WEST VIRGINIA

SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

FORM #1

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

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

RULE TYPE: Legislative ; CITE AUTHORITY W.Va. Code §§22-5-1 et seq.

AMENDMENT TO AN EXISTING RULE: YES X NO ____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 33

TITLE OF RULE BEING AMENDED: "Acid Rain Provisions and Permits"

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: ____

TITLE OF RULE BEING PROPOSED: ____

DATE OF PUBLIC HEARING: July 21, 1997 TIME: 6:00 p.m.

LOCATION OF PUBLIC HEARING: Office of Air Quality
1558 Washington Street, East
Charleston, West Virginia 25311

COMMENTS LIMITED TO: ORAL ____, WRITTEN ____, BOTH X

COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS:

John H. Johnston, Chief
Office of Air Quality
1558 Washington Street, East
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

John H. Johnston
Authorized Signature

$3.60 (w/out Fed. Reg's)
$54.10 (Fed. Reg's)

CECIL H. UNDERWOOD
GOVERNOR

BUREAU OF ENVIRONMENT
10 McJunkin Road
Nitro, WV 25143-2506

JOHN E. CAFFREY
COMMISSIONER

June 17, 1997

Ms. Judy Cooper
Director, Administrative Law Division
Office of the Secretary of State
Capitol Complex
Charleston, West Virginia 25305

RE: 45CSR33 - "Acid Rain Provisions and Permits"

Dear Ms. Cooper:

This is to advise you that I am giving approval for filing the above-referenced rule as Notice of Public Hearing/Comment Period.

Your cooperation in this regard is very much appreciated. If you have any questions or require additional information, please feel free to contact Carrie Chambers at 759-0515.

Sincerely yours,

John E. Caffrey
Commissioner

LEM:cc

Attachment

BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION

BRIEFING DOCUMENT

Rule Title: 45CSR33 - "Acid Rain Provisions and Permits"

A. AUTHORITY: W.Va. Code §§22-5-1 et seq. and §§22-18-1 et seq.

B. SUMMARY OF RULE:

Title IV of the federal Clean Air Act, as amended, November 15, 1990, required each state to implement an operating permit system conforming to Title IV and Title V of the Clean Air Act as amended. West Virginia complied by enacting rule 45 CSR 33 "Acid Rain Provisions and Permits" which is an incorporation by reference of the Federal Counterpart Regulation 40 CFR Part 72, and became effective May 1, 1994. The United States Environmental Protection Agency approved West Virginia's Acid Rain Program with its approval of West Virginia's Title V Operating Permit Program effective December 15, 1995. 45 CSR 33 was amended in the 1996 Legislative Session to include all revisions and additions promulgated under 40 CFR Part 72 and related Parts between June, 1994, and June, 1995.

The intent of the revisions contained herein is to update 45 CSR 33 by incorporating all revisions and additions promulgated between June 1, 1995 and June 1, 1997 under the Federal Counterpart Regulation 40 CFR Part 72 and related Parts. These revisions also contain language changes that make clear and certain which of the CFR Parts of the Acid Rain Program of the Federal regulations that are included in the incorporation. Those to be incorporated are ;

1. 40 CFR Part 72 "Permits Regulations",
2. 40 CFR Part 74 "Sulfur Dioxide Opt-Ins",
3. 40 CFR Part 75 "Continuous Emissions Monitoring",
4. 40 CFR Part 76 "Nitrogen Oxides Reduction Program",
5. 40 CFR Part 77 "Excess Emissions".

C. STATEMENT OF CIRCUMSTANCES WHICH REQUIRE RULE:

Under the Acid Rain Program promulgated by the United States Environmental Protection Agency, pursuant to Title IV of the Clean Air Act, as amended, no person may construct, modify, or operate or cause to be constructed, modified, or operated, an Acid Rain source in violation of 40 CFR Part 72. The Legislature has previously promulgation 45 CSR

33 pursuant to Title IV by incorporation by reference portion of the Federal counter part regulations. The purpose of this rule amendment is to update 45 CSR 33 to be consistent with all rules promulgated under pertinent Federal counterpart rules under the Clean Air Act, as amended. This rule amendments will also provide clarity in the exact federal counterparts adopted by the West Virginia rule.

D. FEDERAL COUNTERPART REGULATIONS - INCORPORATION BY REFERENCE/DETERMINATION OF STRINGENCY:

A federal counterpart to this proposed rule exists. In accordance with the Director's recommendation, and with limited exception, the Office of Air Quality proposes that the rule incorporate by reference the federal counterparts.

Because the proposed rule incorporates by reference the federal counterpart, no determination of stringency is required.

E. CONSTITUTIONAL TAKINGS DETERMINATION:

The Director has determined that this rule will not result in taking of private property within the meaning of the Constitutions of West Virginia and the United States of America. The Director further finds that this rule is consistent with the requirements of chapter 22 article 1A of the W.Va. Code.

F. CONSULTATION WITH THE ENVIRONMENTAL PROTECTION ADVISORY COUNCIL:

At their July 17, 1996 meeting, the Environmental Protection Advisory Council (the "Council") made no comments on this rule. (See attached minutes of the July 17, 1996 Council meeting).

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: 45CSR33 - Acid Rain Provisions and Permits

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	$ -0-	$ -0-	$ -0-	$ -0-	$ -0-
Personal Services	-0-	-0-	-0-	-0-	-0-
Current Expense	-0-	-0-	-0-	-0-	-0-
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: Costs incurred are covered under the budget estimate for implementing the Clean Air Act, as amended, under 45CSR30 promulgated by the Legislature during the 1994 Session.

3. Objectives of these rules: This rule establishes general provisions and the operating permit program requirements for affected sources and affected units under the Acid Rain Program promulgated by the United States Environmental Protection Agency under Title IV of 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 requirements.

C. Economic impact on citizens/public at large.

No impact above that resulting from the currently applicable federal requirements.

Date: June 17

Signature of agency head or authorized representative:

John H. Johnston

John H. Johnston
Chief, Office of Air Quality

FILED

JUN 17 3 46 PM '97

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

45CSR33

TITLE 45
LEGISLATIVE RULE

BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY

SERIES 33
ACID RAIN PROVISIONS AND PERMITS

§45-33-1. General.

1.1 Scope. - This rule establishes general provisions and the operating permit program requirements for affected sources and affected units under the Acid Rain Program promulgated by the United States Environmental Protection Agency under Title IV of the Clean Air Act, as amended. 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. ~~- April 25, 1996~~

1.4. Effective Date. - ~~May 1, 1996~~

1.5. Incorporation by Reference - Federal Counterpart Regulation. - The Director has determined that a federal counterpart regulation exists, and in accordance with the Director's recommendation this rule incorporates by reference the following provisions: 40 CFR Part 72, 40 CFR Part 74, 40 CFR Part 75, 40 CFR Part 76, and 40 CFR Part 77, as in effect on ~~June 1, 1995~~ June 1,1997.

§45-33-2. Requirements.

2.1. No person may construct, modify, or operate or cause to be constructed, modified, or operated an Acid Rain source which results or will result in a violation of this rule.

§45-33-3. 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 or his or her designated representative.

3.3 "Permitting Authority" shall mean the West Virginia Division of Environmental Protection.

§45-33-4. Adoption of Standards.

4.1 The Director hereby adopts and incorporates by reference the following provisions of the United States Environmental Protection Agency Acid Rain Program in effect on June 1, 1997; ~~of~~ 40 CFR Part 72, 40 CFR Part 74, 40 CFR Part 75, 40 CFR Part 76, and 40 CFR Part 77, ~~including associated reference methods, performance specifications and other test methods which are appended to such standards and contained in 40 CFR Part 72 as in effect on June 1, 1995~~ These provisions are adopted for the purposes of implementing an acid rain program that meets the requirements of Title IV of the federal Clean Air Act, as amended.

§45-33-5. Inconsistency Between Rules.

The provisions of this rule shall not be construed as exempting persons subject to this rule from compliance with any other provisions of the Clean Air Act, including the provisions of Title I of the Clean Air Act relating to applicable National Ambient Air Quality Standards, the State Implementation Plan, or any other rules of the West Virginia Division of Environmental Protection, except as expressly provided under Title IV of the Clean Air Act; provided however, that in the event of any inconsistency between the provisions of this rule and any provisions of 45CSR30, the provisions of this rule shall take precedence and shall govern the issuance, denial, revision, reopening, renewal, and appeal of the Acid Rain provision of an operating permit.

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

Arizona Department of Environmental Quality, 3033 North Central Avenue, Phoenix, AZ 85012.

Maricopa County Department of Environmental Services, 2406 South 24th Street, Suite E–204, Phoenix, AZ 85034–6822.

FOR FURTHER INFORMATION CONTACT: Christine Vineyard, Rulemaking Office (Air-4), Air Division, U.S. Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105, Telephone: (415) 744–1197.

SUPPLEMENTARY INFORMATION:

Applicability

The rule being approved into the Arizona SIP is: MCESD Rule 343—Commercial Bread Bakeries. This rule was submitted by the Arizona Department of Environmental Quality to EPA on August 31, 1995.

Background

On March 3, 1978, EPA promulgated a list of ozone nonattainment areas under the provisions of the Clean Air Act, as amended in 1977 (1977 Act or pre-amended Act), that included the Maricopa County Area. 43 FR 8964, 40 CFR 81.305. On March 19, 1979, EPA changed the name and modified the geographic boundaries of the ozone nonattainment area of Maricopa County to the Maricopa Association of Governments (MAG) Urban Planning Area. 44 FR 16391, 40 CFR 81.303. On February 24, 1984, EPA notified the Governor of Arizona, pursuant to section 110(a)(2)(H) of the pre-amended Act, that MCESD's portion of the Arizona SIP was inadequate to attain and maintain the ozone standard and requested that deficiencies in the existing SIP be corrected (EPA's SIP-Call, 49 FR 18827, May 3, 1984). On May 26, 1988, EPA again notified the Governor of Arizona, pursuant to section 110(a)(2)(H) of the 1977 Act, that the above district's portions of the Arizona SIP were inadequate to attain and maintain the ozone standard and requested that deficiencies in the existing SIP be corrected (EPA's second SIP-Call, 53 FR 34500, September 7, 1988). On November 15, 1990, the Clean Air Act Amendments of 1990 were enacted. Pub. L. 101–549, 104 Stat. 2399, codified at 42 U.S.C. 7401–7671q. In amended section 182(b)(2)(C) of the CAA, Congress statutorily required nonattainment areas to submit RACT rules for all major stationary sources of VOCs by November 15, 1992 (the RACT catch-up requirement).

The MAG Urban Planning Area is classified as moderate;[1] therefore, this area was subject to the RACT catch-up requirement and the November 15, 1992 deadline.[2]

The State of Arizona submitted many revised RACT rules for incorporation into its SIP on August 31, 1995, including the rule being acted on in this notice. This notice addresses EPA's direct-final approval action for MCESD Rule 343—Commercial Bread Bakeries. MCESD adopted Rule 343 on February 15, 1995. This submitted rule was found to be complete on October 25, 1995 pursuant to EPA's completeness criteria that are set forth in 40 CFR part 51, Appendix V[3] and is being finalized for approval into the SIP.

Rule 343 controls VOC emissions from bread ovens at commercial bread bakeries. VOCs contribute to the production of ground level ozone and smog. This rule was originally adopted as part of MCESD's effort to achieve the National Ambient Air Quality Standard (NAAQS) for ozone and in response to EPA's 1988 SIP-Call and the section 182(b)(2)(C) CAA requirement. The following is EPA's evaluation and final action for this rule.

