similar source." In addition, unlike for existing sources for which the Act states, " the average emission limitation achieved by the best performing 12 percent of the existing sources * * * in the category or subcategory for categories or subcategories with 30 or more sources," the Act does not specifically indicate that the determination of the best controlled similar source should be limited to sources within that same source category. The guidance document "MACT Determinations under Section 112(j)" provides a detailed discussion of the criteria that should be used to determine if a source is "similar."

The EPA believes that because the Act specifically indicates that existing source MACT should be determined from within the source category, and does not make this distinction for new source MACT, that Congress intends for transfer technologies to be considered when establishing the minimum criteria for new sources. The EPA also believes that the use of the word "similar" provides additional support for this interpretation. The EPA believes that Congress could have explicitly restricted the minimum level of control for new sources, but did not. The use of the term "best controlled similar source" rather than "best controlled source within the source category" suggests that the intent is to require a consideration of transfer technologies when appropriate.

The EPA believes that there will be cases when such technology transfers are entirely reasonable. For example, suppose that the best controlled tank within a source category did not have state-of-the-art controls. Yet, tanks from outside the source category storing similar organic liquids use state-of-the-art controls vented to an emission control device. The EPA believes that such tanks are clearly "similar" within the language of section 112(d). The EPA also believes that the Act does not compel all such technology transfers in all cases, and that emission types and the ability to install such controls are strong factors in determining when sources should be considered similar. For example, within source category X, spray booths tend to be uncontrolled due to gas streams with low concentrations and relatively high airflows. The EPA does not believe that controls from another category should be considered in determining the best controlled similar source when emissions from that category's spray booths are of high concentration and low airflow. The emissions from these sources are clearly not similar. However, if it is technologically feasible, these same controls could be considered in establishing the new source level of control if consideration is given to cost, non-air quality health and environmental impacts and energy requirements.

Subcategorization

When the notice of initial list of categories of sources under section

112(c)(1) of the Act was published in the Federal Register (57 FR 31579), the EPA listed broad categories of major and area sources rather than narrowly defined categories. The EPA chose to establish broad source categories at the time the source category list was developed because there was too little information to anticipate specific groupings of similar sources that are appropriate for defining MACT floors for the purposes of establishing emission standards. During the standard setting process, the EPA may find it appropriate to further divide categories to distinguish among classes, types and sizes of sources, as the Act provides.

The lack of subcategorization and broad nature of the source category may pose some difficulty in establishing a case-by-case emission limitation. The source category list contains categories that will regulate more than one process type. It may be appropriate to consider all process and emission units as one source when determining the MACT floor level of control; or, after gathering information on the source category, the EPA may find that, where there are basic technological differences between different types of processes or emission units, grouping all units into one source category is inappropriate and a more accurate and realistic MACT floor finding can be made by subcategorizing the industry. Criteria to consider include air pollution control differences, process operation (including differences between batch and continuous operation), emission characteristics, control device applicability and costs, safety, and opportunities for pollution prevention.

Several commenters encouraged EPA to further subcategorize the source category list for the purposes of case-by-case MACT determinations. While this option may provide for the greatest consistency in MACT determinations from all permitting authorities, the feasibility of this option is questionable. The EPA did not subcategorize source categories because there was insufficient information to properly characterize each source category at the time the source category list was developed under section 112(c)(1). Although additional information may be collected for a given category before the section 112(j) deadline, such information may not always be sufficient to support subcategorization.

Information burden/MACT floor finding. A significant issue for this rulemaking is how to avoid placing unmanageable information-gathering burdens on sources and permitting authorities while ensuring that emissions limitations under section 112(j) are equivalent to standards that the EPA would have issued. Commenters raised a variety of concerns about the resource burden, legality, and sensibility of requiring each individual source to provide its own MACT floor determination in its permit application.

Because all section 112(j) MACT determinations occur for a particular source category within a limited time frame, the EPA agrees that it would be duplicative and burdensome for each individual source to initiate a MACT floor finding, and that it would be more efficient and consistent for EPA or permitting agencies to determine the MACT floor.

In addition, consistent MACT determinations across sources are in the interests of both sources and permitting agencies. MACT determinations would be more likely to be at least as stringent as the eventual section 112(d) standard if either EPA or the permitting agency, as opposed to each individual source, provided the initial floor analysis. If the MACT floor is not determined consistently under section 112(j), then chances increase that some sources would install controls under section 112(j) that do not achieve an emission limitation equivalent to eventual section 112(d) requirements. These sources would then be required later to retrofit the emission unit with different controls when the section 112(d) MACT standard is eventually promulgated (once the compliance extension provided for in § 63.56 has expired).

If section 112(j) requirements are triggered, the EPA anticipates that a substantial amount of information on the source category will have been collected, allowing EPA to conduct a MACT floor analysis. When it appears that the section 112(j) requirements will take effect, the EPA intends to make the findings of this analysis available to the public. For example, the floor determination may be readily available in EPA-developed Background Information Document (BID). The EPA believes that for such cases it would be reasonable to expect that such a BID would be taken into consideration in establishing a case-by-case MACT emission limitation. Regardless of the format in which the MACT floor finding is presented, the EPA expects that its finding would include the EPA's view of the definition of source or emission unit, as well as a delineation of applicable subcategories. However, nothing in today's rule should be read to diminish the discretion of the permitting authority to use its own floor finding, if the permitting authority can present evidence for a MACT floor finding different from that which the EPA has determined. Such evidence could be, for example, data provided by affected owners or operators that supports a correction to the EPA's MACT floor finding.

Although the EPA believes that it holds the greatest responsibility for making MACT floor findings and MACT determinations available in cases where the requirements of section 112(j) are triggered, the EPA must still provide for those instances in which a MACT floor determination will not be available at the time of the section 112(j) deadline. The EPA agrees with commenters who argue, as outlined above, that in such cases the burden for making MACT floor findings should rest with the permitting agency, not the individual applicant. (In such cases, the EPA may still have collected a great deal of information on the industry, which the EPA anticipates sharing with permitting agencies).

Section 63.55(a)(3) provides that if neither the EPA nor the permitting authority makes a MACT floor finding by the section 112(j) deadline, then the source shall submit a permit application, by the section 112(j) deadline, that will be considered complete if it contains all relevant information on emissions and controls (as set out in § 63.53(b)(1)-(9)), but no MACT floor finding or MACT determination. Section 63.55(a)(3)(i) adds that the source may choose to include a recommended MACT determination in its permit application.

Section 63.55(b) provides that the source's final permit must contain a MACT determination which, based on information "available to or generated by" the permitting authority, is at least as stringent as the MACT floor. In cases where a floor has not been established by the section 112(j) deadline by the EPA, the EPA believes that the data collected in the permit application process, in combination with information already collected by the EPA, can be used to establish minimum requirements for permits. The EPA envisions that permitting agencies can share information received in these applications, and that such information will be reported to EPA's national database. In addition, information generated by industry trade groups and the public may be of assistance.

The proposed rule contained a requirement for permitting authorities to submit copies to the Administrator of all Notice of MACT Approvals or Title V permits within 60 days of issuance. The EPA received many comments affirming the need for a mandatory reporting requirement to a National database. Commenters believe this is necessary to assure that the information used to

determine the MACT floor is representative of the full range and frequency of controls achieved by sources in the category or subcategory. The EPA agrees that information should be submitted to the Administrator to facilitate information exchange between the permitting agencies making section 112(j) MACT determinations. However, the EPA believes that this information would be most useful if received before issuance of the permit or Notice of MACT Approval. Therefore, § 63.55(c) has been changed to require owners or operator to provide, to the Administrator, an additional copy of any Notice of MACT Approval or title V permit submitted to a permitting authority to comply with the requirements of this rule.

The EPA considered requiring that, in each permit application, the owner or operator would make a control technology recommendation evaluating the impacts of alternative control levels and evaluating whether, in its judgement, the recommended control technology achieves emission reductions equal to or greater than the MACT floor. The EPA is concerned that, while such a requirement would satisfy the requirements of the Act, it may be overly burdensome to require each affected owner to prepare a separate analysis of costs, environmental impacts, etc., needed for such a recommendation.

In today's rule, owners and operators are strongly encouraged to provide such recommendations at the time of the application, but are not required to do so. At a minimum, however, the owner or operator is required to submit information on HAP emissions and current controls for each emission point, as well as any additional information deemed necessary by the permitting authority to evaluate control alternatives.

The EPA wishes to clarify that the requirements in § 63.53 (b)(8) and (b)(9) to list emission rates is intended as background information to enable the permitting authority to identify the pollutants requiring MACT controls. The EPA recognizes that there is often a significant effort required to obtain precise estimates of HAP emission rates and speciation. The EPA does not intend in this paragraph to require a greater level of detail than is necessary for evaluating applicability and emission control issues.

The EPA envisions, in cases where a MACT determination has not been provided by the Administrator, that a multi-stage process will be involved before issuance of the final title V permit. For the first stage, affected owners and operators would submit an initial application identifying the current level of control and data pertinent to the evaluation of control alternatives. Permitting authorities would review the application and provide the owner or operator with feedback on any additional information required. The owner or operator would be required to supply complete information no later than 6 months from the date of the initial application. For the second stage, the permitting authority would, in tandem with other permitting authorities, determine an emission limitation for each application that represents a MACT emission limitation for each emission unit. In the last stage, the emission limitation would be formally incorporated into the permit through the normal title V processes (public review, etc.)

G. Section 63.56—Requirements After Promulgation of a Subsequent Standard Under Section 112(d).

Section 63.56 of today's rule sets out requirements for incorporating subsequent standards into an operating permit after the owner or operator has submitted a permit application for a section 112(j) case-by-case MACT determination, or after a case-by-case MACT determination has been made under section 112(j). Section 63.56 implements the specific requirements of subsection 112(j)(6) of the Act.

Section 63.56 provides, as required in the Act, that if the EPA promulgates a section 112(d) standard for a source category before approval of a section 112(j) permit application for a source in that source category, then the permit must reflect the section 112(d) standard. New sources must comply upon startup with the section 112(d) rule except that, if the MACT standard is more stringent than the proposal, sources commencing construction or reconstruction between proposal and promulgation may comply with the proposal for 3 years, then meet the final MACT standard.

If EPA promulgates a section 112(d) standard after issuance of a section 112(j) permit for a source in the relevant source category, then the permit must be revised upon renewal to reflect the section 112(d) standard. However, the compliance period must be no longer than a total of 8 years from the initial section 112(j) compliance date, or the section 112(d) promulgation date, whichever is earlier.

Paragraph 63.56(c) clarifies a permitting authority's responsibilities when a case-by-case MACT standard is more stringent than a subsequent section 112(d) standard, and a permit containing that case-by-case standard has been issued. In that instance, the permitting authority is not required to revise the permit to reflect the less stringent section 112(d) standard, but may presume that the more stringent case-by-case determination satisfies the requirements of both section 112(j) and section 112(d). The EPA believes that nothing in section 112 of the Clean Air Act requires pre-emption of these more stringent State standards. The initial responsibility for determining whether a case-by-case MACT determination is more stringent rests with the permitting authority. The permitting authority should expect that EPA, in reviewing the permit at permit renewal, would look to the criteria in subpart E for guidance in approving this determination.

IV. Discussion of the Relationship of Today's Rule to Other Requirements of the Act

A. Section 112(g) Requirements for Constructed, Reconstructed, and Modified Major Sources; and Subsequent Standards Under Section 112(d) or Section 112(h)

States and sources implementing the requirements of section 112 of the Clean Air Act need to understand the potentially complex relationships among several interlocking provisions. At proposal the EPA requested comment on different interpretations of the relationship among the requirements of sections 112 (d), (g) and (j).

Internal Consistency

As discussed in section II.C. of this preamble, EPA's primary goal is to create as much consistency as possible between case-by-case MACT determinations under section 112(j) and implementation of subsequent section 112(d) standards for those same source categories. In addition, the Agency desires to rationalize the section 112(j) provisions with the section 112(g) provisions requiring case-by-case MACT determinations for constructed, reconstructed, and modified major sources. While some of the specific substantive requirements of section 112(g) differ from the substantive requirements of section 112(j) and section 112(d), the EPA intends to ensure the greatest possible consistency among sections 112 (d), (g), and (j) provisions. This discussion outlines EPA's preferred approach in implementing section 112(g) and achieving a consistent relationship across sections 112(d), 112(g), and 112(j). EPA recently proposed a rule implementing section 112(g) and a final determination on the relationship

between these provisions will be made in that rulemaking.

One fundamental principal guiding the design of regulations under all three provisions is that case-by-case maximum achievable control technology requirements under section 112(g) are applicable only until the effective date of a section 112(j) or section 112(d) standard for a source category. After the effective date of a section 112(j) or a section 112(d) MACT standard, any more stringent emission limitations required under section 112(j) or section 112(d) supersede the specific emission limitations required under section 112(g).

The EPA considered an alternative approach, i.e. the finding that section 112(g) governs all changes and additions of new emission units at existing sources whether or not a section 112 (d) or (j) standard exists. This issue generated numerous comments. Some commenters argue that the requirements of section 112(g) should not be superseded when a MACT emission limitation is established under either section 112(j) or section 112(d) is promulgated. A few commenters argue that a control technology selected for a particular standard under section 112 (j) or (d) should not remain fixed, and that the way to continually require better controls is through section 112(g). Others argue that because section 112(j) does not contain the word "modification", that all modifications should be handled by section 112(g).

Many argue that EPA's approach to coordinating sections section 112 (j), (d), and (g) would result in unnecessary regulatory burdens, such as: (1) regulating sources that emit below "de minimis" amounts under section 112(g) as new sources, (2) stifling technological advance and delay needed process changes through over-regulation, and (3) subjecting some sources to repeated MACT determinations, and perhaps forcing sources to replace controls required under section 112(g) with controls required under section 112(j).

Other commenters endorsed EPA's approach to coordinating section 112(j), (g), and (d), by asserting that since section 112(j) standards will apply to an entire source category, it is important that they be established according to a philosophy compatible with section 112(d).

The EPA recognizes that changes to a source subject to a section 112(d) MACT standard will be subject to the same control requirements that already apply under section 112(d). The EPA believes that section 112(g) establishes case-by-case MACT to cover those major sources who make modifications before a promulgated MACT standard applies. Therefore consistency would suggest that similarly, changes to a source subject to a case-by-case MACT standard under section 112(j)—which acts in place of a section 112(d) standard—should be subject to the same control requirements that already apply under section 112(j). While under this approach section 112(g) continues to require assessment of whether a modification has occurred after a section 112(d) or section 112(j) standard is in effect, it will not dictate the level of control when the requirements of section 112(d) or section 112(j) are more stringent. The EPA believes that the internal consistency of this approach would yield a more consistent application of controls on major sources than would prolonging the use of case-by-case MACT under section 112(g).

Moreover the EPA does not intend that case-by-case controls applied under section 112(j) will result in subjecting sources to repeating and conflicting MACT determinations. The EPA expects that case-by-case MACT determinations under section 112(j) will require updates to those made under section 112(g) only in rare cases.

A further reason for rejecting the approach that section 112(g) control extends to sources covered by more stringent section 112(d) or section 112(j) standards is that it leads to the conclusion that many new sources within the section 112(a)(4) definition of new source would forever escape having to apply a new source MACT level of control.

Section 112(a)(4) defines a new source as "a stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations under this section establishing an emission standard applicable to such source." Thus, once a standard has been set under section 112(d), any new source will be subject to new source MACT. The MACT standard will define the portion of a facility that is considered a "source" for the purposes of the particular standard. Such source may be either an entire major source, or one or more sources within the major source. (Of course a MACT standard can also be set for area sources, which are stationary sources that are not part of a major source; but as section 112(j) does not apply to area sources, that is not relevant here).

Section 112 (g) applies to construction, reconstruction, or modification of major sources, and in many cases will have an effect on sources earlier than section 112 (d) or (j) standards. However, section 112 (g) only requires new source MACT on "constructed" major sources, and considers any other new emission unit to be a modification of an existing major source. As a "modification," such a new emission unit will be required to apply for existing source case-by-case MACT determination under section 112(g). Therefore if section 112(g) were to constrain the application of a subsequent section 112(j) or section 112(d) standard, many new emission units under the section 112(a)(4) definition of "new source" would never be required to comply with new source MACT.

In addition, under section 112(g) a new emission unit might not even be required to meet an existing source MACT level of control. Section 112(g) allows for modifications to either: (1) comply with a case-by-case "existing source" MACT determination under section 112(g); (2) offset emissions increases in lieu of applying section 112(g) existing source MACT requirements; or (3) if its emissions were below section 112(g) de minimis levels, not be subject to any control requirements at all. The EPA believes that section 112(g) thus provides major sources with a great deal of needed flexibility before sections 112 (d) or (j) standards are set; but that once those standards are in place the Act intends that these sources must comply with the specific control technology requirements of those standards instead of those of section 112(g).