EPA Evaluation and Action

In determining the approvability of a VOC rule, EPA must evaluate the rule for consistency with the requirements of the CAA and EPA regulations, as found in section 110 and part D of the CAA and 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans). The EPA interpretation of these requirements, which forms the basis for today's action, appears in the various EPA policy guidance documents.[4] Among those provisions is the requirement that a VOC rule must, at a minimum, provide for the implementation of RACT for stationary sources of VOC emissions. This requirement was carried forth from the pre-amended Act.

For the purpose of assisting state and local agencies in developing RACT rules, EPA prepared a series of Control Technique Guideline (CTG) documents. The CTGs are based on the underlying requirements of the Act and specify the presumptive norms for what is RACT for specific source categories. Under the CAA, Congress ratified EPA's use of these documents, as well as other Agency policy, for requiring States to "catch-up" their RACT rules. See section 182(b)(2)(C). For some source categories, such as bakeries, EPA did not publish a CTG. In such cases, the District may determine what controls are required by reviewing the operation of facilities subject to the regulation and evaluating regulations for similar sources in other areas. Bakery sources have been subject to a RACT regulation since 1989 in the Bay Area Air Quality Management District. EPA did publish an Alternative Control Technology Document (ACT) entitled, "Alternative Control Technology Document for Bakery Oven Emissions"; EPA 453/R–92–017, December 1992 as guidance for this source category. Further interpretations of EPA policy are found in the Blue Book, referred to in footnote 4. In general, these guidance documents have been set forth to ensure that VOC rules are fully enforceable and strengthen or maintain the SIP. MCESD's Rule 343, Commercial Bread Bakeries, is a new rule which was adopted to control VOC emissions from large commercial bakeries by establishing emissions reduction standards, recordkeeping requirements, and test methods for demonstration of compliance with the rule. A detailed evaluation of Rule 343, Commercial Bread Bakeries, can be found in the Technical Support Document (TSD) dated July 30, 1996. EPA has evaluated the submitted rule and has determined that it is consistent with the CAA, EPA regulations, and EPA policy. Therefore, MCESD, Rule 343, Commercial Bread Bakeries, is being approved under section 110(k)(3) of the CAA as meeting the requirements of section 110(a) and Part D.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future implementation plan. Each request for

[1] The Maricopa Association of Governments (MAG) Urban Planning Area retained its designation of nonattainment and was classified by operation of law pursuant to sections 107(d) and 181(a) upon the date of enactment of the CAA. See 56 FR 56694 (November 6, 1991).

[2] Arizona did not make the required SIP submittal by November 15, 1992. On January 15, 1993, the EPA made a finding of nonsubmittal pursuant to section 179(a)(1), which started an 18-month sanction clock. The rule being acted upon in this action was submitted in response to the EPA finding of failure to submit.

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

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

revision to the state implementation plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

EPA is publishing this action without prior proposal because the Agency views this as a noncontroversial amendment and anticipates no adverse comments. However, in a separate document in this **Federal Register** publication, the EPA is proposing to approve the SIP revision should adverse or critical comments be filed. This action will be effective May 16, 1997, unless, by April 16, 1997, adverse or critical comments are received.

If the EPA receives such comments, this action will be withdrawn before the effective date by publishing a subsequent document that will withdraw the final action. All public comments received will then be addressed in a subsequent final rule based on this action serving as a proposed rule. The EPA will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time. If no such comments are received, the public is advised that this action will be effective May 16, 1997.

Regulatory Process

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

SIP approvals under sections 110 and 301(a) and subchapter I, Part D of the CAA do not create any new requirements, but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP-approval does not impose any new requirements, I certify that it does not have a significant impact on any small entities affected. Moreover, due to the nature of the Federal-state relationship under the CAA, preparation of a regulatory flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action.

The CAA forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co.* v. *U.S. E.P.A.*, 427 U.S. 246, 256–66 (S. Ct. 1976); 42 U.S.C. 7410 (a)(2).

Unfunded Mandates

Under Sections 202, 203, and 205 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must undertake various actions in association with proposed or final rules that include a Federal mandate that may result in estimated costs of $100 million or more to the private sector or to State, local, or tribal governments in the aggregate.

Through submission of this state implementation plan or plan revision, the State and any affected local or tribal governments have elected to adopt the program provided for under Part D of the Clean Air Act. These rules may bind State, local, and tribal governments to perform certain actions and also require the private sector to perform certain duties. The rule being approved by this action will impose no new requirements because affected sources are already subject to these regulations under State law. Therefore, no additional costs to State, local, or tribal governments or to the private sector result from this action. EPA has also determined that this final action does not include a mandate that may result in estimated costs of $100 million or more to State, local, or tribal governments in the aggregate or to the private sector.

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

This action has been classified as a Table 3 action for signature by the Regional Administrator under the procedures published in the **Federal Register** on January 19, 1989 (54 FR 2214–2225), as revised by a July 10, 1995 memorandum from Mary Nichols, Assistant Administrator for Air and Radiation. The Office of Management and Budget (OMB) has exempted this regulatory action from Executive Order 12866 review.

List of Subjects in 40 CFR Part 52

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

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

Dated: February 19, 1997.

Nora L. McGee,

Acting Regional Administrator.

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

PART 52—[AMENDED]

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

Authority: 42 U.S.C. 7401–7671q

Subpart D—Arizona

2. Section 52.120 is amended by adding paragraph (c)(82) to read as follows:

§ 52.120 Identification of plan.

* * * * *

(c) * * *

(82) New and amended rules and regulations for the Maricopa County Environmental Services Department—Air Pollution Control were submitted on August 31, 1995, by the Governor's designee.

(i) Incorporated by reference.

(A) Rule 343, adopted on February 15, 1995.

* * * * * * *

[FR Doc. 97–5972 Filed 3–14–97; 8:45 am]

BILLING CODE 6560–50–P

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40 CFR Part 63

[FRL–5700–9]

RIN 2060–AE37

NESHAPS

Test Methods for the Polymers and Resins I Rule; Appendix A, Test Methods 310 A, B, C, 312 A, B, C, 313 A, B

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates test methods 310 a, b and c, 312 a, b and c, and 313 a and b for the detection of residual amounts of hazardous air pollutants (HAPs) in conjunction with the recently issued National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Manufacture of Major Elastomers, (commonly referred to as Polymers and Resins I). The methods were adapted from industrial methods submitted by the facilities in the polymers and resins industry and were published for public comment as part of the Polymers and Resins I proposed rulemaking action. The methods will be

promulgated, in conjunction with the Polymers and Resins I rule, as EPA methods 310 a, b and c, 312 a, b and c, and 313 a and b, and will be codified at 40 CFR Part 63, Appendix A.

Methods 310 a, b, and c are applicable for determining the residual amount of solvent (hexane being the most commonly used solvent) and diene monomer in ethylene-propylene terpolymer (EPDM) as produced in the solution polymerization process. Methods 312 a, b, and c are applicable for determining the residual amount of styrene in styrene-butadiene rubber (SBR) as produced in the emulsion polymerization process. Methods 313 a and b are applicable for determining the residual amount of toluene, dimer, and styrene in polybutadiene rubber (PBR) and SBR crumb as produced in the solution polymerization process. All of the methods analyses are through the use of gas chromatography.

EFFECTIVE DATE: These methods are effective March 17, 1997.

ADDRESS: The background information for the promulgated test methods may be obtained from: Air Docket Section (LE–131), Attention: Docket No. A–92–44, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

The docket is located at the above address in room M–1500, Waterside Mall (ground floor), and may be inspected from 8 a.m. to 4 p.m., Monday through Friday; telephone number (202) 382–7548. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For information concerning the methods, contact Mr. Solomon Ricks at (919) 541–5242, Emission Measurement Center, Emission Monitoring and Analysis Division (MD–19), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711.

SUPPLEMENTARY INFORMATION: *Response to Comments:* Concurrent with the proposal of subpart U, the EPA proposed three test residual HAP test methods—one each for SBRE, PBR/SBRS, and EPR. In determining the methods to be included in the proposal, the industry was given the opportunity to submit test methods for evaluation and approval by the EPA. The EPA selected the test methods submitted by the Exxon Chemical Company (Method 310), the Goodyear Tire and Rubber Company (Method 312), and the American Synthetic Rubber Corporation (Method 313) as the test methods to be used to determine residual HAP concentration.

After proposal of the test methods, several commenters stated that no single analytical method would produce consistent results for all polymers. It was suggested by the companies that each company should be allowed to demonstrate compliance using a company-specific method that is comparable to the EPA test method. The EPA agreed with the commenters and concluded that it was appropriate to allow every interested company to validate their own test method using a modified version of 40 CFR part 63, Appendix A, Method 301.

A total of eight test methods were submitted by seven different companies. Throughout the process, the affected industry has been involved with all activity associated with the EPA's promulgation of the residual organic HAP test methods. The EPA held meetings with industry representatives to discuss their comments on the proposed methods, and to discuss procedures for validating company test methods. Representatives of each of those three companies which did not submit test methods were in attendance at one or more of the meetings.

This notice with the promulgated regulatory language is also available on the Technology Transfer Network (TTN) on the EPA's electronic bulletin boards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free, except for the cost of a telephone call. Dial (919) 541–5742 for up to a 14,400 bps modem. If more information on TTN is needed, call the HELP line at (919) 541–5384.

Other materials related to this rulemaking are available for review in the docket.

Judicial Review: Under section 307(b)(1) of the Act, judicial review of the final rule 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 final 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.

I. Introduction

The methods being promulgated are to be used in testing for residual amounts of HAPs to determine compliance with the standards in the promulgated Polymers and Resins I rule (September 5, 1996, 61 FR 46906). The methods were published for comment along with the Polymers and Resins I proposal under the authority of section 112(d) of the Clean Air Act as amended in 1990. Section 112(d) requires the Administrator to regulate emissions of HAP listed in section 112(b) of the Clean Air Act. The Polymers and Resins I proposal was published for public comment on June 12, 1995 (60 FR 30801).

The methods being promulgated will apply to ethylene-propylene elastomers production, polybutadiene rubber production, and styrene-butadiene rubber and latex production, using stripping technology as the method of compliance. As stated in the promulgated Polymers and Resins I rule, if compliance is to be demonstrated by sampling, samples of the stripped wet crumb or stripped latex must be taken after the stripper and analyzed to determine the residual HAP content.

II. Summary of Test Methods

A. Methods 310 a, b, and c

The promulgated methods are adapted from test methods submitted to the EPA by DSM Copolymer, Uniroyal Chemical, and Exxon. These companies are involved in the manufacture of EPDM rubber. The basic principle of DSM Copolymer's methods involve heating a sample in a sealed bottle with an internal standard and analyzing the vapor by gas chromatography. Uniroyal Chemical extracts residual hexane contained in wet pieces of EPDM polymer with methyl isobutyl ketone (MIBK). The extract is then analyzed by gas chromatography. Exxon's principle involves dissolving an EPDM crumb rubber sample in toluene to which heptane has been added as an internal standard. Acetone is then added to the solution to precipitate the crumb, and the supernatant is then analyzed for hexane and diene by a gas chromatograph with a flame ionization detector (FID).

B. Methods 312 a, b, and c

The promulgated methods are adapted from a test methods submitted to the EPA by Goodyear Tire and Rubber Company, Ameripol Synpol Corporation, and DSM Copolymer. The basic principle of the Goodyear method is to coagulate the SBR latex sample with an an ethyl alcohol solution containing a specific amount of alpha-methyl styrene as the internal standard, and analyzing the extract to determine styrene concentration using a gas chromatograph with a FID. Ameripol Synpol coagulates the latex sample in propanol which contains alpha-methyl styrene as the internal standard. The extract is then analyzed by a gas chromatograph to determine the residual styrene from the latex. DSM Copolymer utilizes a packed column gas chromatograph with a FID to determine

the concentration of residual styrene in the latex samples.

C. Methods 313 a and b

The promulgated methods are adapted from test methods submitted to the EPA by the American Synthetic Rubber Corporation (ASRC) and the Goodyear Tire and Rubber Company. The basic principle of the ASRC method involves placing the wet crumb sample in a sealed vial and running on a headspace sampler which heats the vial to a specified temperature for a specific time and then injects a known volume of vapor into a capillary gas chromatograph. The method determines residual toluene and styrene in the stripper crumb derived from solution polymerization processes that utilize toluene as the polymerization solvent. The Goodyear method uses the principle of dissolving the polymer sample in chloroform and coagulating the cement with an isopropyl alcohol solution containing a specific amount of alpha-methyl styrene as the internal standard. The extract of this coagulation is then injected into a gas chromatograph and separated into individual components.

III. Significant Comments and Changes to Test Methods

When published with the Polymers and Resins I proposal, the methods were proposed as methods 310, 312, and 313. The industry submitted their test methods for EPA review, and it was left to the EPA to decide which method would be acceptable as the test methods to be used for compliance purposes. However, after proposal, the companies who submitted their methods for consideration, and whose methods were not selected, raised the issue that no single analytical method would produce consistent results for all polymers. After review and consideration of this issue, the EPA concluded that it was appropriate to allow every interested company to validate their own test method using a modified version of 40 CFR part 63, Appendix A, Method 301. The results of this effort was to have a total of eight methods submitted as validated test methods by seven companies. Only three affected companies decided not to submit methods. Therefore, the final methods rule include methods 310a, b, and c for EPR, methods 312a, b, and c for SBRE, and methods 313a and b for PBR/SBRS, as acceptable residual organic HAP test methods.

IV. Administrative Requirements

A. Docket

The docket is an organized and complete file for all information submitted or otherwise considered by EPA in the development of this promulgated rulemaking. The principal purposes of the docket are: (1) to allow interested parties 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 (except for interagency review materials) [Clean Air Act Section 307(d)(7)(A)].

B. Office of Management and Budget Review

Under Executive Order 12866 (58 FR 51735 October 4, 1993), the EPA is required to judge whether a regulation is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of this Executive Order to prepare a regulatory impact analysis (RIA). The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, 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; or (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 the Executive Order, this action has been determined to be "not significant."

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant adverse impact on a substantial number of small businesses. This rulemaking does not impose emission measurement requirements beyond those specified in the current regulations, nor does it change any emission standard, rather it provides acceptable test methods that the businesses regulated by Polymers and Resins I may use to comply with that rule. As such, it will not present a significant economic impact on a substantial number of small businesses.

D. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

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

E. Paperwork Reduction Act

The rule does not impose or change any information collection requirements subject to Office of Management and Budget review under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*

F. Unfunded Mandates

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

EPA has determined that the action proposed today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate; or to the private sector, nor does this action significantly or uniquely impact small governments, because this action contains no requirements that apply to such govenments or impose obligations upon them. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

List of Subjects in 40 CFR Part 63

Environmental protection, Emulsion polymerization, Gas chromatography, Residual Hydrocarbon, Styrene, Solution polymerization.

Dated: March 4, 1997.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, Appendix A of Part 63 of Title 40 of the CFR 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. Appendix A of Part 63 is amended by adding methods 310, 312, and 313 to read as follows:

APPENDIX A—TEST METHODS

* * * * *

METHOD 310A—DETERMINATION OF RESIDUAL HEXANE THROUGH GAS CHROMATOGRAPHY

1.0 Scope and Application

1.1 This method is used to analyze any crumb rubber or water samples for residual hexane content.

1.2 The sample is heated in a sealed bottle with an internal standard and the vapor is analyzed by gas chromatography.

2.0 Summary of Method.

2.1 This method, utilizing a capillary column gas chromatograph with a flame ionization detector, determines the concentration of residual hexane in rubber crumb samples.

3.0 Definitions

3.1 The definitions are included in the text as needed.

4.0 Interferences

4.1 There are no known interferences.

5.0 Safety

5.1 It is the responsibility of the user of this procedure to establish safety and health practices applicable to their specific operation.

6.0 Equipment and Supplies

6.1 Gas Chromatograph with a flame ionization detector and data handling station equipped with a capillary column 30 meters long.

6.2 Chromatograph conditions for Sigma 1:

6.2.1 Helium pressure: 50# inlet A, 14# aux

6.2.2 Carrier flow: 25 cc/min

6.2.3 Range switch: 100x

6.2.4 DB: 1 capillary column

6.3 Chromatograph conditions for Hewlett-Packard GC:

6.3.1 Initial temperature: 40 °C

6.3.2 Initial time: 8 min

6.3.3 Rate: 0

6.3.4 Range: 2

6.3.5 DB: 1705 capillary column

6.4 Septum bottles and stoppers

6.5 Gas Syringe—0.5 cc

7.0 Reagents and Standards

7.1 Chloroform, 99.9+%, A.S.C. HPLC grade

8.0 Sample Collection, Preservation, and Storage

8.1 A representative sample should be caught in a clean 8 oz. container with a secure lid.

8.2 The container should be labeled with sample identification, date and time.

9.0 Quality Control

9.1 The instrument is calibrated by injecting calibration solution (Section 10.2 of this method) five times.

9.2 The retention time for components of interest and relative response of monomer to the internal standard is determined.

9.3 Recovery efficiency must be determined once for each sample type and whenever modifications are made to the method.

9.3.1 Determine the percent hexane in three separate dried rubber crumb samples.

9.3.2 Weigh a portion of each crumb sample into separate sample bottles and add a known amount of hexane (10 microliters) by microliter syringe and 20 microliters of internal standard. Analyze each by the described procedure and calculate the percent recovery of the known added hexane.

9.3.3 Repeat the previous step using twice the hexane level (20 microliters), analyze and calculate the percent recovery of the known added hexane.

9.3.4 Set up two additional sets of samples using 10 microliters and 20 microliters of hexane as before, but add an amount of water equal to the dry crumb used. Analyze and calculate percent recovery to show the effect of free water on the results obtained.

9.3.5 A value of R between 0.70 and 1.30 is acceptable.

9.3.6 R shall be used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type.

10.0 Calibration and Instrument Settings

10.1 Calibrate the chromatograph using a standard made by injecting 10 µl of fresh hexane and 20 µl of chloroform into a sealed septum bottle. This standard will be 0.6 wt.% *total* hexane based on 1 gram of dry rubber.

10.2 Analyze the hexane used and calculate the percentage of each hexane isomer (2-methylpentane, 3-methylpentane, n-hexane, and methylcyclo-pentane). Enter these percentages into the method calibration table.

10.3 Heat the standard bottle for 30 minutes in a 105 °C oven.

10.4 Inject about 0.25 cc of vapor into the gas chromatograph and after the analysis is finished, calibrate according to the procedures described by the instrument manufacturer.

11.0 Procedure

11.1 Using a cold mill set at a wide roller gap (125–150 mm), mill about 250 grams of crumb two times to homogenize the sample.

11.2 Weigh about 2 grams of wet crumb into a septum bottle and cap with a septum ring. Add 20 µl of chloroform with a syringe and place in a 105 °C oven for 45 minutes.

11.3 Run the moisture content on a separate portion of the sample and calculate the grams of dry rubber put into the septum bottle.

11.4 Set up the data station on the required method and enter the dry rubber weight in the sample weight field.

11.5 Inject a 0.25 cc vapor sample into the chromatograph and push the start button.

11.6 At the end of the analysis, the data station will print a report listing the concentration of each identified component.

11.7 To analyze water samples, pipet 5 ml of sample into the septum bottle, cap and add 20 µl of chloroform. Place in a 105 °C oven for 30 minutes.

11.8 Enter 5 grams into the sample weight field.

11.9 Inject a 0.25 cc vapor sample into the chromatograph and push the start button.

11.10 At the end of the analysis, the data station will print a report listing the concentration of each identified component.

12.0 Data Analysis and Calculation

12.1 For samples that are prepared as in section 11 of this method, ppm

n-hexane is read directly from the computer.

12.2 The formulas for calculation of the results are as follows:

$ppm_{hexane}=(A_{hexane}\times R_{hexane})/(A_{is}\times R_{is})$

Where:

A_{hexane}=area of hexane

R_{hexane}=response of hexane

A_{is}=area of the internal standard

R_{is}=response of the internal standard

% hexane in crumb=(ppm_{hexane}/sample amount)100.

12.3 Correct the results by the value of R (as determined in sections 9.3.4, 9.3.5, and 9.3.6 of this method).

13.0 Method Performance

13.1 The test has a standard deviation of 0.14 wt% at 0.66 wt% hexane. Spike recovery of 12 samples at two levels of hexane averaged 102.3%. Note: Recovery must be determined for each type of sample. The values given here are meant to be examples of method performance.

14.0 Pollution Prevention

14.1 Waste generation should be minimized where possible. Sample size should be an amount necessary to adequately run the analysis.

15.0 Waste Management

15.1 All waste shall be handled in accordance with federal and state environmental regulations.

16.0 References and Publications

16.1 DSM Copolymer Test Method T–3380.

METHOD 310B—DETERMINATION OF RESIDUAL HEXANE THROUGH GAS CHROMATOGRAPHY

1.0 Scope and Application

Analyte	CAS No.	Matrix	Method sensitivity (5.5g sample size)
Hexane	110–54–3	Rubber crumb	.01 wt%
Ethylidene norbornene (ENB)	16219–75–3	Rubber crumb	.001 wt%

1.1 Data Quality Objectives:

In the production of ethylene-propylene terpolymer crumb rubber, the polymer is recovered from solution by flashing off the solvent with steam and hot water. The resulting water-crumb slurry is then pumped to the finishing units. Certain amounts of solvent (hexane being the most commonly-used solvent) and diene monomer remain in the crumb. The analyst uses the following procedure to determine those amounts.

2.0 Summary of Method

2.1 The crumb rubber sample is dissolved in toluene to which heptane has been added as an internal standard. Acetone is then added to this solution to precipitate the crumb, and the supernatant is analyzed for hexane and diene by a gas chromatograph equipped with a flame ionization detector (FID).

3.0 Definitions

3.1 Included in text as needed.

4.0 Interferences

4.1 None known.

4.2 Benzene, introduced as a contaminant in the toluene solvent, elutes between methyl cyclopentane and cyclohexane. However, the benzene peak is completely resolved.

4.3 2,2-dimethyl pentane, a minor component of the hexane used in our process, elutes just prior to methyl cyclopentane. It is included as "hexane" in the analysis whether it is integrated separately or included in the methyl cyclopentane peak.

5.0 Safety

5.1 This procedure does not purport to address all of the safety concerns associated with its use. It is the responsibility of the user of this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

5.2 Chemicals used in this analysis are flammable and hazardous (see specific toxicity information below). Avoid contact with sources of ignition during sample prep. All handling should be done beneath a hood. Playtex or nitrile gloves recommended.

5.3 Hexane is toxic by ingestion and inhalation. Vapor inhalation causes irritation of nasal and respiratory passages, headache, dizziness, nausea, central nervous system depression. Chronic overexposure can cause severe nerve damage. May cause irritation on contact with skin or eyes. May cause damage to kidneys.

5.3 ENB may be harmful by inhalation, ingestion, or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. Causes skin irritation.