Finally, the interpretation that section 112(g) governs the control requirements on new emission units at major sources to which section 112 (d) or (j) standards already apply would have some anomalous implications. One example would be a new emission unit whose emissions are below section 112(g) de minimis levels for a particular hazardous air pollutant. If that emission unit were added to a major source, it would be exempt from the requirements of section 112(g), but would be required to apply new source MACT control under section 112(j). However, if that emission unit were not below section 112(g) de minimis levels, it would be required to comply with section 112(g). If section 112(g) requirements limit the application of section 112(j), then the source would be required to apply existing source MACT. In this instance, a smaller emission unit would be required to control more stringently than a larger emission unit.

Another example of anomalies resulting from this reading of the statute would be a section 112(d) standard that sets new source MACT for new area sources in a source category. Under this reading, major sources adding new

sources could avoid new source MACT, but any new area source would have to meet new source MACT. Again, a smaller unit would be required to control more stringently than a larger emission unit.

Several commenters argue that the requirements of section 112(j) should only apply to new and existing major sources once, at the time the hammer falls, and that subsequent construction of new major sources, or additions to existing major sources should not be subject to section 112(j) requirements. These commenters state that such subsequent changes should be governed by section 112(g) requirements.

The EPA does not believe that section 112(j) is only applicable at the time that the hammer falls. Section 112(j) is intended to take the place of section 112(d) standards, and thus should apply to all sources in the relevant category until the section 112(d) standard takes over. Thus, a new source constructed after the hammer date, but before a MACT standard is promulgated, should be subject to section 112(j) to the same extent as a source that is covered by section 112(j) on the date the hammer falls.

The EPA believes that under its preferred approach, the substantive control requirements of section 112(g) would be pre-empted by the more stringent requirements of a relevant section 112(j) or section 112(d) standard. Relying on section 112(g) to cover new emission units after the section 112(j) deadline is insufficient because it does not require application of the equivalent of section 112(d) standards to all sources in the relevant source category.

Similarly, some commenters argue that if a major source has complied with section 112(g), it should have to do no more under section 112(j). Under the EPA's preferred approach, in most cases compliance with section 112(g) will be sufficient under section 112(j), but there are some situations where section 112(j) may require more control. For example, an existing major source that has been modified and has met case-by-case MACT under section 112(g) may not have installed MACT on all emission units in a given source category, because some emission units may have offset out of control, and emission units below section 112(g) de minimis emission rates will not have applied control. Under the EPA's preferred approach, section 112(j) would require case-by-case MACT on all the emission units within the major source that are included in the category for which the section 112(j) deadline has passed. However in most cases where existing source MACT controls have been applied under section 112(g), those controls under section 112(g) will suffice for emission units required to install existing source MACT under section 112(j). (There may be rare cases where section 112(j) will require new source MACT on some emission units that only have to meet existing source MACT under section 112(g). For example, an emission unit constructed after proposal of a section 112(d) MACT standard, but before the section 112(j) deadline, would have to meet existing source MACT under section 112(g) and later new source MACT under section 112(j). This distinction will require more stringent control in cases where the permitting authority finds new source MACT to be more stringent than existing source MACT). Again, this discussion outlines the EPA's preferred approach in implementing section 112(g) and achieving a consistent relationship across sections 112(d), 112(g), and 112(j). The EPA recently proposed a rule implementing section 112(g) and a final determination on the relationship between these provisions will be made in that rulemaking.

Administrative consistency. Voluntary administrative procedures for new sources under section 112(j), as outlined in § 63.54 of today's rule, are intended to be analogous to administrative requirements that will be established for modified, constructed, and reconstructed sources under section 112(g) of the Act. These requirements were proposed in § 63.40 through 63.48 of this subpart, at 59 FR 15504 (April 1, 1994).

Figure 1 illustrates the link between the voluntary section 112(j) preconstruction review process and the proposed section 112(g) administrative requirements. Although the EPA believes that section 112(j) does not provide authority for an upfront review of all new sources, the EPA believes, as a matter of policy, that whether preconstruction or pre-operation review is done under the authority of section 112(g) or section 112(j), the MACT determination can be incorporated directly into the title V permit by administrative amendment if the review process contains the elements necessary to make it an "enhanced" process, as discussed in section III.C. of this preamble.

Before the section 112(j) deadline, such sources will be required to make a case-by-case MACT determination under section 112(g). After the section 112(j) deadline, these sources will be required to make a case-by-case MACT determination under section 112(j). Many of these sources may still be subject to preconstruction or pre-operation review under section 112(g). Sources applying for approval of a case-by-case MACT determination under section 112(g), but who will be subject to section 112(j) new source MACT, need to know this before they construct, in order to install the right equipment.

In addition there will be new sources that may not be covered by section 112(g), but who may be required to install new source MACT under section 112(j). For example, an owner/operator may intend to make an offset showing that would avoid a case-by-case MACT determination under section 112(g). Or a new unit's emissions may fall below a section 112(g) de minimis level for a specific pollutant. In both of these cases, the owner or operator should know in advance of the section 112(j) deadline that they may be required to install new source MACT under section 112(j).

Therefore, any owner or operator planning to construct a new major source, or any existing major source planning to install a new emission unit after a scheduled promulgation date for a source category, is encouraged to undergo "enhanced" preconstruction or pre-operation review under section 112(j). This is the only way to satisfy the requirements of title V to allow incorporation of section 112(j) MACT emission limits in the operating permit by administrative amendment.

B. Section 112(l) Delegation Process

Under section 112(l) of the Act, States have the option of developing and submitting to the Administrator a program for implementing the requirements of section 112, including section 112(j). The EPA rule implementing section 112(l) is contained in § 63.90 through § 63.96 of 40 CFR part 63.

The EPA believes that section 112(l) approvals do not have a great deal of overlap with the section 112(j) provision, because section 112(j) is designed to use the title V permit process as the primary vehicle for establishing requirements. There may be, however, some instances where section 112(l) approvals could streamline the process. For example, a State may have an existing rule for a source category for which it could be demonstrated that all sources are achieving a level of control no less stringent than required under the case-by-case MACT requirements of section 112(j). The EPA believes that there may be advantages in obtaining approval under subpart E for such instances.

C. Section 112(i)(5) Early Reductions Program

Section 112(i)(5) of the Act allows EPA to grant a source a 6 year compliance extension from a section 112(d) MACT standard if the source achieves "early reductions" of its emissions. An early reduction is defined as a 90 percent reduction in a source's hazardous air pollutant emissions (95 percent reduction in a source's particulate emissions) before the relevant MACT standard is proposed. The source's commitment to achieve early reductions must be federally enforceable, must be included in the title V permit, and must be submitted to EPA within 120 days of establishment of a title V permit program, or, if later, before the relevant section 112(d) standard for that source category is proposed. These commitments to reduce emissions early become classified as alternative emission limitations throughout the 6 year extension period. Alternative emission limitations are the "applicable emission requirements" for the early reduction source.

However, § 63.52(c) provides that an alternative emission limitation established for the purpose of early reduction credit can be included as a MACT emission limitation in the permit, so long as the reduction was achieved by the date established in the source category schedule for standards. This requirement is established pursuant to the specific provisions of section 112(i)(5).

V. Administrative Requirements

A. Docket

The docket for this regulatory action is A–93–32. The docket is an organized and complete file of all the information submitted to, or otherwise considered by, EPA in the development of this rulemaking. The principal purposes of the docket are:

(1) To allow interested parties a means to identify and locate documents so that they can effectively participate in the rulemaking process, and

(2) To serve as the record in case of judicial review. The docket is available for public inspection at the EPA's Air Docket, which is listed under the ADDRESSES section of this document.

B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, 10/04/94), the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant" regulatory action as one that is likely to lead to a rule that may:

(1) Have an annual effect on the economy of $100 million or more, or adversely and materially affect a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;

(2) Create a serous inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligation of recipients thereof;

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, the EPA has determined that this action is a "significant regulatory action" within the meaning of the Executive Order because it may materially affect the environment, public health, and State and local governments. For this reason, this action was submitted to the OMB for review. Changes made in response to the OMB's suggestions or recommendations will be documented in the public record.

Any written comments from OMB to the EPA and any written EPA response to any of those comments will be included in the docket listed at the beginning of today's notice under ADDRESSES. The docket is available for public inspection at the EPA Air Docket Section, (LE–131), ATTN: Docket No. A–93–32, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et. seq.) requires the EPA to consider potential impacts of proposed regulations on small entities. If a preliminary analysis indicates that a proposed regulation would have a significant economic impact on 20 percent or more of small entities, then a regulatory flexibility analysis must be prepared.

Present Regulatory Flexibility Act guidelines indicate that an economic impact should be considered significant if it meets one of the following criteria: (1) Compliance increases annual production costs by more than 5 percent, assuming costs are passed on to consumers; (2) compliance costs as a percentage of sales for small entities are at least 10 percent more than compliance costs as a percentage of sales for large entities; (3) capital costs of compliance represent a "significant" portion of capital available to small entities, considering internal cash flow plus external financial capabilities; or (4) regulatory requirements are likely to result in closures of small entities.

This regulation does not affect a significant number of small businesses, small governmental jurisdictions, or small institutions, because this regulation only affects major sources of hazardous air pollutants. Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that today's rule will not have a significant economic impact on a substantial number of small entities.

D. Paperwork Reduction Act

The information collection requirements in this rule have been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq., and has been assigned the OMB control no. 2060–0266. An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1648.01), and a copy may be obtained from Sandy Farmer, Information Policy Branch (PM–2136), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, or by calling (202) 260–2740.

This collection of information is estimated to have an average annual public reporting burden of approximately 200 hours per respondent. This includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch (PM–2136), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 63

Environmental protection, Administrative practices and procedures, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: April 29, 1994.

Carol M. Browner,

Administrator.

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

PART 9—[AMENDED]

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding a new entry to the table under the indicated heading to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories:	
63.52–63.56	2060–0255
* * * * *	

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. Part 63 is amended by adding a new subpart B, consisting of §§ 63.40 through 63.56 to read as follows:

Subpart B—Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)

Sec.

63.40–63.49 [Reserved]
63.50 Applicability.
63.51 Definitions.
63.52 Approval process for new and existing emission units.
63.53 Application content for case-by-case MACT determinations.
63.54 Preconstruction review procedures for new emission units.
63.55 Maximum achievable control technology (MACT) determinations for emission units subject to case-by-case determination of equivalent emission limitations.
63.56 Requirements for case-by-case determination of equivalent emission limitations after promulgation of a subsequent MACT standard.

Subpart B—Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)

§§ 63.40–63.49 [Reserved]

§ 63.50 Applicability.

(a) *General applicability.* The requirements of §§ 63.50 through 63.56 implement section 112(j) of the Clean Air Act (as amended in 1990). The requirements of §§ 63.50 through 63.56 apply in each State beginning on the effective date of an approved title V permit program in such State. These requirements apply to the owner or operator of a major source of hazardous air pollutants which includes one or more stationary sources included in a source category or subcategory for which the Administrator has failed to promulgate an emission standard under this part by the section 112(j) deadline.

(b) *Relationship to State and local requirements.* Nothing in §§ 63.50 through 63.56 shall prevent a State or local regulatory agency from imposing more stringent requirements than those contained in these subsections.

(c) *Retention of State permit program approval.* In order to retain State permit program approval, a State must, by the section 112(j) deadline for a source category, obtain sufficient legal authority to establish equivalent emission limitations, to incorporate those requirements into a title V permit, and to incorporate and enforce other requirements of section 112(j).

§ 63.51 Definitions.

Terms used in §§ 63.50 through 63.56 of this subpart that are not defined below have the meaning given to them in the Act, in subpart A of this part.

Available information means, for purposes of conducting a MACT floor finding and identifying control technology options for emission units subject to the provisions of this subpart, information contained in the following information sources as of the section 112(j) deadline:

(1) A relevant proposed regulation, including all supporting information;

(2) Background information documents for a draft or proposed regulation;

(3) Any regulation, information or guidance collected by the Administrator establishing a MACT floor finding and/or MACT determination;

(4) Data and information available from the Control Technology Center developed pursuant to section 112(l)(3) of the Act, and

(5) Data and information contained in the Aerometric Informational Retrieval System (AIRS) including information in the MACT database, and

(6) Any additional information that can be expeditiously provided by the Administrator, and

(7) Any information provided by applicants in an application for a permit, permit modification, administrative amendment, or Notice of MACT Approval pursuant to the requirements of this subpart.

(8) Any additional relevant information provided by the applicant.

Control technology means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants including, but not limited to, measures which:

(1) Reduce the quantity, or eliminate emissions, of such pollutants through process changes, substitution of materials or other modifications;

(2) Enclose systems or processes to eliminate emissions;

(3) Collect, capture, or treat such pollutants when released from a process, stack, storage or fugitive emissions point;

(4) Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 USC 7412(h); or

(5) Are a combination of paragraphs (1) through (4) of this definition.

Emission point means any part or activity of a major source that emits or has the potential to emit, under current operational design, any hazardous air pollutant.

Emission unit means any building, structure, facility, or installation. This could include an emission point or collection of emission points, within a major source, which the permitting authority determines is the appropriate entity for making a MACT determination under section 112(j), i.e., any of the following:

(1) An emission point that can be individually controlled.

(2) The smallest grouping of emission points, that, when collected together, can be commonly controlled by a single control device or work practice.

(3) Any grouping of emission points, that, when collected together, can be commonly controlled by a single control device or work practice.

(4) A grouping of emission points that are functionally related. Equipment is functionally related if the operation or action for which the equipment was specifically designed could not occur without being connected with or without relying on the operation of another piece of equipment.

(5) The entire geographical entity comprising a major source in a source category subject to a MACT determination under section 112(j).

Enhanced review means a review process containing all administrative steps needed to ensure that the terms and conditions resulting from the review process can be incorporated into the title V permit by an administrative amendment.

Equivalent emission limitation means an emission limitation, established under section 112(j) of the Act, which is at least as stringent as the MACT standard that EPA would have promulgated under section 112(d) or section 112(h) of the Act.

Existing major source means a major source, construction or reconstruction of which is commenced before EPA proposed a standard, applicable to the major source, under section 112 (d) or (h), or if no proposal was published, then on or before the section 112(j) deadline.

Maximum achievable control technology (MACT) emission limitation for existing sources means the emission limitation reflecting the maximum degree of reduction in emissions of hazardous air pollutants (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reductions, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such emission standard applies. This limitation shall not be less stringent than the MACT floor.

Maximum achievable control technology (MACT) emission limitation for new sources means the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions of hazardous air pollutants (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by sources in the category or subcategory to which such emission standard applies.

Maximum Achievable Control Technology (MACT) floor means:

(1) For existing sources:

(i) The average emission limitation achieved by the best performing 12 percent of the existing sources in the United States (for which the Administrator has emissions information), excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined in section 171 of the Act) applicable to the source category and prevailing at the time, in the category or subcategory, for categories and subcategories of stationary sources with 30 or more sources; or

(ii) The average emission limitation achieved by the best performing five sources in the United States (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory, for a category or subcategory of stationary sources with fewer than 30 sources;

(2) For new sources, the emission limitation achieved in practice by the best controlled similar source.

New emission unit means an emission unit for which construction or reconstruction is commenced after the section 112(j) deadline, or after proposal of a relevant standard under section 112(d) or section 112(h) of the Clean Air Act (as amended in 1990), whichever comes first, except that, as provided by § 63.52(f)(1), an emission unit, at a major source, for which construction or reconstruction is commenced before the date upon which the area source becomes a major source, shall not be considered a new emission unit if, after the addition of such emission unit, the source is still an area source.

New major source means a major source for which construction or reconstruction is commenced after the section 112(j) deadline, or after proposal of a relevant standard under section 112(d) or section 112(h) of the Clean Air Act (as amended in 1990), whichever comes first.

Permitting authority means the permitting authority as defined in part 70 of this chapter.

Section 112(j) deadline means the date 18 months after the date for which a relevant standard is scheduled to be promulgated under this part. The applicable date for categories of major sources is contained in the source category schedule for standards.

Similar source means an emission unit that has comparable emissions and is structurally similar in design and capacity to other emission units such that the emission units could be controlled using the same control technology.

Source category schedule for standards means the schedule for promulgating MACT standards issued pursuant to section 112(e) of the Act.

United States means the United States, its possessions and territories.

§ 63.52 Approval process for new and existing emission units.