5.4 Toluene is harmful or fatal if swallowed. Vapor harmful if inhaled. Symptoms: headache, dizziness, hallucinations, distorted perceptions, changes in motor activity, nausea, diarrhea, respiratory irritation, central nervous system depression, unconsciousness, liver, kidney and lung damage. Contact can cause severe eye irritation. May cause skin irritation. Causes irritation of eyes, nose, and throat.

5.5 Acetone, at high concentrations or prolonged overexposure, may cause headache, dizziness, irritation of eyes and respiratory tract, loss of strength, and narcosis. Eye contact causes severe irritation; skin contact may cause mild irritation. Concentrations of 20,000 ppm are immediately dangerous to life and health.

5.6 Heptane is harmful if inhaled or swallowed. May be harmful if absorbed through the skin. Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. Prolonged or repeated exposure to skin causes defatting and dermatitis.

5.7 The steam oven used to dry the polymer in this procedure is set at 110° C. Wear leather gloves when removing bottles from the oven.

6.0 Equipment and Supplies

6.1 4000-ml volumetric flask

6.2 100-ml volumetric pipette

6.3 1000-ml volumetric flask

6.4 8-oz. French Square sample bottles with plastic-lined caps

6.5 Top-loading balance

6.6 Laboratory shaker

6.7 Laboratory oven set at 110° C (steam-oven)

6.8 Gas chromatograph, Hewlett-Packard 5890A, or equivalent, interfaced with HP 7673A (or equivalent) autosampler (equipped with nanoliter adapter and robotic arm), and HP 3396 series II or 3392A (or equivalent) integrator/controller.

6.9 GC column, capillary type, 50m × 0.53mm, methyl silicone, 5 micron

film thickness, Quadrex, or equivalent.

6.10 Computerized data acquisition system, such as CIS/CALS

6.11 Crimp-top sample vials and HP p/n 5181–1211 crimp caps.

6.12 Glass syringes, 5-ml, with "Luer-lock" fitting

6.13 Filters, PTFE, .45µm pore size, Gelman Acrodisc or equivalent, to fit on Luer-lock syringes (in 6.12, above).

7.0 Reagents and Standards

7.1 Reagent toluene, EM Science Omnisolv

Purity Check: Prior to using any bottle of reagent toluene, analyze it according to section 11.2 of this method. Use the bottle only if hexane, heptane, and ENB peak areas are less than 15 each (note that an area of 15 is equivalent to less than 0.01 wt% in a 10g sample).

7.2 Reagent acetone, EM Science Omnisolv HR–GC

Purity Check: Prior to using any bottle of reagent acetone, analyze it according to section 11.2 of this method. Use the bottle only if hexane, heptane, and ENB peak areas are less than 15 each.

7.3 Reagent heptane, Aldrich Chemical Gold Label; Cat #15,487-3

Purity Check: Prior to using any bottle of reagent heptane, analyze it according to section 11.2 of this method. Use the bottle only if hexane and ENB peak areas are less than 5 each.

7.4 Internal standard solution—used as a concentrate for preparation of the more dilute Polymer Dissolving Solution. It contains 12.00g heptane/100ml of solution which is 120.0g per liter.

Preparation of internal standard solution (polymer dissolving stock solution):

Action	Notes
7.4.1 Tare a clean, dry 1-liter volumetric flask on the balance. Record the weight to three places.	If the 1-liter volumetric flask is too tall to fit in the balance case, you can shield the flask from drafts by inverting a paint bucket with a hole cut in the bottom over the balance cover. Allow the neck of the flask to project through the hole in the bucket.
7.4.2 Weigh 120.00 g of n-heptane into the flask. Record the total weight of the flask and heptane as well as the weight of heptane added.	Use 99+% n-heptane from Aldrich or Janssen Chimica.
7.4.3 Fill the flask close to the mark with toluene, about 1 to 2" below the mark.	Use EM Science Omnisolve toluene, Grade TX0737–1, or equivalent.
7.4.4 Shake the flask vigorously to mix the contents	Allow any bubbles to clear before proceeding to the next step.
7.4.5 Top off the flask to the mark with toluene. Shake vigorously, as in section 5.4.4 of this method, to mix well.	
7.4.6 Weigh the flask containing the solution on the three place balance record the weight	
7.4.7 Transfer the contents of the flask to a 1 qt Boston round bottle	Discard any excess solution
7.4.8 Label the bottle with the identity of the contents, the weights of heptane and toluene used, the date of preparation and the preparer's name.	Be sure to include the words *"Hexane in Crumb Polymer Dissolving Stock Solution"* on the label.
7.4.9 Refrigerate the completed blend for the use of the routine Technicians.	

7.5 Polymer Dissolving Solution ("PDS")—Heptane (as internal standard) in toluene. This solution contains 0.3g of heptane internal standard per 100 ml of solution.

7.5.1 Fill a 4000ml volumetric flask about ¾ full with toluene.

7.5.2 Add 100 ml of the internal standard solution (section 7.4 of this method) to the flask using the 100ml pipette.

7.5.3 Fill the flask to the mark with toluene. Discard any excess.

7.5.4 Add a large magnetic stirring bar to the flask and mix by stirring.

7.5.5 Transfer the polymer solvent solution to the one-gallon labeled container with 50ml volumetric dispenser attached.

7.5.6 Purity Check: Analyze according to section 11.2. *NOTE:* You must "precipitate" the sample with an equal part of acetone (thus duplicating actual test conditions—see section 11.1 of this method, sample prep) before analyzing. Analyze the reagent 3 times to quantify the C_6 and ENB interferences. Inspect the results to ensure good agreement among the three runs (within 10%).

7.5.7 Tag the bottle with the following information:
POLYMER DISSOLVING SOLUTION FOR C_6 IN CRUMB ANALYSIS
PREPARER'S NAME
DATE
CALS FILE ID'S OF THE THREE ANALYSES FOR PURITY (from section 7.5.6 of this method)

7.6 Quality Control Solution: the quality control solution is prepared by adding specific amounts of mixed hexanes (barge hexane), n-nonane and ENB to some polymer dissolving solution. Nonane elutes in the same approximate time region as ENB and is used to quantify in that region because it has a longer shelf life. ENB, having a high tendency to polymerize, is used in the QC solution only to ensure that both ENB isomers elute at the proper time.

First, a concentrated stock solution is prepared; the final QC solution can then be prepared by diluting the stock solution.

7.6.1 In preparation of stock solution, fill a 1-liter volumetric flask partially with polymer dissolving solution (PDS)—see section 7.5 of this method. Add 20.0 ml barge hexane, 5.0 ml n-nonane, and 3 ml ENB. Finish filling the volumetric to the mark with PDS.

7.6.2 In preparation of quality control solution, dilute the quality control stock solution (above) precisely 1:10 with PDS, i.e. 10 ml of stock solution made up to 100 ml (volumetric flask) with PDS. Pour the solution into a 4 oz. Boston round bottle and store in the refrigerator.

8.0 Sample Collection, Preservation and Storage

8.1 Line up facility to catch crumb samples. The facility is a special facility where the sample is drawn.

8.1.1 Ensure that the cock valve beneath facility is closed.

8.1.2 Line up the system from the slurry line cock valve to the cock valve at the nozzle on the stripper.

8.1.3 Allow the system to flush through facility for a period of 30 seconds.

8.2 Catch a slurry crumb sample.

8.2.1 Simultaneously close the cock valves upstream and downstream of facility.

8.2.2 Close the cock valve beneath the slurry line in service.

8.2.3 Line up the cooling tower water through the sample bomb water jacket to the sewer for a minimum of 30 minutes.

8.2.4 Place the sample catching basket beneath facility and open the cock valve underneath the bomb to retrieve the rubber crumb.

8.2.5 If no rubber falls by gravity into the basket, line up nitrogen to the bleeder upstream of the sample bomb and force the rubber into the basket.

8.2.6 Close the cock valve underneath the sample bomb.

8.3 Fill a plastic "Whirl-pak" sample bag with slurry crumb and send it to the lab immediately.

8.4 Once the sample reaches the lab, it should be prepped as soon as possible to avoid hexane loss through evaporation. Samples which have lain untouched for more than 30 minutes should be discarded.

9.0 Quality Control

Quality control is monitored via a computer program that tracks analyses of a prepared QC sample (from section 7.6.2 of this method). The QC sample result is entered daily into the program, which plots the result as a data point on a statistical chart. If the data point does not satisfy the "in-control" criteria (as defined by the lab quality facilitator), an "out-of-control" flag appears, mandating corrective action.

In addition, the area of the n-heptane peak is monitored so that any errors in making up the polymer dissolving solution will be caught and corrected. Refer to section 12.4 of this method.

9.1 Fill an autosampler vial with the quality control solution (from section 7.6.2 of this method) and analyze on the GC as normal (per section 11 of this method).

9.2 Add the concentrations of the 5 hexane isomers as they appear on the CALS printout. Also include the 2,2-dimethyl-pentane peak just ahead of the methyl cyclopentane (the fourth major isomer) peak in the event that the peak integration split this peak out. Do not include the benzene peak in the sum. Note the nonane concentration. Record both results (total hexane and nonane) in the QC computer program. If out of control, and GC appears to be functioning within normal parameters, reanalyze a fresh control sample. If the fresh QC is not in control, check stock solution for contaminants or make up a new QC sample with the toluene currently in use. If instrument remains out-of-control, more thorough GC troubleshooting may be needed.

Also, verify that the instrument has detected both isomers of ENB (quantification not necessary—see section 7.0 of this method).

9.3 Recovery efficiency must be determined for each sample type and whenever modifications are made to the method. Recovery shall be between 70 and 130 percent. All test results must be corrected by the recovery efficiency value (R).

9.3.1 Approximately 10 grams of wet EPDM crumb (equivalent to about 5 grams of dry rubber) shall be added to six sample bottles containing 100 ml of hexane in crumb polymer dissolving solution (toluene containing 0.3 gram n-heptane/100 ml solution). The polymer shall be dissolved by agitating the bottles on a shaker for 4 hours. The polymer shall be precipitated using 100 ml acetone.

9.3.2 The supernatant liquid shall be decanted from the polymer. Care shall be taken to remove as much of the liquid phase from the sample as possible to minimize the effect of retained liquid phase upon the next cycle of the analysis. The supernatant liquid shall be analyzed by gas chromatography using an internal standard quantitation method with heptane as the internal standard.

9.3.3 The precipitated polymer from the steps described above shall be re-dissolved using toluene as the solvent. The toluene solvent and acetone precipitant shall be determined to be free of interfering compounds.

9.3.4 The rubber which was dissolved in the toluene shall be precipitated with acetone as before, and the supernatant liquid decanted from the precipitated polymer. The liquid shall be analyzed by gas chromatography and the rubber phase dried in a steam-oven to determine the final polymer weight.

9.3.5 The ratios of the areas of the hexane peaks and of the heptane internal standard peak shall be calculated for each of the six samples in the two analysis cycles outlined above. The calculation of the total hexane to heptane (R1) shall be determined for the two analysis cycles of the sample set. The ratio of the values of R1 from the second analysis cycle to the first cycle shall be determined to give a second ratio (R2).

10.0 Calibration and Standardization

The procedure for preparing a Quality Control sample with the internal standard in it is outlined in section 7.6 of this method.

10.1 The relative FID response factors for n-heptane, the internal standard, versus the various hexane isomers and ENB are relatively constant and should seldom need to be altered. However Baseline construction is a most critical factor in the production of good data. For this reason, close attention should be paid to peak integration. Procedures for handling peak integration will depend upon the data system used.