(a) *Application.* (1) Except as provided in § 63.52(a)(3), if the Administrator fails to promulgate an emission standard under this part on or before an applicable section 112(j) deadline for a source category or subcategory, the owner or operator of an existing major source that includes one or more stationary sources in such category or subcategory, shall submit an application for a title V permit or application for a significant permit modification, whichever is applicable, by the section 112(j) deadline.

(2) If the Administrator fails to promulgate an emission standard under this part on or before an applicable section 112(j) deadline for a source category or subcategory, the owner or operator of a new emission unit in such source category or subcategory shall submit an application for a title V permit or application for a significant permit modification or administrative amendment, whichever is applicable, in accordance with procedures established under title V.

(3) (i) The owner or operator of an existing major source that already has a title V permit requiring compliance with a limit that would meet the requirements of section 112(j) of the Act, shall submit an application for an administrative permit amendment, by the section 112(j) deadline, in accordance with procedures established under title V.

(ii) The owner or operator of a new emission unit that currently complies with a federally enforceable alternative emission limitation, or has a title V permit that already contains emission limitations substantively meeting the requirements of section 112(j), shall submit an application for an administrative permit amendment confirming compliance with the requirements of section 112(j), in accordance with procedures established under title V, and not later than the date

30 days after the date construction or reconstruction is commenced.

(4) In addition to meeting the requirements of § 63.52(a)(2), the owner or operator of a new emission unit may submit an application for a Notice of MACT Approval before construction, pursuant to § 63.54.

(b) *Permit review.* (1) Permit applications submitted under this paragraph will be reviewed and approved or disapproved according to procedures established under title V, and any other regulations approved under title V in the jurisdiction in which the emission unit is located. In the event that the permitting authority disapproves a permit application submitted under this paragraph or determines that the application is incomplete, the owner or operator shall revise and resubmit the application to meet the objections of the permitting authority not later than six months after first being notified that the application was disapproved or is incomplete.

(2) If the owner or operator has submitted a timely and complete application for a title V permit, significant permit modification, or administrative amendment required by this paragraph, any failure to have this permit will not be a violation of the requirements of this paragraph, unless the delay in final action is due to the failure of the applicant to submit, in a timely manner, information required or requested to process the application.

(c) *Emission limitation.* The permit or Notice of MACT Approval, whichever is applicable, shall contain an equivalent emission limitation (or limitations) for that category or subcategory determined on a case-by-case basis by the permitting authority, or, if the applicable criteria in subpart D of this part are met, the permit or Notice of MACT Approval may contain an alternative emission limitation. For the purposes of the preceding sentence, early reductions made pursuant to section 112(i)(5)(A) of the Act shall be achieved not later than the date on which the relevant standard should have been promulgated according to the source category schedule for standards.

(1) The permit or Notice will contain an emission standard or emission limitation to control the emissions of hazardous air pollutants. The MACT emission limitation will be determined by the permitting authority and will be based on the degree of emission reductions that can be achieved, if the control technologies or work practices are installed, maintained, and operated properly. Such emission limitation will be established consistent with the principles contained in § 63.55.

(2) The permit or Notice will specify any notification, operation and maintenance, performance testing, monitoring, reporting and recordkeeping requirements. The permit or Notice will include the following information:

(i) In addition to the MACT emission limitation required by paragraph (c)(1) of this section, additional emission limits, production limits, operational limits or other terms and conditions necessary to ensure federal enforceability of the MACT emission limitation;

(ii) Compliance certifications, testing, monitoring, reporting and recordkeeping requirements that are consistent with requirements established pursuant to title V, § 63.52(e), and, at the discretion of the permitting authority, to subpart A of this part;

(iii) A statement requiring the owner or operator to comply with all requirements contained in subpart A of this part deemed by the permitting authority to be applicable;

(iv) A compliance date(s) by which the owner or operator shall be in compliance with the MACT emission limitation, and all other applicable terms and conditions of the Notice.

(d)(1) *Compliance date.* The owner or operator of an existing major source subject to the requirements of this paragraph shall comply with the emission limitation(s) established in the source's title V permit. In no case will such compliance date exceed 3 years after the issuance of the permit for that source, except where the permitting authority issues a permit that grants an additional year to comply in accordance with section 112(i)(3)(B), or unless otherwise specified in section 112(i), or in subpart D of this part.

(2) The owner or operator of a new emission unit subject to the requirements of this paragraph shall comply with a new source MACT level of control immediately upon issuance of the title V permit for the emission unit.

(e) *Enhanced monitoring.* In accordance with section 114(a)(3) of the Act, monitoring shall be capable of detecting deviations from each applicable emission limitation or other standard with sufficient reliability and timeliness to determine continuous compliance over the applicable reporting period. Such monitoring data may be used as a basis for enforcing emission limitations established under this subpart.

(f) *Area sources that become major sources.* (1) After the effective date of this subpart, the owner or operator of a new or existing area source that increases its emissions of, or its potential to emit, hazardous air pollutants such that the source becomes a major source that is subject to this subpart shall submit an application for a title V permit or application for a significant permit modification, or administrative amendment, whichever is applicable, by the date that such source becomes a major source.

(i) If an existing area source becomes a major source by the addition of an emission unit or as a result of reconstructing, that added emission unit or reconstructed emission unit shall comply with all requirements of this subpart that affect new emission units, including the compliance date for new emission units established in § 63.52(d).

(ii) If an area source, constructed after the section 112(j) deadline, becomes a major source solely by virtue of a relaxation in any federally enforceable emission limitation, established after the section 112(j) deadline, on the capacity of an emission unit or units to emit a hazardous air pollutant, such as a restriction on hours of operation, then that emission unit or units shall comply with all requirements of this subpart that affect new emission units, on or before the date of such relaxation.

(2) After the effective date of this subpart, if the Administrator establishes a lesser quantity emission rate under section 112(a)(1) of the Act that results in an area source becoming a major source, then the owner or operator of such major source shall submit an application for a title V permit or application for a significant permit modification, or administrative amendment, whichever is applicable, on or before the date 6 months from the date that such source becomes a major source. If an existing area source becomes a major source as a result of the Administrator establishing a lesser quantity emission rate, then any emission unit, at that source, for which construction or reconstruction is commenced before the date upon which the source becomes major shall not be considered a new emission unit.

§ 63.53 Application content for case-by-case MACT determinations.

(a) *MACT Demonstration.* Except as provided by § 63.55(a)(3), an application for a MACT determination shall demonstrate how an emission unit will obtain the degree of emission reduction that the Administrator or the State has determined is at least as stringent as the emission reduction that would have been obtained had the relevant emission standard been promulgated according to the source category schedule for

standards for the source category of which the emission unit is a member.

(b) *MACT Application.* The application for a MACT determination shall contain the following information:

(1) The name and address (physical location) of the major source;

(2) A brief description of the major source, its source category or categories, a description of the emission unit(s) requiring a MACT determination pursuant to other requirements in this subpart, and a description of whether the emission unit(s) require new source MACT or existing source MACT based on the definitions established in § 63.51;

(3) For a new emission unit, the expected date of commencement of construction;

(4) For a new emission unit, the expected date of completion of construction;

(5) For a new emission unit, the anticipated date of startup of operation;

(6) The hazardous air pollutants emitted by each emission point, and an estimated emission rate for each hazardous air pollutant.

(7) Any existing federally enforceable emission limitations applicable to the emission point.

(8) The maximum and expected utilization of capacity of each emission point, and the associated uncontrolled emission rates for each emission point;

(9) The controlled emissions for each emission point in tons/year at expected and maximum utilization of capacity, and identification of control technology in place;

(10) Except as provided in § 63.55(a)(3), the MACT floor as specified by the Administrator or the permitting authority.

(11) Except as provided in § 63.55(a)(3), recommended emission limitations for the emission unit(s), and supporting information, consistent with § 63.52(c) and § 63.55(a).

(12) Except as provided in § 63.55(a)(3), a description of the control technologies that will apply to meet the emission limitations including technical information on the design, operation, size, estimated control efficiency, and any other information deemed appropriate by the permitting authority, and identification of the emission points to which the control technologies will be applied;

(13) Except as provided in § 63.55(a)(3), parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

(14) Any other information required by the permitting authority including, at the discretion of the permitting authority, information required pursuant to subpart A of this part.

§ 63.54 Preconstruction review procedures for new emission units.

(a) *Review process for new emission units.* (1) If the permitting authority requires an owner or operator to obtain or revise a title V permit before construction of the new emission unit, or when the owner or operator chooses to obtain or revise a title V permit before construction, the owner or operator shall follow the administrative procedures established under title V before construction of the new emission unit.

(2) If an owner or operator is not required to obtain or revise a title V permit before construction of the new emission unit (and has not elected to do so), but the new emission unit is covered by any preconstruction or pre-operation review requirements established pursuant to section 112(g) of the Act, then the owner or operator shall comply with those requirements, in order to ensure that the requirements of section 112(j) and section 112(g) are satisfied. If the new emission unit is not covered by section 112(g), the permitting authority, in its discretion, may issue a Notice of MACT Approval, or the equivalent, in accordance with the procedures set forth in paragraphs (b) through (h) of this section, or an equivalent permit review process, before construction or operation of the new emission unit.

(3) Regardless of the review process, the MACT determination shall be consistent with the principles established in § 63.55. The application for a Notice of MACT Approval or a title V permit, permit modification, or administrative amendment, whichever is applicable, shall include the documentation required by § 63.53.

(b) *Optional administrative procedures for preconstruction or pre-operation review for new emission units.* The permitting authority may provide for an enhanced review of section 112(j) MACT determinations that provides for review procedures and compliance requirements equivalent to those set forth in paragraphs (b) through (h) of this section.

(1) The permitting authority will notify the owner or operator in writing as to whether the application for a MACT determination is complete or whether additional information is required.

(2) The permitting authority will approve an applicant's proposed control technology, or the permitting authority will notify the owner or operator in writing of its intention to disapprove a control technology.

(3) The owner or operator may present in writing, within a time frame specified by the permitting authority, additional information, considerations, or amendments to the application before the permitting authority's issuance of a final disapproval.

(4) The permitting authority will issue a preliminary approval or issue a disapproval of the application, taking into account additional information received from the owner or operator.

(5) A determination to disapprove any application will be in writing and will specify the grounds on which the disapproval is based.

(6) Approval of an applicant's proposed control technology will be set forth in a Notice of MACT Approval (or the equivalent) as described in § 63.52(c).

(c) *Opportunity for public comment on Notice of MACT Approval.* The permitting authority will provide opportunity for public comment on the preliminary Notice of MACT Approval prior to issuance, including, at a minimum,

(1) Availability for public inspection in at least one location in the area affected of the information submitted by the owner or operator and of the permitting authority's tentative determination;

(2) A period for submittal of public comment of at least 30 days; and

(3) A notice by prominent advertisement in the area affected of the location of the source information and analysis specified in § 63.52(c). The form and content of the notice will be substantially equivalent to that found in § 70.7 of this chapter.

(4) An opportunity for a public hearing, if one is requested. The permitting authority will give at least 30 days notice in advance of any hearing.

(d) *Review by the EPA and Affected States.* The permitting authority will send copies of the preliminary notice (in time for comment) and final notice required by paragraph (c) of this section to the Administrator through the appropriate Regional Office, and to all other State and local air pollution control agencies having jurisdiction in the region in which the new source would be located. The permitting authority will provide EPA with a review period for the final notice of at least 45 days, and will not issue a final Notice of MACT approval unless EPA objections are satisfied.

(e) *Effective date.* The effective date for new sources under this subsection shall be the date a Notice of MACT

Approval is issued to the owner or operator of a new emission unit.

(f) *Compliance date.* New emission units shall comply with case-by-case MACT upon issuance of a title V permit for the emission unit.

(g) *Compliance with MACT Determinations.* An owner or operator of a major source that is subject to a MACT determination shall comply with notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements established under § 63.52(e), under title V, and at the discretion of the permitting authority, under subpart A of this part. The permitting authority will provide the EPA with the opportunity to review compliance requirements for consistency with requirements established pursuant to title V during the review period under paragraph (d) of this section.

(h) *Equivalency under Section 112(l).* If a permitting authority requires preconstruction review for new source MACT determinations under this subpart, such requirement shall not necessitate a determination under subpart E of this part.

§ 63.55 Maximum achievable control technology (MACT) determinations for emission units subject to case-by-case determination of equivalent emission limitations.

(a) *Requirements for emission units subject to case-by-case determination of equivalent emission limitations.* The owner or operator of a major source submitting an application pursuant to § 63.52 or § 63.54 shall include elements specified in § 63.53, taking into consideration the following requirements:

(1) When the Administrator has proposed a relevant emission standard for the source category pursuant to section 112(d) or section 112(h) of the Act, then the control technologies recommended by the owner or operator under § 63.53(b)(12), when applied to the emission points recommended by the applicant for control, shall be capable of achieving all emission limitations and requirements of the proposed standard unless the application contains information adequate to support a contention that:

(i) different emissions limitations represent the maximum achievable control technology emission limitations for the source category, or

(ii) requirements different from those proposed by EPA will be effective in ensuring that MACT emissions limitations are achieved.

(2) When the Administrator or the permitting authority has issued guidance or distributed information establishing a MACT floor finding for the source category or subcategory by the section 112(j) deadline, then the recommended MACT emission limitations required by § 63.53(b)(11) must be at least as stringent as the MACT floor, unless the application contains information adequately supporting an amendment to such MACT floor.

(3)(i) When neither the Administrator nor the permitting authority has issued guidance or distributed information establishing a MACT floor finding and MACT determination for a source category or subcategory by the section 112(j) deadline, then the owner or operator shall submit an application for a permit or application for a Notice of MACT Approval, whichever is applicable, containing the elements required by § 63.53(b) (1) through (9) and (14), by the section 112(j) deadline.

(ii) The owner or operator may recommend a control technology that either achieves a level of control at least as stringent as the emission control that is achieved in practice by the best controlled similar source, or obtains at least the maximum reduction in emissions of hazardous air pollutants that is achievable considering costs, non air quality health and environmental impacts, and energy requirements.

(4) The owner or operator may select a specific design, equipment, work practice, or operational standard, or combination thereof, when it is not feasible to prescribe or enforce an equivalent emission limitation due to the nature of the process or pollutant. It is not feasible to prescribe or enforce a limitation when the Administrator determines that a hazardous air pollutant (HAP) or HAPs cannot be emitted through a conveyance designed and constructed to capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(b) *Requirements for permitting authorities.* The permitting authority will determine whether the permit application or application for a Notice of MACT Approval is approvable. If approvable, the permitting authority will establish hazardous air pollutant emissions limitations equivalent to the limitation that would apply if an emission standard had been issued in a timely manner under subsection 112 (d) or (h) of the Act. The permitting authority will establish these emissions limitations consistent with the following requirements and principles:

(1) Emission limitations will be established for all emission units within a source category or subcategory for which the section 112(j) deadline has passed.

(2) Each emission limitation for an existing emission unit will reflect the maximum degree of reduction in emissions of hazardous air pollutants (including a prohibition on such emission, where achievable) that the permitting authority, taking into consideration the cost of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements, determines is achievable by emission units in the category or subcategory for which the section 112(j) deadline has passed. This limitation will not be less stringent than the MACT floor, and will be based upon available information and information generated by the permitting authority before or during the application review process, including information provided in public comments.

(3) Each emission limitation for a new emission unit will not be less stringent than the emission limitation achieved in practice by the best controlled similar source, and must reflect the maximum degree of reduction in emissions of hazardous air pollutants (including a prohibition on such emissions, where achievable) that the permitting authority, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable. This limitation will be based at a minimum upon available information and information provided in public comments.

(4) When the Administrator has proposed a relevant emissions standard for the source category pursuant to section 112(d) or section 112(h) of the Act, then the equivalent emission limitation established by the permitting authority shall ensure that all emission limitations and requirements of the proposed standard are achieved, unless the permitting authority determines based on additional information that:

(i) Different emissions limitations represent the maximum achievable control technology emission limitations for the source category; or

(ii) Requirements different from those proposed by EPA will be effective in ensuring that MACT emissions limitations are achieved.

(5) When the Administrator or the permitting authority has issued guidance or collected information

establishing a MACT floor finding for the source category or subcategory, the equivalent emission limitation for an emission unit must be at least as stringent as that MACT floor finding unless, based on additional information, the permitting authority determines that the additional information adequately supports an amendment to the MACT floor. In that case, the equivalent emission limitation must be at least as stringent as the amended MACT floor.