10.2 If recalibration of the analysis is needed, make up a calibration blend of the internal standard and the analytes as detailed below and analyze it using the analytical method used for the samples.

10.2.1 Weigh 5 g heptane into a tared scintillation vial to five places.

10.2.2 Add 0.2 ml ENB to the vial and reweigh.

10.2.3 Add 0.5 ml hexane to the vial and reweigh.

10.2.4 Cap, and shake vigorously to mix.

10.2.5 Calculate the weights of ENB and of hexane added and divide their weights by the weight of the n-heptane added. The result is the known of given value for the calibration.

10.2.6 Add 0.4 ml of this mixture to a mixture of 100 ml toluene and 100 ml of acetone. Cap and shake vigorously to mix.

10.2.7 Analyze the sample.

10.2.8 Divide the ENB area and the total areas of the hexane peaks by the n-heptane area. This result is the "found" value for the calibration.

10.2.9 Divide the appropriate "known" value from 10.2.5 by the found value from 10.2.8. The result is the response factor for the analyte in question. Previous work has shown that the standard deviation of the calibration method is about 1% relative.

11.0 Procedure

11.1 SAMPLE PREPARATION

11.1.1 Tare an 8oz sample bottle—Tag attached, cap off, record weight and sample ID on tag in pencil.

11.1.2 Place crumb sample in bottle: RLA–1: 20g; RLA–3: 10g—(gives a dry wt of ~10g); (gives a dry wt of ~5.5g).

11.1.3 Dispense 100ml of PDS into each bottle. SAMPLE SHOULD BE PLACED INTO SOLUTION ASAP TO AVOID HEXANE LOSS—Using "Dispensette" pipettor. *Before dispensing, "purge" the dispensette (25% of its volume) into a waste bottle to eliminate any voids.*

11.1.4 Tightly cap bottles and load samples into shaker.

11.1.5 Insure that "ON–OFF" switch on the shaker itself is "ON."

11.1.6 Locate shaker timer. Insure that toggle switch atop timer control box is in the middle ("off") position. If display reads "04:00" (4 hours), move toggle switch to the left position: Shaker should begin operating.

11.1.7 After shaker stops, add 100 ml acetone to each sample to precipitate polymer. Shake minimum of 5 minutes on shaker—Vistalon sample may not have fully dissolved; nevertheless, for purposes of consistency, 4 hours is the agreed-upon dissolving time.

11.1.8 Using a 5-ml glass Luer-lock syringe and Acrodisc filter, filter some of the supernatant liquid into an autosampler vial; crimp the vial and load it into the GC autosampler for analysis (section 11.2 of this method)—The samples are filtered to prevent polymer buildup in the GC. Clean the syringes in toluene.

11.1.9 Decant remaining supernatant into a hydrocarbon waste sink, being careful not to discard any of the polymer. Place bottle of precipitate into the steam oven and dry for six hours—Some grades of Vistalon produce very small particles in the precipitate, thus making complete decanting impossible without discarding some polymer. In this case, decant as much as possible and put into the oven as is, allowing the oven to drive off remaining supernatant (this practice is avoided for environmental reasons). WARNING: OVEN IS HOT—110 °C (230° F).

11.1.10 Cool, weigh and record final weight of bottle.

11.2 GC ANALYSIS

11.2.1 Initiate the CALS computer channel.

11.2.2 Enter the correct instrument method into the GC's integrator.

11.2.3 Load sample vial(s) into autosampler.

11.2.4 Start the integrator.

11.2.5 When analysis is complete, plot CALS run to check baseline skim.

12.0 Data Analysis and Calculations

12.1 Add the concentrations of the hexane peaks as they appear on the CALS printout. Do not include the benzene peak in the sum.

12.2 Subtract any hexane interferences found in the PDS (see section 7.5.6 of this method); record the result.

12.3 Note the ENB concentration on the CALS printout. Subtract any ENB interference found in the PDS and record this result in a "% ENB by GC" column in a logbook.

12.4 Record the area (from CALS printout) of the heptane internal standard peak in a "C7 area" column in the logbook. This helps track instrument performance over the long term.

12.5 After obtaining the final dry weight of polymer used (section 11.1.10 of this method), record that result in a "dry wt." column of the logbook.

12.6 Divide the %C6 by the dry weight to obtain the total PHR hexane in crumb. Similarly, divide the %ENB by the dry weight to obtain the total PHR ENB in crumb. Note that PHR is an abbreviation for "parts per hundred". Record both the hexane and ENB results in the logbook.

12.7 Correct all results by the recovery efficiency value (R).

13.0 Method Performance

13.1 The method has been shown to provide 100% recovery of the hexane analyte. The method was found to give a 6% relative standard deviation when the same six portions of the same sample were carried through the procedure. Note: These values are examples; each sample type must be tested for sample recovery.

14.0 Pollution Prevention

14.1 Dispose of all hydrocarbon liquids in the appropriate disposal sink system; never pour hydrocarbons down a water sink.

14.2 As discussed in section 11.1.9 of this method, the analyst can minimize venting hydrocarbon vapor to the atmosphere by decanting as much hydrocarbon liquid as possible before oven drying.

15.0 Waste Management

15.1 The Technician conducting the analysis should follow the proper waste management practices for their laboratory location.

16.0 References

16.1 Baton Rouge Chemical Plant Analytical Procedure no. BRCP 1302

16.2 Material Safety Data Sheets (from chemical vendors) for hexane, ENB, toluene, acetone, and heptane

METHOD 310C—DETERMINATION OF RESIDUAL N-HEXANE IN EPDM RUBBER THROUGH GAS CHROMATOGRAPHY

1.0 Scope and Application

1.1 This method describes a procedure for the determination of residual hexane in EPDM wet crumb rubber in the 0.01—2% range by solvent extraction of the hexane followed by gas chromatographic analysis where the hexane is detected by flame ionization and quantified via an internal standard.

1.2 This method may involve hazardous materials operations and equipment. This method does not purport to address all the safety problems associated with it use, if any. It is the responsibility of the user to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2.0 Summary

2.1 Residual hexane contained in wet pieces of EPDM polymer is extracted with MIBK. A known amount of an internal standard (IS) is added to the extract which is subsequently analyzed via gas chromatography where the hexane and IS are separated and detected utilizing a megabore column and flame ionization detection (FID). From the response to the hexane and the IS, the amount of hexane in the EPDM polymer is calculated.

3.0 Definitions

3.1 Hexane—refers to n-hexane

3.2 Heptane—refers to n-heptane.

3.3 MIBK—methyl isobutyl ketone (4 methyl 2—Pentanone)

4.0 Interferences

4.1 Material eluting at or near the hexane and/or the IS will cause erroneous results. Prior to extraction, solvent blanks must be analyzed to confirm the absence of interfering peaks.

5.0 Safety

5.1 Review Material Safety Data Sheets of the chemicals used in this method.

6.0 Equipment and Supplies

6.1 4 oz round glass jar with a wide mouth screw cap lid.
6.2 Vacuum oven.
6.3 50 ml pipettes.
6.4 A gas chromatograph with an auto sampler and a 50 meter, 0.53 ID, methyl silicone column with 5 micron phase thickness.
6.5 Shaker, large enough to hold 10, 4 oz. jars.
6.6 1000 and 4000 ml volumetric flasks.
6.7 Electronic integrator or equivalent data system.
6.8 GC autosampler vials.
6.9 50 uL syringe.

7.0 Reagents and Standards

7.1 Reagent grade Methyl-Iso-Butyl-Ketone (MIBK)
7.2 n-heptane, 99% + purity
7.3 n-hexane, 99% + purity

8.0 Sample Collection

8.1 Trap a sample of the EPDM crumb slurry in the sampling apparatus. Allow the crumb slurry to circulate through the sampling apparatus for 5 minutes; then close off the values at the bottom and top of the sampling apparatus, trapping the crumb slurry. Run cooling water through the water jacket for a minimum of 30 minutes. Expel the cooled crumb slurry into a sample catching basket. If the crumb does not fall by gravity, force it out with demineralized water or nitrogen. Send the crumb slurry to the lab for analysis.

9.0 Quality Control

9.1 The Royalene crumb sample is extracted three times with MIBK containing an internal standard. The hexane from each extraction is added together to obtain a total hexane content. The percent hexane in the first extraction is then calculated and used as the recovery factor for the analysis.
9.2 Follow this test method through section 11.4 of the method. After removing the sample of the first extraction to be run on the gas chromatograph, drain off the remainder of the extraction solvent, retaining the crumb sample in the sample jar. Rinse the crumb with demineralized water to remove any MIBK left on the surface of the crumb. Repeat the extraction procedure with fresh MIBK with internal standard two more times.
9.3 After the third extraction, proceed to section 11.5 of this method and obtain the percent hexane in each extraction. Use the sample weight obtained in section 12.1 of this method to calculate the percent hexane in each of the extracts.
9.4 Add the percent hexane obtained from the three extractions for a total percent hexane in the sample.
9.5 Use the following equations to determine the recovery factor (R):

% Recovery of the first extraction=(% hexane in the first extract/total % hexane)×100

Recovery Factor (R)=(% Hexane Recovered in the first extract)/100

10.0 Calibration

10.1 Preparation of Internal Standard (IS) solution:

Accuracy weigh 30 grams of n-heptane into a 1000 ml volumetric flask. Dilute to the mark with reagent grade MIBK. Label this Solution "A". Pipette 100 mls. of Solution A into a 4 liter volumetric flask. Fill the flask to the mark with reagent MIBK. Label this Solution "B". Solution "B" will have a concentration of 0.75 mg/ml of heptane.

10.2 Preparation of Hexane Standard Solution (HS):

Using a 50 uL syringe, weigh by difference, 20 mg of n-hexane into a 50 ml volumetric flask containing approximately 40 ml of Solution B. Fill the flask to the mark with Solution B and mix well.

10.3 Conditions for GC analysis of standards and samples:

Temperature:
Initial=40 °C
Final=150 °C
Injector=160 °C
Detector=280 °C
Program Rate=5.0 °C/min
Initial Time=5 minutes Final Time=6 minutes
Flow Rate=5.0 ml/min
Sensitivity=detector response must be adjusted to keep the hexane and IS on scale.

10.4 Fill an autosampler vial with the HS, analyze it three times and calculate a Hexane Relative Response Factor (RF) as follows:

$RF=(A_{IS}\times C_{HS}\times P_{HS})/(A_{HS}\times C_{IS}\times P_{IS})$

Where:
A_{IS}=Area of IS peak (Heptane)
A_{HS}=Area of peak (Hexane Standard)
C_{HS}=Mg of Hexane/50 ml HS
C_{IS}=Mg of Heptane/50 ml IS Solution B
P_{IS}=Purity of the IS n-heptane
P_{HS}=Purity of the HS n-hexane

11.0 Procedure

11.1 Weight 10 grams of wet crumb into a tared (W1), wide mouth 4 oz. jar.
11.2 Pipette 50 ml of Solution B into the jar with the wet crumb rubber.
11.3 Screw the cap on tightly and place it on a shaker for 4 hours.
11.4 Remove the sample from the shaker and fill an autosampler vial with the MIBK extract.
11.5 Analyze the sample two times.
11.6 Analyze the HS twice, followed by the samples. Inject the HS twice at the end of each 10 samples or at the end of the run.

12.0 Calculations

12.1 Drain off the remainder of the MIBK extract from the polymer in the 4 oz. jar. Retain all the polymer in the jar. Place the uncovered jar and polymer in a heated vacuum oven until the polymer is dry. Reweigh the jar and polymer (W2) and calculate the dried sample weight of the polymer as follows:

Dried SW=W2—W1 (2)

12.2 Should the polymer be oil extended, pipette 10 ml of the MIBK extract into a tared evaporating dish (W1) and evaporate to dryness on a steam plate.

Reweigh the evaporating dish containing the extracted oil (W2). Calculate the oil content of the polymer as follows:

Gram of oil extracted=5 (W2—W1) (3)

$\%\ Hexane\ in\ polymer=(A_s \times RF \times C_{IS} \times P_{IS})/(A_{IS} \times SW)$ (4)

Where:
A_s=Area of sample hexane sample peak.
A_{IS}=Area of IS peak in sample.
C_{IS}=Concentration of IS in 50 ml.
P_{IS}=Purity of IS.
SW=Weight of dried rubber after extraction. (For oil extended polymer, the amount of oil extracted is added to the dry rubber weight).

% Corrected Hexane=(% Hexane in Polymer)/R (5)

R=Recovery factor determined in section 9 of this method.

13.0 Method Performance

13.1 Performance must be determined (1) for each sample type by following the procedures in section 9 of this method.

14.0 Waste Generation

14.1 Waste generation should be minimized where possible.

15.0 Waste Management

15.1 All waste shall be handled in accordance with Federal and State environmental regulations.

16.0 References

(Reserved)

METHOD 312A—DETERMINATION OF STYRENE IN LATEX STYRENE-BUTADIENE RUBBER, THROUGH GAS CHROMATOGRAPHY

1. Scope and Application

1.1 This method describes a procedure for determining parts per million (ppm) styrene monomer (CAS No. 100–42–5) in aqueous samples, including latex samples and styrene stripper water.

1.2 The sample is separated in a gas chromatograph equipped with a packed column and a flame ionization detector.

2.0 Summary of Method

2.1 This method utilizes a packed column gas chromatograph with a flame ionization detector to determine the concentration of residual styrene in styrene butadiene rubber (SBR) latex samples.

3.0 Definitions

3.1 The definitions are included in the text as needed.

4.0 Interferences

4.1 In order to reduce matrix effects and emulsify the styrene, similar styrene free latex is added to the internal standard. There are no known interferences.

4.2 The operating parameters are selected to obtain resolution necessary to determine styrene monomer concentrations in latex.

5.0 Safety

5.1 It is the responsibility of the user of this procedure to establish appropriate safety and health practices.

6.0 Equipment and Supplies

6.1 Adjustable bottle-top dispenser, set to deliver 3 ml. (for internal standard), Brinkmann Dispensette, or equivalent.

6.2 Pipettor, set to 10 ml., Oxford Macro-set, or equivalent.

6.3 Volumetric flask, 100-ml, with stopper.

6.4 Hewlett Packard Model 5710A dual channel gas chromatograph equipped with flame ionization detector.

6.4.1 11 ft. × ⅛ in. stainless steel column packed with 10% TCEP on 100/120 mesh Chromosorb P, or equivalent.

6.4.2 Perkin Elmer Model 023 strip chart recorder, or equivalent.

6.5 Helium carrier gas, zero grade.

6.6 Liquid syringe, 25-µl.

6.7 Digital MicroVAX 3100 computer with VG Multichrom software, or equivalent data handling system.

6.6 Wire Screens, circular, 70-mm, 80-mesh diamond weave.

6.7 DEHA—(N,N-Diethyl hydroxylamine), 97+% purity, CAS No. 3710–84–7

6.8 p-Dioxane, CAS No. 123–91–1

7.0 Reagents and Standards

7.1 Internal standard preparation.

7.1.1 Pipette 5 ml p-dioxane into a 1000-ml volumetric flask and fill to the mark with distilled water and mix thoroughly.

7.2 Calibration solution preparation.

7.2.1 Pipette 10 ml styrene-free latex (eg: NBR latex) into a 100-ml volumetric flask.

7.2.2 Add 3 ml internal standard (section 7.1.1 of this method).

7.2.3 Weigh exactly 10µl fresh styrene and record the weight.

7.2.4 Inject the styrene into the flask and mix well.

7.2.5 Add 2 drops of DEHA, fill to the mark with water and mix well again.

7.2.6 Calculate concentration of the calibration solution as follows:

mg/l styrene=(mg styrene added)/0.1 L

8.0 Sample Collection, Preservation, and Storage

8.1 A representative SBR emulsion sample should be caught in a clean, dry 6-oz. teflon lined glass container. Close it properly to assure no sample leakage.

8.2 The container should be labeled with sample identification, date and time.

9.0 Quality Control

9.1 The instrument is calibrated by injecting calibration solution (Section 7.2 of this method) five times.

9.2 The retention time for components of interest and relative response of monomer to the internal standard is determined.

9.3 Recovery efficiency must be determined once for each sample type and whenever modifications are made to the method.

9.3.1 A set of six latex samples shall be collected. Two samples shall be prepared for analysis from each sample. Each sample shall be analyzed in duplicate.

9.3.2 The second set of six latex samples shall be analyzed in duplicate before spiking each sample with approximately 1000 ppm styrene. The spiked samples shall be analyzed in duplicate.

9.3.3 For each hydrocarbon, calculate the average recovery efficiency (R) using the following equations:

where:

$R=\Sigma(R_n)/6$

where:

$R_n=(c_{ns}-c_{nu})/S_n$

n=sample number

c_{ns}=concentration of compound measured in spiked sample number n.

c_{nu}= concentration of compound measured in unspiked sample number n.

S_n=theoretical concentration of compound spiked into sample n.

9.3.4 A value of R between 0.70 and 1.30 is acceptable.

9.3.5 R is used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type.

10.0 Calibration and Instrument Settings

10.1 Injection port temperature, 250°C.

10.2 Oven temperature, 110°C, isothermal.

10.3 Carrier gas flow, 25 cc/min.

10.4 Detector temperature, 250°C.

10.5 Range, 1X.

11.0 Procedure

11.1 Turn on recorder and adjust baseline to zero.

11.2 Prepare sample.

11.2.1 For latex samples, add 3 ml Internal Standard (section 7.1 of this method) to a 100-ml volumetric flask. Pipet 10 ml sample into the flask using the Oxford pipettor, dilute to the 100-ml mark with water, and shake well.

11.2.2 For water samples, add 3 ml Internal Standard (section 7.1 of this method) to a 100-ml volumetric flask and fill to the mark with sample. Shake well.

11.3 Flush syringe with sample.

11.4 Carefully inject 2 µl of sample into the gas chromatograph column injection port and press the start button.

11.5 When the run is complete the computer will print a report of the analysis.

12.0 Data Analysis and Calculation

12.1 For samples that are prepared as in section 11.2.1 of this method:

ppm styrene = A x D

Where:

A = "ppm" readout from computer

D = dilution factor (10 for latex samples)

12.2 For samples that are prepared as in section 11.2.2 of this method,

0.2 ppm styrene is read directly from the computer.

13.0 Method Performance

13.1 This test has a standard deviation (1) of 3.3 ppm at 100 ppm styrene. The average Spike Recovery from six samples at 1000 ppm Styrene was 96.7 percent. The test method was validated using 926 ppm styrene standard. Six analysis of the same standard provided average 97.7 percent recovery. Note: These are example recoveries and do not replace quality assurance procedures in this method.

14.0 Pollution Prevention

14.1 Waste generation should be minimized where possible. Sample size should be an amount necessary to adequately run the analysis.

15.0 Waste Management

15.1 All waste shall be handled in accordance with Federal and State environmental regulations.

16.0 References and Publications

16.1 40 CFR 63 Appendix A—Method 301 Test Methods Field Validation of Pollutant Measurement

16.2 DSM Copolymer Test Method T–3060, dated October 19, 1995, entitled: *Determination of Residual Styrene in Latex*, Leonard, C.D., Vora, N.M. *et al*

METHOD 312B—DETERMINATION OF RESIDUAL STYRENE IN STYRENE-BUTADIENE (SBR) RUBBER LATEX BY CAPILLARY GAS CHROMATOGRAPHY

1.0 Scope

1.1 This method is applicable to SBR latex solutions.

1.2 This method quantitatively determines residual styrene concentrations in SBR latex solutions at levels from 80 to 1200 ppm.

2.0 Principle of Method

2.1 A weighed sample of a latex solution is coagulated with an ethyl alcohol (EtOH) solution containing a specific amount of alpha-methyl styrene (AMS) as the internal standard. The extract of this coagulation is then injected into a gas chromatograph and separated into individual components. Quantification is achieved by the method of internal standardization.

3.0 Definitions

3.1 The definitions are included in the text as needed.

4.0 Interferences

(Reserved)

5.0 Safety

5.1 This method may involve hazardous materials, operations, and equipment. This method does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

6.0 Equipment and Supplies

6.1 Analytical balance, 160 g capacity, and 0.1 mg resolution

6.2 Bottles, 2-oz capacity, with poly-cap screw lids

6.3 Mechanical shaker

6.4 Syringe, 10-ul capacity

6.5 Gas chromatograph; Hewlett Packard model 5890A, or equivalent, configured with FID with a megabore jet, splitless injector packed with silanized glass wool.

6.5.1 Establish the following gas chromatographic conditions, and allow the system to thoroughly equilibrate before use.

Injection technique = Splitless
Injector temperature = 225 deg C
Oven temperature = 70 deg C (isothermal)
Detector: temperature = 300 deg C
range = 5
attenuation = 0
Carrier gas: helium = 47 ml/min
Detector gases: hydrogen = 30 ml/min
air = 270 ml/min
make-up = 0 ml/min
Analysis time: = 3.2 min at the specified carrier gas flow rate and column temperature.

6.6 Gas chromatographic column, DB–1, 30 M X 0.53 ID, or equivalent, with a 1.5 micron film thickness.

6.7 Data collection system, Perkin-Elmer/Nelson Series Turbochrom 4 Series 900 Interface, or equivalent.

6.8 Pipet, automatic dispensing, 50-ml capacity, and 2-liter reservoir.

6.9 Flasks, volumetric, class A, 100-ml and 1000-ml capacity.

6.10 Pipet, volumetric delivery, 10-ml capacity, class A.

7.0 Chemicals and Reagents

CHEMICALS:

7.1 Styrene, C8H8, 99+%, CAS 100–42–5

7.2 Alpha methyl styrene, C9H10, 99%, CAS 98–83–9

7.3 Ethyl alcohol, C2H5OH, denatured formula 2B, CAS 64–17–5

REAGENTS:

7.4 Internal Standard Stock Solution: 5.0 mg/ml AMS in ethyl alcohol.

7.4.1 Into a 100-ml volumetric flask, weigh 0.50 g of AMS to the nearest 0.1 mg.

7.4.2 Dilute to the mark with ethyl alcohol. This solution will contain 5.0 mg/ml AMS in ethyl alcohol and will be labeled the AMS STOCK SOLUTION.

7.5 Internal Standard Working Solution: 2500 ug/50 ml of AMS in ethyl alcohol.

7.5.1 Using a 10 ml volumetric pipet, quantitatively transfer 10.0 ml of the AMS STOCK SOLUTION into a 1000-ml volumetric flask.

7.5.2 Dilute to the mark with ethyl alcohol. This solution will contain 2500 ug/50ml of AMS in ethyl alcohol and will be labeled the AMS WORKING SOLUTION.

7.5.3 Transfer the AMS WORKING SOLUTION to the automatic dispensing pipet reservoir.

7.6 Styrene Stock Solution: 5.0 mg/ml styrene in ethyl alcohol.

7.6.1 Into a 100-ml volumetric flask, weigh 0.50 g of styrene to the nearest 0.1 mg.

7.6.2 Dilute to the mark with ethyl alcohol. This solution will contain 5.0 mg/ml styrene in ethyl alcohol and will be labeled the STYRENE STOCK SOLUTION.