(6) The permitting authority will select a specific design, equipment, work practice, or operational standard, or combination thereof, when it is not feasible to prescribe or enforce an equivalent emission limitation due to the nature of the process or pollutant. It is not feasible to prescribe or enforce a limitation when the Administrator determines that a hazardous air pollutant (HAP) or HAPs cannot be emitted through a conveyance designed and constructed to capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(7) Nothing in this subpart will prevent a State or local permitting authority from establishing an emission limitation more stringent than required by Federal regulations.

(c) *Reporting to National Data Base.* The owner or operator shall submit additional copies of its application for a permit, permit modification, administrative amendment, or Notice of MACT Approval, whichever is applicable, to the EPA by the section 112(j) deadline for existing emission units, or by the date of the application for a permit or Notice of MACT Approval for new emission units.

§ 63.56 Requirements for case-by-case determination of equivalent emission limitations after promulgation of a subsequent MACT standard.

(a) If the Administrator promulgates an emission standard that is applicable to one or more emission units within a major source before the date a permit application under this paragraph is approved, the permit shall contain the promulgated standard rather than the emission limitation determined under § 63.52, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

(b) If the Administrator promulgates an emission standard under section 112 (d) or (h) of the Act that is applicable to a source after the date a permit is issued pursuant to § 63.52 or § 63.54, the permitting authority shall revise the permit upon its next renewal to reflect the promulgated standard. The permitting authority will establish a compliance date in the revised permit that assures that the owner or operator shall comply with the promulgated standard within a reasonable time, but not longer than 8 years after such standard is promulgated or 8 years after the date by which the owner or operator was first required to comply with the emission limitation established by permit, whichever is earlier.

(c) Notwithstanding the requirements of paragraph (a) or (b) of this section, if the Administrator promulgates an emission standard that is applicable to a source after the date a permit application is approved under § 63.52 or § 63.54, the permitting authority is not required to change the emission limitation in the permit to reflect the promulgated standard if the level of control required by the emission limitation in the permit is at least as stringent as that required by the promulgated standard.

[FR Doc. 94-10971 Filed 5-19-94; 8:45 am]
BILLING CODE 6560-50-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 649

[Docket No. 940366-4143; I.D. 051094A]

RIN 0648-AF39

American Lobster Fishery

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

ACTION: Final rule.

SUMMARY: NMFS issues this final rule to implement one of the conservation and management measures in Amendment 5 to the Fishery Management Plan for the American Lobster Fishery (FMP). This final rule maintains the current 3¼-inch (8.26-cm) minimum carapace length, thus rescinding the scheduled increases in the minimum size limit. The intent of this rule is to relieve a regulatory burden.

EFFECTIVE DATE: May 17, 1994.

ADDRESSES: Copies of Amendment 5, its regulatory impact review (RIR), initial regulatory flexibility analysis (IRFA), and the final supplemental environmental impact statement (FSEIS) are available from Douglas G. Marshall, Executive Director, New England Fishery Management Council, Suntaug Office Park, 5 Broadway (U.S. Rte. 1), Saugus, MA 01906, telephone 617-565-8937.

FOR FURTHER INFORMATION CONTACT: Paul H. Jones, Fishery Policy Analyst, 508-281-9273.

SUPPLEMENTARY INFORMATION: Amendment 5, with some exceptions, was approved by NMFS on May 11, 1994. Background to the amendment was discussed in the proposed rule (59 FR 11029, March 9, 1994), and is not repeated here. The following measures were disapproved on May 11, 1994: (1) The division of the fleet into vessel permit categories, (2) the limits on lobster landings according to a vessel's permit category and the quota for vessels that operate gear other than lobster pots, and (3) mandatory reporting.

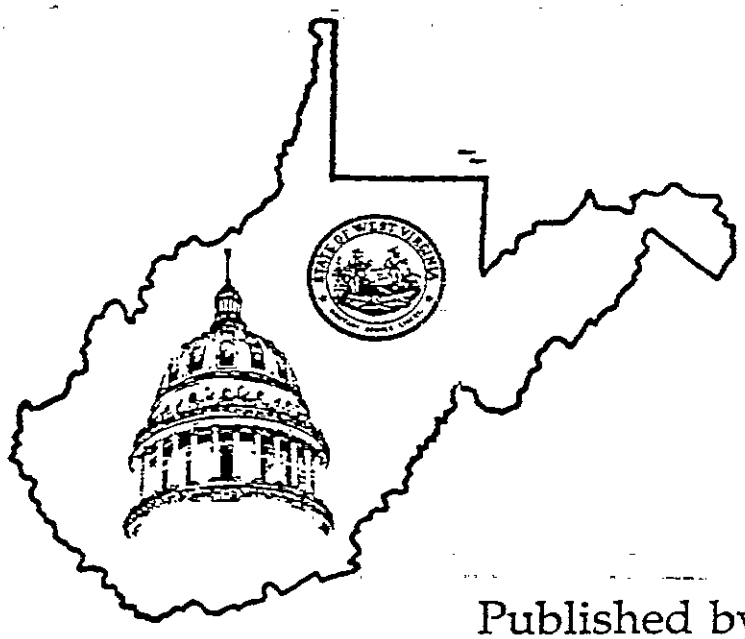
NMFS is implementing the approved measures of Amendment 5 by two separate final rules. This final rule implements one of the measures that was approved, which is to maintain the minimum carapace length for lobsters at the current size of 3¼ inches (8.26 cm). Thus, this rule prevents the incremental increases in the minimum carapace length that are currently in the regulations and scheduled to go into effect on May 18, 1994, and subsequent dates. The second rule, which is scheduled to be published within the next 3 weeks, will implement the remaining approved provisions of Amendment 5. The second rule will discuss the comments and responses on the measures contained in that rule, and will explain the reasons for disapproving three provisions of Amendment 5. Publication of the first rule will not affect the purpose or impact of the other approved Amendment 5 measures.

Comments and Responses

Comment: One industry association and one individual stated that the American lobster carapace length increases required in Amendment 2 proved to be effective in protecting small, immature lobsters and egg-bearing females and are preferable to the new management measures, which they oppose.

Response: The minimum carapace length requirement remains a primary management measure for American lobster. However, the lobster resource has been determined to be overfished and the remaining 2 carapace length increases required under the existing regulations would not alone have

Reg 34



WEST VIRGINIA REGISTER

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Administrative Law Division

Judy Cooper
Director

Missy Phalen
Pam Reece
Administrative Assistants

Secretary of State
Administrative Law Division
Bldg. 1, Suite 157K
1900 Kanawha Blvd. E.
Charleston, WV 25305-0770

(304)558-6000

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LEGISLATIVE

SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION
m #1

FILED
Jun 21 4 15 PM '94
OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

AGENCY: Division of Environmental Protection TITLE NUMBER: 45

RULE TYPE: Legislative ; CITE AUTHORITY W.Va. Code §§22-5-1 et seq.

AMENDMENT TO AN EXISTING RULE: YES___ NO_x_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: ___

TITLE OF RULE BEING AMENDED: ___

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 33

TITLE OF RULE BEING PROPOSED: Acid Rain Provisions and Permits

DATE OF PUBLIC HEARING: July 29, 1994 TIME: 9:00 am

LOCATION OF PUBLIC HEARING: WVDEP - Office of Air Quality
1558 Washington Street East
Charleston WV 25311

COMMENTS LIMITED TO: ORAL___, WRITTEN___, BOTH_x_

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS: Office of Air Quality
1558 Washington Street E
Charleston WV 25311

The Department requests that persons wishing to make comments at the hearing make an effort to submit written comments in order to facilitate the review of these comments.

The issues to be heard shall be limited to the proposed rule.

ATTACH A BRIEF SUMMARY OF YOUR PROPOSAL

Authorized Signature

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SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION
Form #1

FILED
Jun 21 4 17 PM '94
OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

AGENCY: Division of Environmental Protection TITLE NUMBER: 45

RULE TYPE: Legislative ; CITE AUTHORITY W.Va. Code §§22-5-1 et seq.

AMENDMENT TO AN EXISTING RULE: YES___ NO_x_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: ___

TITLE OF RULE BEING AMENDED: ___

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 34

TITLE OF RULE BEING PROPOSED: Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 63

DATE OF PUBLIC HEARING: July 29, 1994 TIME: 9:00 am

LOCATION OF PUBLIC HEARING: WVDEP - Office of Air Quality
1558 Washington Street East
Charleston WV 25311

COMMENTS LIMITED TO: ORAL___, WRITTEN___, BOTH_x_

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS: Office of Air Quality
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ATTACH A BRIEF SUMMARY OF YOUR PROPOSAL

Authorized Signature

Proposed Rules Filed for Public Hearing

AGENCY	RULE/TYPE	AUTHORITY	HEARING/COMMENT PERIOD/LOCATION
Env Protection Air Quality (45-14)	Permits for Construction & Major Modification of Major Stationary Sources of Air Polluton for the Prevention of Significant Deterioration Legislative	§22-5-1	July 29, 1994, 9:00 a.m. WVDEP - Office of Air Quality 1558 Washington Street, E Charleston, WV 25311 Written Comments to: Office of Air Quality 1558 Washington Street E Charleston, WV 25311
Env Protection Air Quality (45-15)	Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 61 Legislative	§22-5-1	July 29, 1994, 9:00 a.m. Hearing & Comments Same as Above
Env Protection Air Quality (45-16)	Standards of Performance for New Stationary Sources Legislative	§22-5-1	July 29, 1994, 9:00 a.m. Hearing & Comments Same as Above
Env Protection Air Quality (45-19)	Requirements for Pre-Construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants & Emission Trading for Intrasource Pollutants Legislative	§22-5-1	July 29, 1994, 9:00 a.m. Hearing & Comments Same as Above
Env Protection Air Quality (45-33)	Acid Rain Provisions & Permits Legislative	§22-5-1	July 29, 1994, 9:00 a.m. Hearing & Comments Same as Above
Env Protection Air Quality (45-34)	Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 63 Legislative	§22-5-1	July 29, 1994, 9:00 a.m. Hearing & Comments Same as Above



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IX. Ethics Commission Opinions

X. Attorney General Opinions

XI. Other Documents or Information Filed

XII. Publication Deadlines and Publication Dates

OTHER

FILED

Jun 23 2 51 PM '94

OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

FILED

Jun 23 2 58 PM '94

OFFICE OF WEST VIRGINIA SECRETARY OF STATE

PUBLIC NOTICE OF HEARING

G & L Coal Company, Inc.

PERMIT NUMBER S-3035-87

A hearing has been scheduled to be held on August 18, 1994, in the West Virginia Division of Environmental Protection Conference Room located at No. 10 McJunkin Road, Nitro, West Virginia, beginning at 10:00 AM for G & L Coal Company, Inc.

The purpose of this hearing is to show cause why G & L Coal Company, Inc., Permit Number S-3035-87 operating in the Valley District of Fayette County, should not be revoked and associated securities forfeited by David C. Callaghan, Director of the Division of Environmental Protection.

SHOW CAUSE #529

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JUN 23 2 51 PM '94

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

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45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Library of the Office of Air Quality located at the address below.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

The Wheeling News-Register and
Intelligencer
Legal Ad Department
1500 Main Street
Wheeling, WV 26003

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Mr. Tim Carroll
Office of Air Quality
Northern Panhandle Regional Office
1911 Warwood Avenue
Wheeling, West Virginia 26003

Dear Mr. Carroll:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

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45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

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Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Office of Air Quality, Northern Panhandle Regional Office, 1911 Warwood Avenue, Wheeling, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 22, 1994

The Parkersburg News
Legal Ad Department
519 Juliana Street
Parkersburg, WV 26102

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Dorothy Chittum
Librarian
Parkersburg/Wood County Public Library
3100 Emerson Avenue
Parkersburg, West Virginia 26104

Dear Ms. Chittum:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Parkersburg/Wood County Public Library, 3100 Emerson Avenue, Parkersburg, West Virginia.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

The Herald-Dispatch
Legal Ad Department
P. O. Box 2017
Huntington, WV 25720

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Mr. Matt Onion
Cabell County Public Library
455 9th Street Plaza
Huntington, West Virginia 25701

Dear Mr. Onion:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

NOTICE OF PUBLIC HEARING

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The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Cabell County Public Library, 455 9th Street Plaza, Huntington, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

Charleston Daily Mail
Legal Ad Department
1001 Virginia Street, East
Charleston, WV 25301

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Jeanne Chandler
Librarian
Office of Air Quality
1558 Washington Street, East
Charleston, WV 25311

Dear Ms. Chandler:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Library of the Office of Air Quality located at the address below.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

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Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 22, 1994

Beckley Register/Herald
Legal Ad Department
P. O. Drawer P
Beckley, WV 25801

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Susan Vidovich
Librarian
Raleigh County Public Library
P. O. Box 1876
Beckley, West Virginia 25802

Dear Ms. Vidovich:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Raleigh County Public Library, P. O. Box 1876, Beckley, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

The Clarksburg Exponent
Legal Ad Department
P. O. Box 2000
Clarksburg, WV 26301

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Donna Riggs
Secretary
WV Office of Air Quality
North Central Regional Office
109 Adams Street, Room M-2
Fairmont, West Virginia 26554-2800

Dear Ms. Riggs:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Office of Air Quality, North Central Regional Office, 517 1/2 East Park Avenue, Fairmont, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

Mineral Daily News Tribune
Legal Ad Department
P. O. Box 879
Keyser, West Virginia 26726

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Karen Hiser
Librarian
Keyser-Mineral County Public Library
105 North Main Street
Keyser, West Virginia 26726

Dear Ms. Hiser:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Keyser-Mineral County Public Library, 105 North Main Street, Keyser, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

The Record Delta
Legal Ad Department
P. O. Box 550
Buckhannon, WV 26201

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Ruth B. Six
Librarian
Gassaway Public Library
100 Birch Street
Gassaway, West Virginia 26624

Dear Ms. Six:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Gassaway Public Library, 100 Birch Street, Gassaway, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 22, 1994

Elkins Inter-Mountain
Legal Ad Department
P. O. Box 1339
Elkins, WV 26241

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Elkins-Randolph County Public Library
c/o Librarian
416 Davis Avenue
Elkins, West Virginia 26241

Dear Librarian:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Elkins-Randolph County Public Library, 416 Davis Avenue, Elkins, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 22, 1994

The Evening/Weekend Journal
Legal Ad Department
207 West King Street
Martinsburg, WV 25401

Dear Legal Ad Department:

Please publish the enclosed "Notice of Public Hearing" as soon as possible as a Class I legal advertisement. The publication must occur no later than Thursday June 29, 1994 excepting Sunday. If you have any questions regarding this matter, please contact Tammy Mowrer at 558-2275.

You may submit your invoice and a tear sheet to the attention of Ms. Nadine Sitton, 1558 Washington Street, East, Charleston, West Virginia 25311.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosure

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

June 23, 1994

Ms. Peggy Y. Batten
Librarian
Martinsburg-Berkeley County Public Library
101 West King Street
Martinsburg, West Virginia 25401

Dear Ms. Batten:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

If you have any questions or comments, please contact the undersigned.

Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

Enclosures

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

June 23, 1994

Mr. Richard Poling
Office of Air Quality
Eastern Panhandle Regional Office
P. O. Box 99
Burlington, West Virginia 26710

Dear Mr. Poling:

On Friday, July 29, 1994, the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on proposed rules. For your convenience enclosed is a copy of the "Notice of Public Hearing". The hearing will be held in the Office of Air Quality's conference room located at 1558 Washington Street, East, Charleston beginning at 9:00 a.m. The hearings will be on the following proposed rules: 45CSR14, 45CSR15, 45CSR16, 45CSR19, 45CSR33, 45CSR34 and 45CSR35.

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Sincerely yours,

Dale Farley
Chief, Office of Air Quality

DF/tlm

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following locations: Martinsburg-Berkeley County Public Library, 101 King Street, Martinsburg, WV and the Office of Air Quality's Burlington Office, P. O. Box 99, Burlington, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

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Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street East
Charleston, WV 25311-2599

Intel., June 29
N.R., June 29

STATE OF WEST VIRGINIA,
COUNTY OF OHIO.

I, Bonnie Mattern *for the publisher of the*

~~WHEELING NEWS-REGISTER~~
WHEELING INTELLIGENCER *newspapers published in the CITY OF*

WHEELING, STATE OF WEST VIRGINIA, hereby certify that the annexed publication was inserted in said newspaper on the following dates:

June 29, 1994

commencing on the 29 *day of* June, *19* 94

Given under my hand this 29 *day of* June, *19* 94

Bonnie Mattern

Sworn to and subscribed before me this 29th *day of* June *19* 94 *at WHEELING, OHIO COUNTY, WEST VIRGINIA*

Linda E. Miller
Notary Public

of, in and for OHIO COUNTY, WEST VIRGINIA.

My Commission expires August 9, 2002

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
LINDA E. MILLER
67 E. Frazier Avenue
Wheeling, West Virginia 26003
My Commission Expires Aug. 9, 2002

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Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Parkersburg/Wood County Public Library, 3100 Emerson Avenue, Parkersburg, West Virginia.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 24311-2599

Jun.28 N

NOTAI
1629 -
MY

HEATHER BYERS
being first duly sworn, says that the

NOTICE OF PUBLIC HEARING

hereto attached was printed in the Parkersburg News
a DAILY newspaper published
in the City of Parkersburg, Wood County, West Virginia, and posted
at the front door of the Court House for ONE
successive weeks, the first publication and posting thereon being on
the 28th day of June 19 94, and subse-
quent publication on the day of 19
the day of 19, the day of
19, the day of
, and the day of 19
inter's Fee $ 37.02
6/8 " x 103= 592.25 words @ .0625

Heather J Byers

Subscribed and sworn to before me this 28th day of
June 19 94

Notary Public for Wood County, West Virginia

commission expires 5-23-04

Parkersburg Printing Co. - 5/71

NOTICE
NOTICE OF
PUBLIC HEARING
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Protection, Office of
Quality, will hold a
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AFFIDAVIT OF PUBLICATION

STATE OF WEST VIRGINIA,
COUNTY OF CABELL, TO-WIT:

I, Connie Rappold being first duly sworn, depose and say that I am Legal Clerk for The Herald-Dispatch, a corporation, who publishes at Huntington, Cabell County, West Virginia, the newspaper: The Herald-Dispatch, a independent newspaper, in the morning seven days each week, Monday through Sunday including New Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving and Christmas; that I have been duly authorized by the Board of Directors of such corporation to execute this affidavit of publication for an on behalf of such corporation and the newspaper mentioned herein; that the legal advertisement attached in the left margin of this affidavit and made a part hereof and bearing number LH-877 was duly published in

The Herald-Dispatch

1 time

~~one time, once a week for successive weeks~~, commencing with its issue of the 27th day of June, 19 94, and ending with the issue of the 27th day of June, 19 94, and was posted at the East door of the Cabell County Courthouse on the 27th day of June, 19 94: that said legal advertisement was published on the following dates: June 27, 1994

; that the cost of publishing said annexed advertisement as aforesaid was $76.96 ; that such newspaper in which such legal advertisement was published has been and is now published regularly, at least as frequently as once a week for at least fifty weeks during the calendar year as prescribed by its mailing permit, and has been so published in the municipality of Huntington, Cabell County, West Virginia, for at least one year immediately preceding the date on which the legal advertisement set forth herein was delivered to such newspaper for publication; that such newspaper is a newspaper of "general circulation" as defined in Article 3, Chapter 59, of the West Virginia Code, within the publication area or areas of the municipality of Huntington, Cabell and Wayne Counties, West Virginia, and ;

that such newspaper is circulated to the general public at a definite price or consideration; that such newspaper on each date published consists of not less than four pages without a cover; and that it is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature, and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices.

Connie Rappold

Taken, subscribed and sworn to before me in my said county this 27th day of June, 19 94

My commission expires October 24, 2000.

Melissa L. Allen

Notary Public
Cabell County,
West Virginia

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
MELISSA L. ALLEN
Herald Dispatch P.O. Box 2017
HUNTINGTON, WV 25720
MY COMMISSION EXPIRES OCT 24, 2000

10M Form A-135 (867H)

ence Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Cabell County Public Library, 455 9th Street Plaza, Huntington, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of
Environmental
Protection
1558 Washington St. E.
Charleston, WV
25311-2599
LH-877 6-27,94

P.O. Box 2993
Charleston, West Virginia 25330
Billing 348-4898
Classified 348-4848
1-800-WVA-NEWS
FEIN 55-0676079

ACCOUNT NBR	037143002
SALES REP ID	0016
INVOICE NBR	371430020629005

Legal pricing is based upon 67 words per column inch at a rate of $.0725 per word.
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ISSUE DATE	AD TYPE	PUB	DESCRIPTION REFERENCE NBR PURCHASE ORDER #	AD NUMBER	AD SIZE TOTAL RUN	RATE	GROSS AMOUNT	NET AMOUNT
06/28	LEGF	DM	PUBLIC HEARING 121258001	L213020	3X0400 12.00	4.85	58.20	58.20
			TOTAL INVOICE AMOUNT					58.20

State of West Virginia, **AFFIDAVIT OF PUBLICATION**

I, Sandra Legg of

THE DAILY MAIL, A DAILY REPUBLICAN NEWSPAPER,
published in the city of Charleston, Kanawha County, West Virginia, do solemnly swear that the annexed notice of:
PUBLIC HEARING
was duly published in said paper(s) during the dates listed below, and was posted at the front door of the court house of said Kanawha County, West Virginia, on the 29TH day of JUNE 1994. Published during the following dates: 06/28/94-06/28/94
Subscribed and sworn to before me this 30 day of June.
Printers fee $ 58.20

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
SARAH J. WITHROW
1001-T LINCOLN DRIVE
SO. CHARLESTON, WV 25308
My Commission Expires April 28, 2003

Sarah J. Withrow
Notary Public of Kanawha County, West Virginia

LEGAL ADVERTISEMENT **LEGAL ADVERTISEMENT** **LEGAL ADVERTISEMENT**

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CS4R34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following: Library of the Office of Air Quality located at the address below.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599 (213020)

The items listed hereon conform to specification, were received and are approved for payment.
Date: 07.21.94 Signed: N. Sitton

Appn. Yr.	Acct #:	Line Item:
95	7897.17	035

Off. Code:	Fed. Code:	P.C.:
5	504	509

Purchase Auth.	Vendor	Off App/ Date
SA	FEIN # 550.676.079	
No. 4	SS # ___.__.____	

FIMS FUND	FIMS FY	FIMS ORG	FIMS ACT	FIMS OBJ CODE	DOC #
8708	1995	0313	096	___	

AFFIDAVIT OF PUBLICATION
BECKLEY NEWSPAPERS INC.
BECKLEY, WEST VIRGINIA 25801

June 28, , 19 94

STATE OF WEST VIRGINIA
COUNTY OF RALEIGH, to wit:

I, Robert E. Zutaut being first duly sworn upon my oath, do depose and say that I am Advertising Manager of Beckley Newspapers Inc., a corporation, publisher of the newspaper entitled The Register-Herald, an Independent newspaper; that I have been duly authorized by the board of directors of such corporation to execute this affidavit of publication; that such newspaper has been published for more than one year prior to publication of the annexed notice described below; that such newspaper is regularly published daily, for at least fifty weeks during the calendar year, in the municipality of Beckley, Raleigh County, West Virginia; that such newspaper is a newspaper of "general circulation," as that term is defined in article three, chapter fifty-nine of the Code of West Virginia, 1931, as amended, within the publication area or areas of the aforesaid municipality and county; that such newspaper averages in length four or more pages, exclusive of any cover, per issue; that such newspaper is circulated to the general public at a definite price of consideration; that such newspaper is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature, and for current happenings, announcements, miscellaneous reading matters, advertisements and other notices; that the annexed notice

of Public Hearing
(Description of notice)

was duly published in said newspaper once a week for one successive week (Class I), commencing with the issue of the ~~28th~~ day of June, 1994 and ending with the issue of the 28th day of June, 1994, (and was posted at the

on the day of); that said annexed notice was published on the following dates:

June 28, 1994 and that the cost of publishing said annexed notice as aforesaid was $ 37.40

Signed R. E. Zutaut
Robert E. Zutaut, Advertising Manager
Beckley Newspapers

Taken, subscribed and sworn to before me in my said county this 28th day of June, 19 94

My commission expires March 27, 2001

Notary Public of Raleigh County, West Virginia

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
DIANA L. SLONE
BECKLEY NEWSPAPER
P. O. DRAWER P OR R
BECKLEY, WV 25801
My Commission Expires March 27, 2001

COPY OF PUBLICATION

7-12-Tue-4-RH

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Raid Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federa Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pllutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirement of Title VI (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conferance Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Raleigh County Public Library, P.O. B 1676, Beckley, WV.

Please provide any writt comments or questions to t following contact and office: Dale Farley, Office of Air Quali Division of Environment Protection, 1558 Washingt Street, East, Charleston, V 25311-2599.

6-28-Tue-1-RH

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a. m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14- Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15- Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16- Standards of Performance for New Stationary Sources (Amendment).

45CSR19- Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33- Acid Rain Provisions and Permits (New Rule).

45CSR34- Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35- Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16, and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Office of Air Quality, North Central Regional Office, 517 1/2 East Park Avenue, Fairmont, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

PUBLISHER'S CERTIFICATE

STATE OF WEST VIRGINIA,

COUNTY OF HARRISON

I, Deborah S. Veltri

Classified Office Manager of THE CLARKSBURG EXPONENT, a newspaper of general circulation published in the City of Clarksburg, County and State aforesaid, do hereby certify that the annexed

Notice of Public Hearing

was published in said THE CLARKSBURG EXPONENT one time, on the 25 day of June 1994.

The publisher's fee for said publication is $ 20.70

Deborah S. Veltri
Classified Office Mgr. of The Clarksburg Exponent

SEAL

Subscribed and sworn to before me this 25 day of June, 1994

Debra Kay Swiger
Notary Public in and for Harrison County, WV

My commission expires on the 25th day of August, 2003

Form CA-14 E

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Debra Kay Swiger
Rt. 1, Box 2[illegible]6A
Wallace, WV 2[illegible]
My Commission Expires August 25, 2003

I, as an officer of the News-Tribune, a daily newspaper published at Keyser, Mineral County, West Virginia, hereby certify that the Division of Environmental Protection in the case of Notice of Public Hearing: Proposed ~~Legislative Rules~~ vs. _____

a copy whereof is hereto annexed has been published for 1 consecutive day in said NEWS-TRIBUNE, the first publication being on the 28th day of, June 19 94.

Given under my hand at Keyser this 28th day of June, 19 94.

Publisher

Publisher's Fee

$ ~~31.50~~

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9 a.m., the West Virginia Division of Environmental Protection, Office Fair Quality, will hold a public hear on on the following proposed legislative rules:

45CSR14- Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CS35 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the Federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16, and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulagated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR 61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulagation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five mintues per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Keyser-Mineral County Public Library, 105 North Main Street, Keyser, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

6: 28

tate of West Virginia, County of Upshur, ss:

Mark Davis, Advertising Manager
Record Delta, a newspaper published at Buckhannon in the said county, do hereby certify that the annexed NOTICE OF PUBLIC HEARING

was published once a week for ONE (1) successive weeks in said Record Delta newspaper published as aforesaid, commencing on the 27th day of June days of 19 94

Given under my hand this 29th day of June day of 19 94

Mark Davis, Advertising Manager

Printers fee $ 27.60

WEST VIRGINIA, UPSHUR COUNTY, TO-WIT:

Subscribed and sworn to before me this 29th day of June day of 19 94

Phyllis J. Neuhardt, Notary Public.

My Commission expires May 26, 2003

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
PHYLLIS J. NEUHARDT
[illegible]
My Commission Expires May 26, 2003

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 - Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 - Standards of Performance for New Stationary Sources (Amendment).

45CSR19 - Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 - Acid Rain Provisions and Permits (New Rule).

45CSR34 - Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 - Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of the Secretary of State or may be reviewed during normal business hours at the following location: Gassaway Public Library, 100 Birch Street, Gassaway, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599
6-27

State of West Virginia, County of Randolph, ss.

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Environmental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14 — Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15 — Emmission Standards for Hazardous Air Pollutants (Amendment).

45CSR16 — Standards of Performance for New Stationary Sources (Amendment).

45CSR19 — Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33 — Acid Rain Provisions and Permits (New Rule).

45CSR34 — Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35 — Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity) (New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR35 will be submitted to the U.S. Environmental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Peformance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comments will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following location: Elkins-Randolph County Public Library, 416 Davis Avenue, Elkins, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Farley
Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

6—25

I, James Hoffman, Publisher of THE INTER-MOUNTAIN, a newspaper published at Elkins, in said county, do hereby certify that the annexed advertisement was published on the following dates:

June 25

19 94 as required by law.

Given under my hand this 25 day of June, 19 94

James Hoffman
Publisher

4169

Printer's Fee: $

ore me this 25 day of June, 19 94.

Shirley A. Mercer
Notary Public

15 day of April 19 2002

NOTICE OF PUBLIC HEARING

On Friday, July 29, 1994, beginning at 9:00 a.m., the West Virginia Division of Enviromental Protection, Office of Air Quality, will hold a public hearing on the following proposed legislative rules:

45CSR14- Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration (Amendment).

45CSR15- Emission Standards for Hazardous Air Pollutants (Amendment).

45CSR16- Standards of Performance for New Stationary Sources (Amendment).

45CSR19- Requirements for Pre-construction Review, Determination of Emission Offsets for Proposed New or Modified Stationary Sources of Air Pollutants and Emission Trading for Intrasource Pollutants (Amendment).

45CSR33- Acid Rain Provisions and Permits (New Rule).

45CSR34- Emission Standards for Hazardous Air Pollutants (New Rule).

45CSR35- Requirements for Determining Conformity of General Federal Actions to Applicable Air Quality Implementation Plans (General Conformity)(New Rule).

Upon authorization and promulgation, 45CSR14, 45CSR19, and 45CSR25 will be sumitted to the U.S. Enviromental Protection Agency for incorporation into the West Virginia State Implementation Plan under the federal Clean Air Act, as amended. Upon authorization and promulgation of 45CSR15, 45CSR16 and 45CSR34, the Director of the Division of Enviromental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1,1994. The DEP Director will also request, pursuant to legislative approval and promulgation, that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Cean Air Act.

the public hearing will be held in the Office of Air Quality's Conference Room at 1558 Washington Street East, Charleston, West Virginia. The hearing is open to the public. Written comments by all interested parties will be accepted from the date of this notice until the close of the hearing and made part of the record. Oral comments will be accepted at the public hearing and will be limited to five minutes per person per rule. The period for public comment will end at the close of the hearing.

Copies of the proposed legislative rules may be obtained from the Office of Secretary of State or may be reviewed during normal business hours at the following locations: Martinsburg-Berkeley County Public Library, 101 King Street, Martinsburg, WV and the Office of Air Quality's Burlington Office, P.O. Box 99, Burlington, WV.