7.7 Styrene Working Solution: 5000 ug/10 ml of styrene in ethyl alcohol.

7.7.1 Using a 10-ml volumetric pipet, quantitatively transfer 10.0 ml of the STYRENE STOCK SOLUTION into a 100-ml volumetric flask.

7.7.2 Dilute to the mark with ethyl alcohol. This solution will contain 5000 ug/10 ml of styrene in ethyl alcohol and will be labeled the STYRENE WORKING SOLUTION.

8.0 Sample Collection, Preservation and Storage

8.1 Label a 2-oz sample poly-cap lid with the identity, date and time of the sample to be obtained.

8.2 At the sample location, open sample valve for at least 15 seconds to ensure that the sampling pipe has been properly flushed with fresh sample.

8.3 Fill the sample jar to the top (no headspace) with sample, then cap it tightly.

8.4 Deliver sample to the Laboratory for testing within one hour of sampling.

8.5 Laboratory testing will be done within two hours of the sampling time.

8.6 No special storage conditions are required unless the storage time

exceeds 2 hours in which case refrigeration of the sample is recommended.

9.0 Quality Control

9.1 For each sample type, 12 samples of SBR latex shall be obtained from the process for the recovery study. Half the vials and caps shall be tared, labeled "spiked", and numbered 1 through 6. The other vials are labeled "unspiked" and need not be tared, but are also numbered 1 through 6.

9.2 The six vials labeled "spiked" shall be spiked with an amount of styrene to approximate 50% of the solution's expected residual styrene level.

9.3 The spiked samples shall be shaken for several hours and allowed to cool to room temperature before analysis.

9.4 The six samples of unspiked solution shall be coagulated and a mean styrene value shall be determined, along with the standard deviation, and the percent relative standard deviation.

9.5 The six samples of the spiked solution shall be coagulated and the results of the analyses shall be determined using the following equations:

$M_t = M_s - M_u$

$R = M_t / S$

where:

M_u=Mean value of styrene in the unspiked sample

M_s=Measured amount of styrene in the spiked sample

M_t=Measured amount of the spiked compound

S=Amount of styrene added to the spiked sample

R=Fraction of spiked styrene recovered

9.6 A value of R between 0.70 and 1.30 is acceptable.

9.7 R is used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type.

10.0 Calibration

10.1 Using a 10-ml volumetric pipet, quantitatively transfer 10.0 ml of the STYRENE WORKING SOLUTION (section 7.7.2 of this method) into a 2-oz bottle.

10.2 Using the AMS WORKING SOLUTION equipped with the automatic dispensing pipet (section 7.5.3 of this method), transfer 50.0 ml of the internal standard solution into the 2-oz bottle.

10.3 Cap the 2-oz bottle and swirl. This is the calibration standard, which contains 5000 µg of styrene and 2500 µg of AMS.

10.4 Using the conditions prescribed (section 6.5 of this method), chromatograph 1 µl of the calibration standard.

10.5 Obtain the peak areas and calculate the relative response factor as described in the calculations section (section 12.1 of this method).

11.0 Procedure

11.1 Into a tared 2-oz bottle, weigh 10.0 g of latex to the nearest 0.1 g.

11.2 Using the AMS WORKING SOLUTION equipped with the automatic dispensing pipet (section 7.5.3 of this method), transfer 50.0 ml of the internal standard solution into the 2-oz bottle.

11.3 Cap the bottle. Using a mechanical shaker, shake the bottle for at least one minute or until coagulation of the latex is complete as indicated by a clear solvent.

11.4 Using the conditions prescribed (section 6.5 of this method), chromatograph 1 ul of the liquor.

11.5 Obtain the peak areas and calculate the concentration of styrene in the latex as described in the calculations section (Section 12.2 of this method).

12.0 Calculations

12.1 Calibration:

$RF = (W_s \times A_{is}) / (W_{is} \times A_s)$

where:

RF=the relative response factor for styrene

W_s=the weight (ug) of styrene

A_{is}=the area of AMS

W_{is}=the weight (ug) of AMS

A_s=the area of styrene

12.2 Procedure:

$ppm_{styrene} = (A_x RF \times W_{is}) / (A_{is} \times W_s)$

where:

$ppm_{styrene}$=parts per million of styrene in the latex

A_x=the area of styrene

RF=the response factor for styrene

W_{is}=the weight (ug) of AMS

A_{is}=the area of AMS

W_s=the weight (g) of the latex sample

12.3 Correct for recovery (R) as determined by section 9.0 of this method.

13.0 Precision

13.1 Precision for the method was determined at the 80, 144, 590, and 1160 ppm levels. The standard deviations were 0.8, 1.5, 5 and 9 ppm respectively. The percent relative standard deviations (%RSD) were 1% or less at all levels. Five degrees of freedom were used for all precision data except at the 80 ppm level, where nine degrees of freedom were used. Note: These are example results and do not replace quality assurance procedures in this method.

14.0 Pollution Prevention

14.1 Waste generation should be minimized where possible. Sample size should be an amount necessary to adequately run the analysis.

15.0 Waste Management

15.1 Discard liquid chemical waste into the chemical waste drum.

15.2 Discard latex sample waste into the latex waste drum.

15.3 Discard polymer waste into the polymer waste container.

16.0 References

16.1 This method is based on Goodyear Chemical Division Test Method E–889.

METHOD 312C—DETERMINATION OF RESIDUAL STYRENE IN SBR LATEX PRODUCED BY EMULSION POLYMERIZATION

1.0 Scope

1.1 This method is applicable for determining the amount of residual styrene in SBR latex as produced in the emulsion polymerization process.

2.0 Principle of Method

2.1 A weighed sample of latex is coagulated in 2-propanol which contains alpha-methyl styrene as an Internal Standard. The extract from the coagulation will contain the alpha-methyl styrene as the Internal Standard and the residual styrene from the latex. The extract is analyzed by a Gas Chromatograph. Percent styrene is calculated by relating the area of the styrene peak to the area of the Internal Standard peak of known concentration.

3.0 Definitions

3.1 The definitions are included in the text as needed.

4.0 Interferences

(Reserved)

5.0 Safety

5.1 When using solvents, avoid contact with skin and eyes. Wear hand and eye protection. Wash thoroughly after use.

5.2 Avoid overexposure to solvent vapors. Handle only in well ventilated areas.

6.0 Equipment and Supplies

6.1 *Gas Chromatograph*—Hewlett Packard 5890, Series II with flame ionization detector, or equivalent.

Column—HP 19095F–123, 30m × 0.53mm, or equivalent. Substrate HP FFAP (cross-linked) film thickness 1 micrometer. Glass injector port liners with silanized glass wool plug.

Integrator—HP 3396, Series II, or equivalent.

6.2 Wrist action shaker

6.3 Automatic dispenser

6.4 Automatic pipet, calibrated to deliver 5.0 ±0.01 grams of latex

6.5 Four-ounce wide-mouth bottles with foil lined lids

6.6 Crimp cap vials, 2ml, teflon lined septa

6.7 Disposable pipets

6.8 Qualitative filter paper

6.9 Cap crimper

6.10 Analytical balance

6.11 10ml pipette

6.12 Two-inch funnel

7.0 Reagents and Standards

7.1 2-Propanol (HP2C grade)

7.2 Alpha methyl styrene (99+% purity)

7.3 Styrene (99+% purity)

7.4 Zero air

7.5 Hydrogen (chromatographic grade)

7.6 Helium

7.7 Internal Standard preparation

7.7.1 Weigh 5.000–5.005 grams of alpha-methyl styrene into a 100ml volumetric flask and bring to mark with 2-propanol to make Stock "A" Solution.

Note: Shelf life—6 months.

7.7.2 Pipette 10ml of Stock "A" Solution into a 100ml volumetric flask and bring to mark with 2-propanol to prepare Stock "B" Solution.

7.7.3 Pipette 10ml of the Stock "B" solution to a 1000ml volumetric flask and bring to the mark with 2-propanol. This will be the Internal Standard Solution (0.00005 grams/ml).

7.8 Certification of Internal Standard—Each batch of Stock "B" Solution will be certified to confirm concentration.

7.8.1 Prepare a Standard Styrene Control Solution in 2-propanol by the following method:

7.8.1.1 Weigh 5.000 ±.005g of styrene to a 100ml volumetric flask and fill to mark with 2-propanol to make Styrene Stock "A" Solution.

7.8.1.2 Pipette 10ml of Styrene Stock "A" Solution to a 100ml volumetric flask and fill to mark with 2-propanol to make Styrene Stock "B" Solution

7.8.1.3 Pipette 10ml of Styrene Stock "B" soluion to a 250ml volumtric flask and fill to mark wtih 2-propanol to make the Certification Solution.

7.8.2 Certify Alpha-Methyl Styrene Stock "B" Solution.

7.8.2.1 Pipette 5ml of the Certification Solution and 25ml of the Alpha Methyl Styrene Internal Standard Solution to a 4-oz. bottle, cap and shake well.

7.8.2.2 Analyze the resulting mixture by GC using the residual styrene method. (11.4–11.6 of this method)

7.8.2.3 Calculate the weight of alpha methyl styrene present in the 25ml aliquat of the new Alpha Methyl Styrene Standard by the following equation:

$W_x = F_x \times W_{is} (A_x / A_{is})$

Where

A_x = Peak area of alpha methyl styrene

A_{is} = Peak area of styrene

W_x = Weight of alpha methyl styrene

W_{is} = Weight of styrene (.00100)

F_x = Analyzed response factor = 1

The Alpha Methyl Styrene Stock Solution used to prepare the Internal Standard Solution may be considered certified if the weight of alpha methyl styrene analyzed by this method is within the range of .00113g to .00123g.

8.0 Sampling

8.1 Collect a latex sample in a capped container. Cap the bottle and identify the sample as to location and time.

8.2 Deliver samples to laboratory for testing within one hour.

8.3 Laboratory will test within two hours.

8.4 No special storage conditions are required.

9.0 Quality Control

9.1 The laboratory is required to operate a formal quality control program. This consists of an initial demonstration of the capability of the method as well as ongoing analysis of standards, blanks, and spiked samples to demonstrate continued performance.

9.1.1 When the method is first set up, a calibration is run and the recovery efficiency for each type of sample must be determined.

9.1.2 If new types of samples are being analyzed, then recovery efficiency for each new type of sample must be determined. New type includes any change, such as polymer type, physical form or a significant change in the composition of the matrix.

9.2 Recovery efficiency must be determined once for each sample type and whenever modifications are made to the method.

9.2.1 In determining the recovery efficiency, the quadruplet sampling system shall be used. Six sets of samples (for a total of 24) shall be taken. In each quadriplet set, half of the samples (two out of the four) shall be spiked with styrene.

9.2.2 Prepare the samples as described in section 8 of this method. To the vials labeled "spiked", add a known amount of styrene that is expected to be present in the latex.

9.2.3 Run the spiked and unspiked samples in the normal manner. Record the concentrations of styrene reported for each pair of spiked and unspiked samples with the same vial number.

9.2.4 For each hydrocarbon, calculate the average recovery efficiency (R) using the following equation:

$R = \Sigma R_n / 12$

Where: n = sample number

$R_n = (M_s - M_u)/S$

M_s = total mass of compound (styrene) measured in spiked sample (μg)

M_u = total mass of compound (styrene) measured in unspiked sample (μg)

S = theoretical mass of compound (styrene) spiked into sample (μg)

R = fraction of spiked compound (styrene) recovered

9.2.5 A different R value should be obtained for each sample type. A value of R between 0.70 and 1.30 is acceptable.

9.2.6 R is used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type.

10.0 Calibration

A styrene control sample will be tested weekly to confirm the FID response and calibration.