Please provide any written comments or questions to the following contact and office:

G. Dale Fraley
Office of Air Quality
Division of
Enviromental Protection
1558 Washington Street, East

Certificate of Publication

This is to certify the annexed advertisement

WV DEPT.COMM.,LABOR,ENV.RES.
DIV. ENV.PROTECTION,MS.SITTON

NOTICE OF PUBLIC HEARING

appeared for 1 consecutive days/weeks in The Journal Publishing Company a newspaper published in the City of Martinsburg, W. Va., in its issue beginning

6/29

and ending

The Journal

Fee $ 39.16

OAQ MAILING LIST FOR PUBLIC HEARINGS/MEETINGS

Mr. Larry Myers
Allegheny Power Service Corp.
800 Cabin Hill Drive
Greensburg, Pennsylvania 15601

Mr. Brian Broderick
BNA PLUS
Bureau of National Affairs
1231 25th Street, N.W.
Washington, D.C. 20037

Mr. Greg Scandrett
ERM Midwest
5088 West Washington Street
Charleston, WV 25313

Ms. Becky Fleming
Charleston Daily Mail
1001 Virginia Street, East
Charleston, WV 25301

Mr. Norm Steenstra
Environmental Coordinator
West Virginia Citizen Action Group
1324 Virginia Street, East
Charleston, West Virginia 25301

Mr. Eric Niiler
Charleston Gazette
1002 Virginia Street, East
Charleston, WV 25301

Ms. Joline Brady
103 Timberlake Circle
Scott Depot, WV 25560

Ms. Mildred Holt
P. O. Box 367
Institute, WV 25112

Ms. Lillian Erskin
52 Bailes Drive
Nitro, WV 25143

Ms. Suzanne Tenkhoff
National Institute for Chemical Studies
Nitro/St. Albans Committee
31 Bailes Drive
Nitro, West Virginia 25143

Mr. Ray de Bolt
Fire Chief
Charleston Fire Department
808 Virginia Street, West
Charleston, WV 25302

The Honorable William Croye
Mayor, City of Belle
National Institute for Chemical Studies
Upper Kanawha Valley Committee
110 East DuPont Avenue
Belle, West Virginia 25015

Dr. Paul Hill, President
National Institute for Chemical Studies
University of Charleston
2300 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304

Mr. Tim Carroll
Regional Office Supervisor
Northern Panhandle Regional Office
WV Office of Air Quality
1911 Warwood Avenue
Wheeling, West Virginia 26003

Mr. William Taylor
Regional Engineer
North Central Regional Office
WV Office of Air Quality
109 Adams Street, Room M-2
Fairmont, WV 26554-2800

Mr. Robert Parsons
Jackson & Kelly
1600 Laidley Tower
Charleston, WV 25301

Mr. Ira H. Dorfman
Vice-President, Energy & Environment
Ryan-McGinn
2300 Clarendon Blvd., Suite 610
Arlington, VA 22201

Larry G. Kopelman
Special Assistant Attorney General
WV Air Pollution Control Commission
No. 9 Pennsylvania Avenue
Charleston, WV 25302

Ms. Kim Baker
Ohio Valley Environmental Coalition
P. O. Box 970
Proctorville, OH 45669

Ms. Helen Gibbins
6128 Gideon Road
Huntington, WV 25705

Ms. Missy Woolverton
WV Citizen Action Group
1324 Virginia Street, East
Charleston, WV 25301

Ms. Rhonda Hooper
Monsanto
1 Monsanto Road
Nitro, WV 25143

Mr. Richard Poling
Engineer II
c/o WV Division of Highways
P. O. Box 88
Burlington, WV 26710

Ms. Claudia Banner
Appalachian Power Company
P. O. Box 2021
Roanoke, Virginia 24022-2121

Mr. David C. Callaghan
Director, Division of Environmental Protection
10 McJunkin Road
Nitro, WV 25143-2506

Act Foundation
523 Central Avenue
Charleston, WV 25302

Ms. Pamela Nixon
406 Grandview Point
Dunbar, WV 25064

Mr. Oliver A. Fick
Air Program Manager
Engineering-Science, Inc.
57 Executive Park South, N.E.
Suite 590
Atlanta, Georgia 30329-2265

Mr. Brian Farkas
Public Information Officer
WV Division of Environmental Protection
10 McJunkin Road
Nitro, WV 25143-2506

Ms. Liz McMeekin
Aristech Chemical Company
600 Grant Street
Pittsburgh, PA 15219

Ms. Liz Schiffer
128 Woodbridge Drive
Charleston, WV 25311

Ms. Britt Bernheim
Office of Air Quality
1615 Washington Street, East
Charleston, WV 25311

PUBLIC HEARING

JULY 29, 1994

NAME	COMPANY AFFILIATION	ADDRESS
Dale Farley	Office of Air Quality	1558 Washington St
John Johnston	" " "	" " "
Jeff Hedgecock	" " "	" " "
Jeanne Chandler	" " "	" " "
Mansour Alaeddini	" " "	" " "
Dave White	" " "	" " "
Kim Casto	" " "	" " "
John Benedict	" " "	1615 Washington St.
Rupe Burford	" " "	" " "
Fred Durham	" " "	" " "
Karen Price	WV Manufacturers Assoc.	2001 Quarrier St.
Christy Morris	Superior Court Reporting	3719 Virginia Ave. S.E.

PUBLIC HEARING

JULY 29, 1994

NAME	COMPANY AFFILIATION	ADDRESS
Kim Brown Poland	Robinson & McElwee	P.O. Box 1791 - Chas.
Yvonne Clarkson	Allegheny Power	800 Cabin Hill Drive
C. J. Banner	Appalachian Power	P.O. Box 2021 Roanoke, Va.
Bob Foster	Charles Ryan Association	Chas.
David Yaussy	Robinson & McElwee	P.O. Box 1791 - Chas.
Karen Watson	Office of Air Quality	1615 Washington St.

PUBLIC HEARING

WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION

OFFICE OF AIR QUALITY

* *

The following is a transcript of a public hearing held at the West Virginia Division of Environmental Protection, Office of Air Quality, 1558 Washington Street, Charleston, Kanawha County, West Virginia, on July 29, 1994, at 9:00 a.m., and taken by Christy L. Morris, Certified Court Reporter and Notary Public, pursuant to notice.

* *

S U P E R I O R C O U R T R E P O R T I N G
Christy L. Morris, CCR
3719 Virginia Avenue, S.E.
Charleston, West Virginia 25304
(304) 925-2244 Mobile 542-4606

ORIGINAL

PROCEEDINGS

MS. CHANDLER: Good morning. The public hearing will now come to order this 29th day of July, 1994 in the conference room of the West Virginia Division of Environmental Protection Office of Air Quality located at 1558 Washington Street, East, Charleston, West Virginia.

The purpose of the public hearing is to hear discussions on the seven rules filed in the Secretary of State's office on April 27, 1994, and noticed in the State register on April 29, 1994. In addition, the rules were noticed in Class 1 legal newspaper announcements throughout the State and to various individuals and organizations.

This public hearing is being held pursuant to the provisions of 29A of the West Virginia Code and Section 110 of the Clean Air Act.

By the way of introduction, my name is Jeanne Chandler of the Public Information Office of the West Virginia Division of Environmental Protection. I will be the moderator for these proceedings today.

The format of today's hearing may appear different than in the past for those of you

familiar with the prior APCC rulemaking hearings. The 1994 legislature enacted legislation which became effective on June 10, 1994, which reorganized the Division of Environmental Protection.

One of the effects of the legislation was to make the Air Program one of the offices of DEP, and as a result, the Air Pollution Control Commission no longer conducts rulemaking.

Because of time restraints this year, the Office of Air Quality decided to make the close of the comment period coincide with the close of today's hearing and noticed that fact in the public announcement.

One change in the Administrative Procedures Act which became effective in 1994 was the prohibition of ex parte communication with the rulemaking agency once the comment period closed.

Therefore, written comments will be accepted at the close of today's hearing but no later. The next opportunity to enter comments will be when the legislative rule-making committee begins its hearings on the proposed rules.

The hearing procedure today will be to introduce each rule individually, allow time for oral

comments, and close the hearing for that particular rule. Written comments for any rule may be submitted at the end of this public hearing.

Oral comments will be limited to five minutes per person, and for those of you wishing to make formal comments, a sign-up sheet was available, so if you haven't already signed up, please do so, now.

Also, if you're just a participant here today, we'd also like you to fill out the top page just for our record. I remind you that the comment period will close at the end of the public hearing today.

The court reporter is Ms. Christy Morris of Superior Court Reporting. If anyone desires a transcript of this proceeding, then please contact Ms. Morris at 925-2244, and her address is 3719 Virginia Avenue, S.E., Charleston, 25304.

45CSR14

The purpose of the public hearing is to hear discussions on proposed Rule 45CSR14.

Permits For Construction And Modification Of Major Stationary Sources Of Air Pollution For The Prevention Of Significant

Deterioration. That's an amendment.

45CSR14 is being revised to reflect USEPA's changes to 40 CFR Section 51.166. Changes include: maximum allowable emissions increases for particulate matter; changes which clarify PSD preconstruction review requirements of Title 1 of the 1990 Clean Air Act Amendments to air pollution abatement projects undertaken at electric utility steam generating units; and changes to response to a petition by the West Virginia Manufacturer's Association to remove the hazardous air pollutants from PSD-review in accordance with section 112(b) (6) of the 1990 Clean Air Act Amendment. Definitions in Section 2 have been alphabetized.

Changes also reflect enactment of DEP Code. Changes are indicated by underline and strikeout.

Upon authorization and promulgation, 45CSR14 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia State Implemention Plan under the Federal Clean Air Act, as amended.

The floor is now open for any public comment. Oral comments, I will remind you, will be

limited to five minutes, and if you are called upon for comments, please go to the podium, identify yourself and affiliation, if any, prior to making any of your comments.

Yvonne Clarkson, would you like to make a comment?

MS. CLARKSON: I will be submitting written comments.

MS. CHANDLER: Kim Brown Poland.

MS. POLAND: I'll be submitting written comments on behalf of the Manufacturer's Association.

MS. CHANDLER: Well, for time's sake, does anyone want to make any oral comments regarding 45CSR14?

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, this public hearing for 45CSR14 is now concluded.

45CSR15

MS. CHANDLER: The purpose of the public hearing is to hear discussions on proposed rule 45CSR15.

Emission Standards For Hazardous Air Pollutants Pursuant To 40 CFR Part 61. This is an amendment.

This rule adopts emission standards for hazardous air pollutants promulgated by the United States Environmental Protection Agency under the federal Clean Air Act, as amended, and 40 CFR Part 61.

It is the intent of the Director to adopt these standards by reference. It is also the intent of the Director to adopt associated reference methods, performance specifications and other test methods which are appended to such standards.

Upon authorization and promulgation of 45CSR15, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 4-CFR63 as of June 1, 1994.

The floor is now open for public comment.

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, this public hearing for 45CSR15 is concluded.

MS. CHANDLER: The purpose of the public hearing is to hear discussions on proposed rule 45CSR16. Standards Of Performance For New Stationary Sources. This is an amendment.

45CSR16, "Standards of Performance for New Stationary Sources", adopted by reference New Source Performance Standards (NSPS) promulgated by USEPA through May 1, 1993. This revision to the rule updates NSPS requirements through June 1, 1994.

Upon authorization and promulgation of 45CSR16, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards For Hazardous Air Pollutants promulgated by USEPA under 40CFR61 and 40CFR63 as of June 1, 1994.

The floor is now open for public comment.

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, this public hearing for 45 CSR16 is concluded.

45CSR19

MS. CHANDLER: The purpose of the public

hearing is to hear discussions on proposed rule 45CSR19.

Requirements For Pre-construction Review, Determination Of Emission Offsets For Proposed New Or Modified Stationary Sources Of Air Pollutants And Emission Trading For Intrasource Pollutant. This is an amendment, also.

45CSR19 is currently being revised to reflect USEPA's changes to 40CFR Section 51.165. Changes include clarifying nonattainment area preconstruction review requirements of Title 1 of the 1990 Clean Air Act Amendments to projects undertaken at electric utility steam generating units in areas not attaining an ambient air quality standard; changes resulting from changes to the authorizing statue; and changes in Clean Air Act provisions.

Definitions in Section 2 have been alphabetized. Changes are indicated by underline and strikeout.

Upon authorization and promulgation, 45CSR19 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia state implementation plan under the federal Clean Air Act, as amended.

The floor is now open for any public

comment.

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, the public hearing for 45CSR19 is concluded.

45CSR33

MS. CHANDLER: The purpose of this hearing is to hear discussions on proposed rule 45CSR33.

Acid Rain Provisions And Permits. This is a new rule. This rule adopts by reference the Title IV requirement of the Clean Air Act.

The Title IV requirements must be implemented by the State through adoption of the National Operating Permit System conforming to Title IV and V of the Clean Air Act.

Phase 1 permit applications were submitted to USEPA by February 15, 1993, and processed by EPA.

Phase II permit applications must be submitted by January 1, 1996, and will be processed by the State assuming the State has an approved Title V Operating Permit Program (via 45CSR30) and this approved Title IV rule.

Pursuant to legislative approval and

promulgation, the DEP Director will request that USEPA approve 45CSR33 which incorporates the State's operating permit program for facilities subject to the requirements of Title IV (Acid Rain Program) of the Clean Air Act.

The floor is now open for public comment.

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, this public hearing for 45CSR33 is concluded.

45CSR34

MS. CHANDLER: The purpose of this public hearing is to hear discussions on proposed rule 45CSR34.

Emission Standards For Hazardous Air Pollutants Pursuant To 40CFR Part 63. This is a new rule.

Title 45, Series 34 provides authority for the Director to determine and enforce case-by-case MACT standards for major hazardous air pollutant sources in the absence of a federal standard under certain circumstances as required for permit program approval under Title V of the Clean Air Act.

The proposed rule also establishes general provisions for emission standards for hazardous

pollutants (NESHAPS) and other regulatory requirements pursuant to section 112 of the federal Clean Air Act.

The rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the hazardous air pollutants in or pursuant to section 112 (b) of the Clean Air Act.

This rule incorporates by reference provisions relating to perchloroethylene dry cleaners, coke ovens, and synthetic organic chemical manufacturing (HON).

Upon authorization and promulgation of 45CSR34, the Director of the Division of Environmental Protection will request that USEPA delegate to the West Virginia DEP the authority to enforce New Source Performance Standards promulgated by USEPA under 40CFR60 and National Emission Standards for Hazardous Air Pollutants promulgated by the EPA under 40CFR61 and 40CFR63 as of June 1, 1994.

This floor is now open for public comment.

MS. CRITES: Good morning. My name is Karen Crites. I'm president of the West Virginia Manufacturer's Association.

The WVMA recognizes that EPA has put the office of Air Quality in a difficult position by its failure to develop timely our rule implementing Section 112 (g) of the Clean Air Act.

The State cannot adopt a complete a rule establishing its own method of implementing Section 112 (g) because, eventually, the State rule will have to be changed to reflect a federal rule when EPA completes it.

On the other hand, the Clean Air Act requires the State to make case-by-case MACT determination as soon as the State permit program is approved.

In light of the OAQ's inability, through no fault of its own, to promulgate a complete rule addressing section 112 (g), the WVMA suggests this rule be withdrawn and that the OAQ asks EPA, Region 3, to delay approval of the State's permit program until the federal 112 (g) is finalized.

Without an approved permit program, there is no requirement for the State to act under section 112 (g). If that is not acceptable, the WVMA suggests that the rule be withdrawn because there is already authority in existing rules; notably thirteen

and series 30 that would allow the OAQ to MACT determination on a temporary basis until a complete Rule 34 could be finalized.

Delaying Rule 34 until a federal rule is ready would efficiently conserve the Office of Air Quality's resources while still allowing the chief to comply with the requirements of the Clean Air Act through use of currently effective State rules.

Thank you for this opportunity to comment.

MS. CHANDLER: Is there any oral comments on 45CSR34?

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, the public hearing for 45CSR34 is concluded.

45CSR35

MS. CHANDLER: The purpose of the public hearing is to hear discussions on proposed rule 45CSR35.

Requirements For Determining Conformity Of General Federal Actions To Applicable Air Quality Implementation Plans. (General Conformity) This is a new rule.

The purpose of this rule is to adopt

the requirements of 40CFR Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans".

The federal rule was promulgated by the U. S. Environmental Protection Agency to implement Section 176 (c) of the Clean Air Act, as amended, which requires that all federal actions conform to applicable air quality implementation plans.

This rule sets forth policy, criteria and procedures for demonstrating and assuring conformity of such activities to all applicable implementation plans developed pursuant to Section 110 and Part D of the Clean Air Act.

The rule generally applies to federal actions except: (1) Those required under the transportation of conformity rule (40CFR Part 93, Subpart A); (2) Actions with associated emissions below specified de minimis levels; and (3) Certain other actions which are exempt or presumed to conform to applicable air quality implementation plans.

Upon authorization and promulgation, 45CSR35 will be submitted to the U. S. Environmental Protection Agency for incorporation into the West Virginia state implementation plan under the federal

Clean Air Act, as amended.

The floor is now open for public comment.

MR. DURHAM: Good morning, my name is Fred Durham. I work for the West Virginia Division of Environmental Protection Office of Air Quality as a air pollution specialist.

Our office submitted this general proposed conformity rule to the United States Environmental Agency, Region 3, for review and comments.

Yesterday, I spoke with a representative from USEPA, Region 3, who informed me that no formal comments would be complete by today's hearing.

However, the representative did conduct a preliminary evaluation of this proposed rule, and in her opinion no major flaws were evident. Thank you.

MS. CHANDLER: Are there any more public comments on 45CSR?

(NO COMMENTS.)

MS. CHANDLER: There being nothing further, this public hearing for 45CSR35 is concluded.

Would anyone else like to make any

comments concerning any of the rules?

(NO COMMENTS.)

MS. CHANDLER: If not, this hearing is concluded.)

(WHEREUPON, said hearing was concluded at 9:25 a.m.)

REPORTER'S CERTIFICATE

STATE OF WEST VIRGINIA

COUNTY OF KANAWHA, to wit:

I, Christy L. Morris, Certified Court Reporter and Notary Public duly certified and commissioned, do hereby certify that the foregoing is a true and accurate transcript of the proceedings had in the public hearing on the 29th day of July, 1994.

Given under my hand and notarial seal this 29th day of JULY, 1994.

C L Morris - CCR

Certified Court Reporter
Notary Public

MY COMMISSION EXPIRES: 12/11/95

COMMENTS OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION REGARDING 45 C.S.R. 34, EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS PURSUANT TO 40 CFR PART 63

I. Introduction.

The West Virginia Manufacturers Association (WVMA) is a trade organization consisting of manufacturers and associated organizations throughout West Virginia. The WVMA participates in, and comments on, rulemakings that have a significant effect on its members' operations.

The Office of Air Quality has proposed adoption of 45 C.S.R. 34, "Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 63." This rule is intended to allow the OAQ to implement the requirements of §112 of the Clean Air Act (42 U.S.C. §7412). For the reasons set forth below, the WVMA believes that careful consideration should be given to whether this rule should be promulgated as proposed.

II. Comments.

The WVMA recognizes that the Office of Air Quality is in a difficult position. It is required to impose Maximum Available Control Technology (MACT) on new, reconstructed or modified major sources of hazardous air pollutants under Section 112(g) and to apply MACT to existing sources if EPA fails to meet its deadlines under Section 112(d) and (e) of the Act, even though no final guidance on how MACT determinations are made is available from EPA. There is a proposed rule for §112(g), but that proposal is likely to change dramatically by the time it is finalized, and therefore cannot serve as a reliable guide to how the program will be implemented. Furthermore, the federal rule implementing part of Section 112 of the Act, which the OAQ intends to incorporate by

reference, is of little help in interpreting 45 C.S.R. 34. For example, the current definitions section of 40 C.F.R. §63.2 does not contain any definition of "modification" or "reconstruction." Therefore, as presently written, any amount of change, even reductions, in air emissions at a major source of hazardous air pollutants in West Virginia, could be a "modification" that would appear to trigger a requirement for MACT implementation.

Because of the foregoing concerns, the WVMA reluctantly urges the OAQ to withdraw Series 34. We believe it is better to proceed with a complete rule at some later time, perhaps in an emergency rule, than to try to propose a program that is so indefinite. If the OAQ is concerned that this would leave it without authorization to do MACT determinations when Series 30 is approved, the OAQ might want to consider asking Region III to withhold approval of West Virginia's Title V program until the §112(g) rule is finalized, or fix the effective date of Series 30 as at least 60 days after the final §112(g) rule is published. This would relieve industry in this State of having to comply with §112(g) requirements until such time as an appropriate program is in place and allow for adoption of a complete §112(g) rule on an emergency basis at a proper time.

Withdrawing the rule would not leave the OAQ without the authority to make case-by-case MACT determinations. John S. Seitz, Director of EPA's Office of Air Quality Planning and Standards, has addressed implementation of Section 112 despite EPA's failure to have a final Section 112(g) rule in effect. In his Guidance for Initial Implementation of Section 112(g) (a copy of which is attached to these comments) EPA has suggested establishing case-by-case MACT standards under a state's preconstruction permit program. In essence, EPA has advised states that it is willing to approve MACT

determinations under preconstruction permit programs even though they do not satisfy all the requirements for federal enforceability. This development of case-by-case MACT standards under the preconstruction program would only be allowed by EPA on a temporary basis, until a Section 112(g) rule could be adopted by the State. West Virginia could take this approach and issue permits containing MACT determinations under Series 13 that would later be incorporated into permits.

The other method of addressing the requirements of Section 112(g) is through the operating permit program. The state program already allows the Chief to make the MACT determinations contemplated by Section 112(g), and the OAQ could rely upon that authority independent of permit issuance. See 45 C.S.R. 30-12. The Chief could make his MACT determinations on an interim basis, perhaps by order, with the intention of making them permit conditions when a permit is issued. This would allow the Chief sufficient flexibility to make federally enforceable MACT decisions without adopting a rule now that will have to be revised in the near future.

If the OAQ rejects the WVMA's comments and promulgates this rule, it should delete §2.4, which provides that other rules are not invalidated by this rule. Section 6 already preserves the permitting requirements imposed by any other rule. Section 2.4 only serves to allow someone to draw the (erroneous) conclusion that, for example, 45 C.S.R. 13 applies to modifications of major sources of HAPs. Section 2.4 is redundant and can be eliminated with no diminution of the Chief's permitting or enforcement authority.

III. Conclusion.

The WVMA hopes that the Chief will give careful consideration to these comments and withdraw proposed 45 C.S.R. 34.

Respectfully submitted this 29th day of July, 1994.

West Virginia Manufacturers Association
Karen S. Price, President
2001 Quarrier Street
Charleston, WV 25311
(304) 342-2123

Prepared by:

Robinson & McElwee
P. O. Box 1791
Charleston, WV 25326
Contact: David L. Yaussy, Esquire
(304) 347-8358

RESPONSE TO COMMENTS REGARDING 45CSR34 - EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS PURSUANT TO 40 CFR PART 63

The West Virginia Manufacturers Association has requested the Office of Air Quality (OAQ) to withdraw this entire rule until such time as EPA promulgates final rules to implement Section 112(g) of the Clean Air Act relating to case-by-case determinations for Maximum Available Control Technology (MACT). The organization's concern is that until EPA promulgates such rules, the program is too "indefinite". The organization further suggests that if the OAQ is concerned about its lack of authority to do case-by-case MACT determinations, OAQ should request EPA to withhold Title V program approval for the State of West Virginia until EPA adopts Section 112(g) rules.

The OAQ does not object in principle to a short delay in Title V program approval and implementation to allow completion of relevant federal and state rule-making and further development of the infrastructure to administer the Title V program. Program approval by USEPA, in fact, is unlikely to occur prior to February or March 1995. After considerable review of this matter, however, OAQ does not believe that EPA's failure to adopt such rules is a sufficient reason to delay the State's current efforts to put in place program elements necessary to receive Title V program approval (or interim approval) from EPA. And, as the commenter recognizes, if the State is to administer the Title V program, it must have clear authority to make case-by-case MACT determinations in the absence of EPA-promulgated standards. USEPA has recently advised OAQ of its concern in delaying Title V program approval solely as a result of the current status of EPA's 112(g) rule-making.

OAQ clearly intended that Section 12 of 45CSR30 (now in effect) be utilized to provide necessary state authority to implement case-by-case MACT requirements pending final CAAA §112(g) and 112(j) rule-making by USEPA and the state for hazardous air pollutants. OAQ, however, does not agree that the agency may completely rely upon its existing authority under 45CSR13 and 45CSR30 to impose MACT on a case-by-case basis as the commenter suggests. Although 45CSR30 largely provides some such authority, it is more limited in scope than what is required with respect to facility modifications since such review is restricted to sources which <u>have been</u> issued Title V permits.

The agency believes that Series 34 is a reasonable rule which will provide the required authority to administer rules promulgated by USEPA to date pursuant to Section 112 of the CAA. During the temporary period until EPA finalizes its rules under Section 112(g) of the CAA, the agency's determinations will be based on the currently effective provisions of 40 CFR Part 63 and EPA's various guidance documents on the subject, thus limiting the agency's discretion in establishing MACT standards. OAQ does not agree that the example cited by the commenter supports its contention that the current regulations at 40 CFR Part 63 are of little help in interpreting 45CSR34, for two reasons: (1) 40 CFR §63.2 does contain a definition of the term "reconstruction", contrary to the commenter's suggestion; and (2) the term "modification" is defined in Section 112(a)(5) of the CAA and is, therefore, included in 40 CFR §63.2 which includes all of the terms defined in the federal statute. The definition of "modification" in the CAA makes it clear that only an

increase in emissions and not a reduction in emissions can constitute a modification which may trigger the MACT limit.

Notwithstanding the above, the agency has revised the language of the proposed rule to include the requirement that the Director must consider the same factors which the Administrator is required to consider under Section 112(d) of the CAA in establishing a case-by-case limitation for MACT. The agency has also revised the proposed rule to clarify that case-by-case limits for MACT may be established for a person who constructs, reconstructs, or modifies a major source, as well as for an existing source.

45CSR30, which became effective on April 27, 1994, implements the operating permit program mandated by Title V of the 1990 Clean Air Act Amendments and W. Va. Code 22-5-12. This rule was developed in accordance with USEPA rules in Part 70 of Chapter 40 of the Code of Federal Regulations. Title V of the CAAA and the Part 70 regulations require that the operating permit program be funded solely by fees sufficient to cover all direct and indirect program costs.

Consistent with activities to be covered by Title V fees outlined in the CAAA and Part 70 rules, USEPA issued guidance to states in a memo of August 4, 1993 (see the attached John S. Seitz memorandum) concerning criteria for approval of state fee systems. The EPA guidance emphasizes that EPA approval of state fee programs for adequacy and conformance to CAA requirements will be largely based upon the particular "design and attributes of each state's air quality management program". On pages 2-9 of the Attachment to the John Seitz memorandum EPA lists activities and costs expected to be covered by Title V permit fees. In Item K on page 6 of the aforementioned Attachment, EPA lists implementation of CAA Section 111 and 112 standards through Part 70 (45CSR30) operating permits as an activity to be supported by permit program fees. 45CSR15, 45CSR16 and 45CSR34 implement or will implement as state-enforceable requirements CAA Section 111 and 112 standards. Fee collections and the associated budget analyses for implementation of 45CSR30 were previously incorporated into the fiscal note for 45CSR30 which was authorized by the Legislature in its 1994 session. OAQ anticipates EPA approval or interim approval of its Title V program (45CSR30) in the latter part of 1994 or early 1995 (FY'95) prior to or at the time of legislative authorization of the proposed 45CSR15 amendments.

OAQ anticipated that most sources covered by CAA Section 111 or 112 standards (except asbestos demolition and renovation projects and perhaps perchloroethylene dry cleaners) will initially or eventually require permits under 45CSR30 and should be subject to Title V fees and fee support. By eventual EPA and state exemption or deferral, however, some minor sources regulated under CAA Section 111 or 112 may be removed from or exempted from 45CSR30 (40 CFR Part 70) and 45CSR30 fee requirements. With respect to these sources, the use of Title V fees would not be appropriate and therefore, general revenue, 45CSR22 fees or federal grant funds, would be required to support OAQ oversight. The fiscal notes for 45CSR15, 45CSR16 and 45CSR34 will accordingly be amended to reflect this valid WVMA comment and to further clarify the basis of the fiscal impact statement. In the event that sufficient funding were not available from these sources to cover the costs of OAQ regulation of non-Title V sources regulated under CAA §111 or 112, WVDEP would request that EPA withdraw its delegation of authority to the State to enforce the federal standards relating to such sources.

In order to help provide an easily accessible reference OAQ will revise the date of incorporation from June 1, 1994 to July 1, 1994 to correspond to the publication date of the Code of Federal Regulations. No changes to 40CFR61 have occurred in the interim between June 1, 1994 and July 1, 1994.

Because of comments received in connection with the so-called "stringency determination" and "constitutional takings" section, OAQ is amending the rule to include a "severability" section.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

TELECOPIER COVER SHEET

DATE: 8/2/94

TO: John Johnston

FAX #: 304-558-3287

OFFICE: OAQ

RE: TITLE V Fee GUIDANCE

MESSAGE:

John,
Please let me know if you need more information. I think this guidance covers the NSR/TITLE V issue. If not sufficient, I may be able to dig up some more info., if necessary. Good Luck!

FROM: J. Abramson

FAX: 215/597-1136

TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: 15

Joe / Jen M,
Mike M
Lisa D
JUDY K

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

RECEIVED
Air & Radiation Programs
Branch (SAT10)
AUG 9 1993
EPA, REGION III

AUG 4 1993

MEMORANDUM

SUBJECT: Reissuance of Guidance on Agency Review of State Fee Schedules for Operating Permits Programs Under Title V

FROM: for John S. Seitz, Director
Office of Air Quality Planning and Standards (MD-10)

TO: Air Division Director, Regions I-X

On December 18, 1992, I issued a memorandum designed to provide initial guidance on the Environmental Protection Agency's (EPA's) approach to reviewing State fee schedules for operating permits programs under title V of the Clean Air Act (Act). Today's memorandum updates, clarifies, revises, and replaces the earlier memorandum.

Section 502(b)(3) of the Act requires that each State collect fees sufficient to cover all reasonable direct and indirect costs required to develop and administer its title V permits program. [As used herein, the term "State" includes local agencies.] The final part 70 regulation contains a list of activities discussed in the July 21, 1992 preamble to the final rule (57 FR 32250) which must be funded by permit fees. This memorandum and its attachment provide further guidance on how EPA interprets that list of activities, as well as the procedure for demonstrating that fee revenues are adequate to support the program.

The memorandum and attachment set forth the principles which will generally guide our review of fee submittals. The EPA believes that these positions are consistent with the preamble and final rule and are useful in explaining the broad language in the promulgation, but in no way supplant the promulgation itself. In evaluating State program submittals, EPA will make judgments based on the particular design and attributes of the State program, as well as the requirements of section 70.9 of part 70.

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Assessment Section
SAT11

AUG 11 1993

EPA, REGION III

The policies set out in this memorandum and attachment are intended solely as guidance, do not represent final Agency action, and cannot be relied upon to create any rights enforceable by any party.

Several substantive revisions to the earlier guidance that are reflected in this document deserve special mention. First, with respect to activities which relate to provisions of the Act in addition to title V, the revisions clarify that the cost of those activities would be permit program costs only to the extent the activities are necessary for part 70 purposes. For example, this qualification would apply to activities undertaken pursuant to sections 110, 111, and 112 of the Act. In determining which of the activities normally associated with State Implementation Plan (SIP) development are to be funded by permit fees, for instance, States should include those activities to the extent they are necessary for the issuance and implementation of part 70 permits. Accordingly, if a SIP provision requires that a State perform or review a modeling demonstration of a source's impact on ambient air quality as part of the permit application process, the State's costs which arise from the modeling demonstration (which are ordinarily not permit program costs) must be covered by permit fees.

Second, the revisions provide that case-by-case maximum achievable control technology determinations for modified/ constructed and reconstructed major toxic sources under section 112(g) of the Act are considered permit program costs, even if the determination preceded the issuance of the part 70 permit. This position is consistent with the Agency's guidance on Title V Program Approval Criteria for Section 112 Activities (issued April 13, 1993). In that guidance, EPA explained that in order to obtain approval of their title V permit programs, States must take responsibility for implementing all applicable requirements of section 112, including section 112(g), to fulfill their broader obligation to issue title V permits which incorporate all applicable requirements of the Act. For this reason, these section 112 activities are appropriately viewed as permit program costs and thus funded with permit fees.

Third, the revisions clarify in section II.L that enforcement costs incurred prior to the filing of an administrative or judicial complaint are considered permit program costs, including the issuance of notices, findings, and letters of violation, as well as development and referral to prosecutorial agencies of enforcement cases. This approach is based on legislative history which indicates that Congress viewed the filing of complaints as the beginning of enforcement actions for purposes of the statutory provision that excludes "court costs or other costs associated with any enforcement action" from the costs to be recovered through permit fees.

Fourth, the revisions take a different approach to "State-only" requirements which are part of the title V permit by concluding that part 70 does not require that permit fees cover the costs of implementing and enforcing such conditions, since the rule requires that States designate these requirements as not federally enforceable.

Fifth, the attachment modifies the discussion of the extent to which title V fees must fund the costs of permit programs under provisions of the Act other than title V. After carefully considering section 110(a)(2)(L) (which requires that every major source covered by a permit program required under the Act pay a fee to fund the permit program), as it relates to section 502(b)(3) in general, and section 502(b)(3)(A)(ii) in particular, EPA has concluded that title V fees must cover the costs of implementing and enforcing not only title V permits but of any other permits required under the Act, regardless of when issued. This result makes sense, since the title V permit will incorporate the terms of other permits required under the Act so that enforcing title V permits will have the effect of implementing and enforcing those permit requirements as well. However, the costs of reviewing and acting on applications for permits required under Act provisions other than title V need not be recouped by title V fees. In conclusion, the costs of implementing and enforcing all permits required under the Act must be considered in determining whether a State's fee revenue is adequate to support its title V program. However, States may opt to retain separate mechanisms and procedures for collecting permit fees for other permitting programs under the Act, provided the fees covering the costs of implementing and enforcing permits are included in the determination of fee adequacy for purposes of title V.

Although most of the changes outlined today are not expected to affect significantly whether EPA will find fee programs based on the earlier guidance adequate, we will assist States in resolving any difficulties which may have resulted from reliance on the December 18 guidance.

As a means of providing support for the Regional Offices and States on fee approval issues, we invite early submittal of fee analyses (separate from the entire program submittal) from States, particularly those which propose to charge less than the presumptive fee minimum. We will assist Regional Offices in reviewing these submittals with respect to the requirements of title V. Case-by-case reviews of fee programs which you believe are ripe for review offer a timely opportunity to provide additional guidance on this issue.

If you would like us to assist with review of a State's fee program, please contact Kirt Cox. For further information, you may call Kirt at (919) 541-5399 or Candace Carraway at (919) 541-3189.

Attachment

cc: Air Branch Chief, Regions I-X
Regional Counsel, Regions I-X
M. Shapiro
J. Kurtzweg
A. Eckert
B. Jordan
R. Kellam
J. Rasnic

ATTACHMENT

GUIDANCE FOR STATE FEE PROGRAM DEVELOPMENT

I. GENERAL PRINCIPLES

- States must collect, from part 70 sources, fees adequate to fund the reasonable direct and indirect costs of the permits program.

- Only funds collected from part 70 sources may be used to fund a State's title V permits program. Legislative appropriations, other funding mechanisms such as vehicle license fees, and section 105 funds cannot be used to fund these permits program activities.

- The 1990 Amendments to the Clean Air Act (Act) generally require a broader range of permitting activities than are currently addressed by most State and local permits programs. Title V and part 70 contain a nonexclusive list of types of activities which must be funded by permit fees.

- Title V fees present a new opportunity to improve permits program implementation where funding has been inadequate in the past.

- The fee revenue needed to cover the reasonable direct and indirect costs of the permits program may not be used for any purpose except to fund the permits program. However, title V does not limit State discretion to collect fees pursuant to independent State authority beyond the minimum amount required by title V. The evaluation of State fee program adequacy for part 70 approval purposes will be based solely on whether the fees will be sufficient to fund all permit program costs.

- Any fee program which collects aggregate revenues less than the $25 per ton per year (tpy) presumptive minimum will be subject to close Environmental Protection Agency (EPA) scrutiny.

- If credible evidence is presented to EPA which raises serious questions regarding whether the presumptive minimum amount of fee revenue is sufficient to fund the permits program adequately, the State must provide a detailed demonstration as to the adequacy of its fee schedule to fund the direct and indirect costs of the permits program.

- The EPA encourages State legislatures to include flexible fee authority in State statutes so as to allow flexibility to manage fee adjustments if needed in light of program experience, audits, and accounting reports. States should be able to adapt their fee schedules in a timely way in response to new information and new program requirements.

II. ACTIVITIES EXPECTED TO BE FUNDED BY PERMIT FEES

A. Overview.

- Permits program fees must cover all reasonable direct and indirect costs of the title V permits program incurred by State and/or local agencies. For example, fees must cover the cost of permitting affected units under section 404 of the Act, even though such sources may be subject to special treatment with respect to payment of permit fees.

- In making the determination as to whether an activity is a title V permits program activity, EPA will consider the design of the individual State's title V program and its relationship to its comprehensive air quality program. State design of its air program, including its State Implementation Plan (SIP), will in some cases determine whether a particular activity is properly considered a permits program activity. For example, if a SIP provision requires that a State perform or review a modeling demonstration of a source's impact on ambient air quality as part of the permit application process, the State's costs which arise from the modeling demonstration (which are ordinarily not permit program costs) would be part of the State's title V program costs. Because the nature of permitting-related activities can vary from State to State, the EPA intends to evaluate each program individually using the definition of "permit program costs" in the final regulation.

- In general, EPA expects that title V permit fees will fund the activities listed below. However, in evaluating State program submittals, EPA will consider the particular design and attributes of the State program. It is important to note that the activities listed below may not represent the full range of activities to be covered by permit fees. Implementation experience may demonstrate that additional activities are appropriately added to this list. Additionally, some States may have further

program needs based on the particularities of their own air quality issues and program structure.

- States may use permit fees to hire contractors to support permitting activities.

B. Initial program submittal, including:

- Development of documentation required for program submittal, including program description, documentation of adequate resources to implement program, letter from Governor, Attorney General's opinion.

- Development of implementation agreement between State and Regional Office.

C. Part 70 program development, including:

- Staff training.

- Permits program infrastructure development, including:

  * Legislative authority.

  * Regulations.

  * Guidance.

  * Policy, procedures, and forms.

  * Integration of operating permits program with other programs [e.g., SIP, new source review (NSR), section 112].

  * Data systems (including AIRS-compatible systems for submitting permitting information to EPA, permit tracking system) for title V purposes.

  * Local program development, State oversight of local programs, modifications of grants of authority to local agencies, as needed.

  * Justification for program elements which are different from but equivalent to required program elements.

- Permits program modifications which may be triggered by new Federal requirements/policies, new standards [e.g., maximum achievable control technology (MACT), SIP, Federal implementation plan], or audit results.

D. Permits program coverage/applicability determinations, including:

- Creating an inventory of part 70 sources.
- Development of program criteria for deferral of nonmajor sources consistent with the discretion provided to States in part 70.
- Application of deferral criteria to individual sources.
- Development of significance levels (for exempting certain information from inclusion on permits application).
- Development and implementation of federally-enforceable restrictions on a source's potential to emit in order to avoid it being considered a major source.

E. Permits application review, including:

- Completeness review of applications.
- Technical analysis of application content.
- Review of compliance plans, schedules, and compliance certifications.

F. General and model permits, including:

- Development.
- Implementation.

G. Development of permit terms and conditions, including:

- Operational flexibility provisions.
- Netting/trading conditions.
- Filling gaps within applicable requirements (e.g., periodic monitoring and testing).
- Appropriate compliance conditions (e.g., inspection and entry, monitoring and reporting).
- Screen/separate "State-only" requirements from the federally-enforceable requirements.

- Development of source-specific permit limitations [e.g., section 112(g) determinations, equivalent SIP emissions limits pursuant to 70.6(a)(1)(iii)].

- Optional shield provisions.

H. Public/EPA participation, including:

- Notices to public, affected States and EPA for issuance, renewal, significant modifications and (if required by State law) for minor modifications (including staff time and publication costs).

- Response to comments received.

- Hearings (as appropriate) for issuance, renewal, significant modifications, and (if required by State law) for minor modifications (including preparation, administration, response, and documentation).

- Transmittal to EPA of necessary documentation for review and response to EPA objection.

- 90-day challenges to permits terms in State court, petitions for EPA objection.

I. Permit revisions, including:

- Development of criteria and procedures for the following different types of permit revisions:

  * Administrative amendments.

  * Minor modifications (fast-track and group processing).

  * Significant modifications.

- Analysis and processing of proposed revisions.

J. Reopenings:

- For cause.

- Resulting from new emissions standards.

K. Activities relating to other sections of the Act which are also needed in order to issue and implement part 70 permits, including:

- Certain section 110 activities, such as:
  * Emissions inventory compilation requirements.
  * Equivalency determinations and case-by-case reasonably available control technology determinations if done as part of the part 70 permitting process.
- Implementation and enforcement of preconstruction permits issued to part 70 sources pursuant to title I of the Act, including:
  * State minor NSR permits issued pursuant to a program approved into the SIP.
  * Prevention of significant deterioration/NSR permits issued pursuant to Parts C and D of title I of the Act.
- Implementation of Section 111 standards through part 70 permits.
- Implementation of the following section 112 requirements through part 70 permits:
  * National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated under section 112(d) according to the timetable specified in section 112(e).
  * The NESHAP promulgated under section 112(f) subsequent to EPA's study of the residual risks to the public health.
  * Section 112(h) design, equipment, work practice, or operational standards.
- Development and implementation of certain section 112 requirements through part 70 permits, including:
  * Section 112(g) program requirements for constructed, reconstructed, and modified major sources.

* Section 112(i) early reductions.

* Section 112(j) equivalent MACT determinations.

* Section 112(l) State air toxics program activities that take place as part of the part 70 permitting process.

* Section 112(r)(7) risk management plans if the plan is developed as part of the permits process.

L. Compliance and enforcement-related activities to the extent that these activities occur prior to the filing of an administrative or judicial complaint or order. These activities include the following to the extent they are related to the enforcement of a permit, the obligation to obtain a permit, or the permitting regulations:

- Development and administration of enforcement legislation, regulations, and policy and guidance.

- Development of compliance plans and schedules of compliance.

- Compliance and monitoring activities.

  * Review of monitoring reports and compliance certifications.

  * Inspections.

  * Audits.

  * Stack tests conducted/reviewed by the permitting authority.

  * Requests for information either before or after a violation is identified (e.g., requests similar to EPA's section 114 letters).

- Enforcement-related activities.

  * Preparation and issuance of notices, findings, and letters of violation [NOV's, FOV's, LOV's].

  * Development of cases and referrals up until the filing of the complaint or order.

- Excluded are all enforcement/compliance monitoring costs which are incurred after the filing of an administrative or judicial complaint.

M. The portion of the Small Business Assistance Program which provides:

- Counseling to help sources determine and meet their obligations under part 70, including:
  * Applicability.
  * Options for sources to which part 70 applies.
- Outreach/publications on part 70 requirements.
- Direct part 70 permitting assistance.

N. Permit fee program administration, including:

- Fee structure development.
- Fee demonstration.
  * Projection of fee revenues.
  * Projection of program costs if detailed demonstration is required.
- Fee collection and administration.
- Periodic cost accounting.

O. General air program activities to the extent they are also necessary for the issuance and implementation of part 70 permits.

- Emissions and ambient monitoring.
- Modeling and analysis.
- Demonstrations.
- Emissions inventories.
- Administration and technical support (e.g., managerial costs, secretarial/clerical costs, labor indirect costs, copying costs, contracted services, accounting and billing).

- Overhead (e.g., heat, electricity, phone, rent, and janitorial services).

- States will need to develop a rational method based on sound accounting principles for segregating the above costs of the permits program from other costs of the air program. The cost figures and methodology will be reviewed by EPA on a case-by-case basis.

III. FLEXIBILITY IN FEE STRUCTURE DESIGN

A. A State may design its fee structure as it deems appropriate, provided the fee structure raises sufficient revenue to cover all reasonable direct and indirect permits program costs.

B. Provided adequate aggregate revenue is raised, States may:

- Base fees on actual emissions or allowable emissions.

- Differentiate fees based on source categories or type of pollutant.

- Exempt some sources from fee requirements.

- Determine fees on some basis other than emissions.

- Charge annual fees or fees covering some other period of time.

IV. INITIAL PROGRAM APPROVABILITY CRITERIA

A. Elements of State program submittals which relate to permit fees.

- Demonstration that fee revenues in the aggregate will adequately fund the permits program.

- Initial accounting to demonstrate that permit fee revenues required to support the reasonable direct and indirect permits program costs are in fact used to fund permits program costs.

- Statement that the program is adequately funded by permit fees (which is supported by cost estimates for the first 4 years of the permits program).

B. Methods by which a State may demonstrate that its fee schedule is sufficient to fund its title V permits program:

- Demonstration that its fee revenue in the aggregate will meet or exceed the $25/tpy (with CPI adjustment) presumptive minimum amount.

- Detailed fee demonstration.

  * Required if fees in the aggregate are less than the presumptive minimum or if credible evidence is presented raising serious questions during public comment on whether fee schedule is sufficient or information casting doubt on fee adequacy otherwise comes to EPA's attention.

C. Computation of $25/tpy presumptive minimum.

- The emissions inventory against which the $25/tpy is applied is calculated as follows:

  * Calculate emissions inventory using actual emissions (and estimates of actual emissions).

  * From the total emissions of part 70 sources, exclude emissions of carbon monoxide (CO) and other pollutants consistent with the definition of "regulated pollutant (for presumptive fee purposes)."

  * States may:

    • Exclude emissions which exceed 4,000 tpy per pollutant per source.

    • Exclude emissions which are already included in the calculation (i.e., double-counting is not required).

    • Exclude insignificant quantities of emissions not required in a permit application.

  * States have two options with respect to emissions from affected units under section 404 of the Act during 1995 through 1999.

    • If a State <u>excludes</u> emissions from affected units under section 404 from its inventory, fees from those units may <u>not</u> be used to show that the State's fee revenue meets or exceeds the $25/tpy presumptive minimum amount (see paragraph IV.E below).

- If a State <u>includes</u> emissions from affected units under section 404 in its inventory, it <u>may</u> include non-emissions-based fees from those units in showing that its fee revenue meets or exceeds the $25/tpy presumptive minimum amount (see paragraph IV.E below.)

- Computation of the presumptive minimum amount is a surrogate for predicting aggregate actual program costs. Once this aggregate cost has been determined, the method used for computing it does not restrict a State's discretion in designing its particular fee structure. States may impose fees in a manner different from the criteria for calculating the presumptive amount (e.g., charging fees for CO emissions and for emissions which exceed 4,000 tpy per pollutant per source).

D. Establishing that fee revenue meets or exceeds the presumptive minimum.

- Fee revenue <u>in the aggregate</u> must be equivalent to $25/tpy (as adjusted by CPI) as applied to the qualifying emissions inventory.

- States have flexibility in fee schedule design as outlined in paragraph III above and are not required to adopt any particular fee schedule.

E. Fees collected from affected units under section 404.

- States may not use emissions-based fees from "Phase I" affected units under section 404 for any purpose related to the approval of their operating permits programs for the period from 1995 through 1999. The EPA interprets the prohibition contained in section 408(c)(4) of the Act as preventing EPA from recognizing the collection of such fees in determining whether a State has met its obligation for adequate program funding. Furthermore, such fees cannot be used to support the direct or indirect costs of the permits program. However, States may, on their own initiative, impose title V emissions-based fees on affected units under section 404 and use such revenues to fund activities beyond those required pursuant to title V.

  * All units initially classified as "Phase I" units are listed in Table I of 40 CFR part 73. In addition, units designated as active substitution units under section 404(b) are considered "Phase I" affected units under section 404.

- States may collect fees which are not emissions based (e.g., application or processing fees) from such units.

- Role of nonemissions-based fees in determining adequacy of aggregate fee revenue.

  * Such fees may be used as part of a detailed fee demonstration (which does not rely on the $25/tpy presumption).

  * Such fees may not be used to establish that aggregate fees meet or exceed the presumptive minimum amount unless the State exercises its discretion to include emissions from affected units under section 404 in the emissions inventory against which the $25/tpy is applied.

F. Fee program accountability.

- Initial accounting (required as part of program submittal) comprised of a description of the mechanisms and procedures for ensuring that fees needed to support the reasonable direct and indirect costs of the program are utilized solely for permits program costs.

- Periodic accounting every 2-3 years to demonstrate that the reasonable direct and indirect costs of the program were covered by fee revenues.

- Earlier accounting or more frequent accountings if EPA determines through its oversight activities that a program's inadequate implementation may be the result of inadequate funding.

G. Governor's statement assuring adequate personnel and funding for permits program.

- Submitted as part of program submittal.

- A statement supported by annual estimates of permits program costs for the first 4 years after program approval and a description of how the State plans to cover those costs.

  * Detailed description of estimated annual costs is not required if the State has relied on the presumptive minimum amount in demonstrating the adequacy of its fee program.

* Detailed description of estimated costs for a 4-year period showing how program activities and resource needs will change during the transition period is required if State proposes to collect fee revenue which is less than the presumptive minimum amount.

- Projection of annual fee revenue for a 4-year period with explanation of how State will handle any temporary shortfall (if projected revenue for any of the 4 years is less than estimated costs).

V. FUTURE ADJUSTMENTS TO FEE SCHEDULE

A. Continuing requirement of fee revenue adequacy.

- Obligates the States to update and adjust their fee schedules periodically if they are not sufficient to fund the reasonable direct and indirect costs of the permits program.

B. Changes in fee structure over time are inevitable and may be required by the following events:

- Results of periodic audits/accountings.
- Revised number of part 70 sources (discovery of new sources, new EPA standards, expiration of the deferral of nonmajor sources).
- Changes in the number of permit revisions.
- Changes in the number of affected units under section 404 (e.g., substitution units).
- CPI-type adjustments.
- Different activities during post-transition period.

NOTICE

The policies set out in this guidance document are intended solely as guidance and do not represent final Agency action and are not ripe for judicial review. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. The EPA officials may decide to follow the guidance provided in this guidance document, or to act at variance with the guidance, based on an analysis of specific circumstances. The EPA also may change this guidance at any time without public notice.

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*** ACTIVITY REPORT ***
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DIVISION OF ENVIRONMENTAL PROTECTION

GASTON CAPERTON
GOVERNOR

10 McJunkin Road
Nitro, WV 25143-2506

DAVID C. CALLAGHAN
DIRECTOR

July 28, 1994

Ms. Judy Cooper
Director, Administrative Law Division
Secretary of State's Office
Building 1, Suite 157K
Charleston, West Virginia 25305

RE: CSR-45-34 - Emission Standards for Hazardous Air Pollutants Pursuant to 40 CFR Part 63

Dear Ms. Cooper:

This is to advise you that I am giving approval for the filing of the above-captioned rule with your Office and the Legislative Rule-Making Review Committee as an agency-approved rule.

Your cooperation in this regard is very much appreciated. If you have any questions or require additional information, please feel free to contact Roger T. Hall at 759-0515.

Sincerely yours,

David C. Callaghan
Commissioner
Bureau of Environment

DCC;RTH:cc

Attachment