10.1 Using the Styrene Certification Solution prepared in 7.8.1, perform test analysis as described in 7.8.2 using the equation in 7.8.2.3 to calculate results.

10.2 Calculate the weight of styrene in the styrene control sample using the following equation:

$W_{sty} = (F_x \times A_{sty} \times W_{is}) A_{is}$

The instrument can be considered calibrated if the weight of the styrene analyzed is within range of 0.00097—0.00103gms.

11.0 Procedure

11.1 Using an auto pipet, add 25ml of Internal Standard Solution to a 4 oz. wide-mouth bottle.

11.2 Using a calibrated auto pipet, add 5.0 ± 0.01g latex to the bottle containing the 25ml of Internal Standard Solution.

11.3 Cap the bottle and place on the wrist action shaker. Shake the sample for a minimum of five minutes using the timer on the shaker. Remove from shaker.

11.4 Using a disposable pipet, fill the 2ml sample vial with the clear alcohol extract. (If the extract is not clear, it should be filtered using a funnel and filter paper.) Cap and seal the vial.

11.5 Place the sample in the autosampler tray and start the GC and Integrator. The sample will be injected into the GC by the auto-injector, and the Integrator will print the results.

11.6 *Gas Chromatograph Conditions*

Oven Temp—70 °C
Injector Temp—225 °C
Detector Temp—275 °C
Helium Pressure—500 KPA
Column Head Pressure—70 KPA
Makeup Gas—30 ml/min
Column—HP 19095F—123; 30m x 0.53mm Substrate: HP—FFAP (cross-linked) 1 micrometer film thickness

12.0 Calculations

12.1 The integrator is programmed to do the following calculation at the end of the analysis:

$$\%ResidualStyrene=(A_x XW_{is})/(A_{is}XW_x)XF_xX100$$

Where:
A_x=Peak area of styrene
A_{is}=Peak area of internal standard
W_x=Weight of sample = 5g
W_{is}=Weight of internal std. = 0.00125g
F_x=Analyzed response factor = 1.0

12.2 The response factor is determined by analyzing a solution of 0.02g of styrene and 0.02g of alpha methyl styrene in 100ml of 2-propanol. Calculate the factor by the following equation:

$$F_x=(W_xxA_{is})/(W_{is}xA_x)$$

Where:
W_x=Weight of styrene
A_x=Peak area of styrene
W_{is}=Weight of alpha methyl styrene
A_{is}=Peak area of alpha methyl styrene

13.0 Method Performance

13.1 Performance must be determined for each sample type by following the procedures in section 9 of this method.

14.0 Waste Generation

14.1 Waste generation should be minimized where possible.

15.0 Waste Management

15.1 All waste shall be handled in accordance with Federal and State environmental regulations.

16.0 References
(Reserved)

METHOD 313A—DETERMINATION OF RESIDUAL HYDROCARBONS IN RUBBER CRUMB

1.0 Scope and Application

1.1 This method determines residual toluene and styrene in stripper crumb of the of the following types of rubber: polybutadiene (PBR) and styrene/butadiene rubber (SBR), both derived from solution polymerization processes that utilize toluene as the polymerization solvent.

1.2 The method is applicable to a wide range of concentrations of toluene and styrene provided that calibration standards cover the desired range. It is applicable at least over the range of 0.01 to 10.0 % residual toluene and from 0.1 to 3.0 % residual styrene. It is probably applicable over a wider range, but this must be verified prior to use.

1.3 The method may also be applicable to other process samples as long as they are of a similar composition to stripper crumb. See section 3.1 of this method for a description of stripper crumb.

2.0 Summary of Method

2.1 The wet crumb is placed in a sealed vial and run on a headspace sampler which heats the vial to a specified temperature for a specific time and then injects a known volume of vapor into a capillary GC. The concentration of each component in the vapor is proportional to the level of that component in the crumb sample and does not depend on water content of the crumb.

2.2 Identification of each component is performed by comparing the retention times to those of known standards.

2.3 Results are calculated by the external standard method since injections are all performed in an identical manner. The response for each component is compared with that obtained from dosed samples of crumb.

2.4 Measured results of each compound are corrected by dividing each by the average recovery efficiency determined for the same compound in the same sample type.

3.0 Definitions

3.1 Stripper crumb refers to pieces of rubber resulting from the steam stripping of a toluene solution of the same polymer in a water slurry. The primary component of this will be polymer with lesser amounts of entrained water and residual toluene and other hydrocarbons. The amounts of hydrocarbons present must be such that the crumb is a solid material, generally less that 10 % of the dry rubber weight.

4.0 Interferences

4.1 Contamination is not normally a problem since samples are sealed into vials immediately on sampling.

4.2 Cross contamination in the headspace sampler should not be a problem if the correct sampler settings are used. This should be verified by running a blank sample immediately following a normal or high sample. Settings may be modified if necessary if this proves to be a problem, or a blank sample may be inserted between samples.

4.3 Interferences may occur if volatile hydrocarbons are present which have retention times close to that of the components of interest. Since the solvent makeup of the processes involved are normally fairly well defined this should not be a problem. If it is found to be the case, switching to a different chromatographic column will probably resolve the situation.

5.0 Safety

5.1 The chemicals specified in this method should all be handled according to standard laboratory practices as well as any special precautions that may be listed in the MSDS for that compound.

5.2 Sampling of strippers or other process streams may involve high pressures and temperatures or may have the potential for exposure to chemical fumes. Only personnel who have been trained in the specific sampling procedures required for that process should perform this operation. An understanding of the process involved is necessary. Proper personal protective equipment should be worn. Any sampling devices should be inspected prior to use. A detailed sampling procedure which specifies exactly how to obtain the sample must be written and followed.

6.0 Equipment and Supplies

6.1 Hewlett Packard (HP) 7694 Headspace sampler, or equivalent, with the following conditions:
Times (min.): GC cycle time 6.0 , vial equilibration 30.0 , pressurization 0.25 , loop fill 0.25, loop equilibration 0.05 , inject 0.25
Temperatures (deg C): oven 70, loop 80, transfer line 90
Pressurization gas: He @ 16 psi

6.2 HP 5890 Series II capillary gas chromatograph, or equivalent, with the following conditions:

Column: Supelco SPB–1, or equivalent, 15m × .25mm × .25μ film
Carrier: He @ 6 psi
Run time: 4 minutes
Oven: 70 deg C isothermal
Injector: 200 deg C split ratio 50:1
Detector: FID @ 220 deg C

6.3 HP Chemstation consisting of computer, printer and Chemstation software, or an equivalent chromatographic data system.

6.4 20 ml headspace vials with caps and septa.

6.5 Headspace vial crimper.

6.6 Microliter pipetting syringes.

6.7 Drying oven at 100 deg C vented into cold trap or other means of trapping hydrocarbons released.

6.8 Laboratory shaker or tumbler suitable for the headspace vials.

6.9 Personal protective equipment required for sampling the process such as rubber gloves and face and eye protection.

7.0 Reagents and Standards

7.1 Toluene, 99.9+% purity, HPLC grade.

7.2 Styrene, 99.9+% purity, HPLC grade.

7.3 Dry rubber of same type as the stripper crumb samples.

8.0 Sample Collection, Preservation and Storage

8.1 Collect a sample of crumb in a manner appropriate for the process equipment being sampled.

8.1.1 If conditions permit, this may be done by passing a stream of the crumb slurry through a strainer, thus separating the crumb from the water. Allow the water to drain freely, do not attempt to squeeze any water from the crumb. Results will not depend on the exact water content of the samples. Immediately place several pieces of crumb directly into a headspace vial. This should be done with rubber gloves to protect the hands from both the heat and from contact with residual hydrocarbons. The vial should be between ¼ and ⅓ full. Results do not depend on sample size as long as there is sufficient sample to reach an equilibrium vapor pressure in the headspace of the vial. Cap and seal the vial. Prepare each sample at least in duplicate. This is to minimize the effect of the variation that naturally occurs in the composition of non homogeneous crumb. The free water is not analyzed by this method and should be disposed of appropriately along with any unused rubber crumb.

8.1.2 Alternatively the process can be sampled in a specially constructed sealed bomb which can then be transported to the laboratory. The bomb is then cooled to ambient temperature by applying a stream of running water. The bomb can then be opened and the crumb separated from the water and the vials filled as described in section 8.1.1 of this method. The bomb may be stored up to 8 hours prior to transferring the crumb into vials.

8.2 The sealed headspace vials may be run immediately or may be stored up to 72 hours prior to running. It is possible that even longer storage times may be acceptable, but this must be verified for the particular type of sample being analyzed (see section 9.2.3 of this method). The main concern here is that some types of rubber eventually may flow, thus compacting the crumb so that the surface area is reduced. This may have some effect on the headspace equilibration.

9.0 Quality Control

9.1 The laboratory is required to operate a formal quality control program. This consists of an initial demonstration of the capability of the method as well as ongoing analysis of standards, blanks and spiked samples to demonstrate continued performance.

9.1.1 When the method is first set up a calibration is run (described in section 10 of this method) and an initial demonstration of method capability is performed (described in section 9.2 of this method). Also recovery efficiency for each type of sample must be determined (see section 9.4 of this method).

9.1.2 It is permissible to modify this method in order to improve separations or make other improvements, provided that all performance specifications are met. Each time a modification to the method is made it is necessary to repeat the calibration (section 10 of this method), the demonstration of method performance (section 9.2 of this method) and the recovery efficiency for each type of sample (section 9.4 of this method).

9.1.3 Ongoing performance should be monitored by running a spiked rubber standard. If this test fails to demonstrate that the analysis is in control, then corrective action must be taken. This method is described in section 9.3 of this method.

9.1.4 If new types of samples are being analyzed then recovery efficiency for each new type of sample must be determined. New type includes any change, such as polymer type, physical form or a significant change in the composition of the matrix.

9.2 Initial demonstration of method capability to establish the accuracy and precision of the method. This is to be run following the calibration described in section 10 of this method.

9.2.1 Prepare a series of identical spiked rubber standards as described in section 9.3 of this method. A sufficient number to determine statistical information on the test should be run. Ten may be a suitable number, depending on the quality control methodology used at the laboratory running the tests. These are run in the same manner as unknown samples (see section 11 of this method).

9.2.2 Determine mean and standard deviation for the results. Use these to determine the capability of the method and to calculate suitable control limits for the ongoing performance check which will utilize the same standards.

9.2.3 Prepare several additional spiked rubber standards and run 2 each day to determine the suitability of storage of the samples for 24, 48 and 72 hours or longer if longer storage times are desired.

9.3 A spiked rubber standard should be run on a regular basis to verify system performance. This would probably be done daily if samples are run daily. This is prepared in the same manner as the calibration standards (section 10.1 of this method), except that only one concentration of toluene and styrene is prepared. Choose concentrations of toluene and styrene that fall in the middle of the range expected in the stripper crumb and then do not change these unless there is a major change in the composition of the unknowns. If it becomes necessary to change the composition of this standard the initial performance demonstration must be repeated with the new standard (section 9.2 of this method).

9.3.1 Each day prepare one spiked rubber standard to be run the following day. The dry rubber may be prepared in bulk and stored for any length of time consistent with the shelf life of the product. The addition of water and hydrocarbons must be performed daily and all the steps described under section 10.1 of this method must be followed.

9.3.2 Run the spiked rubber standard prepared the previous day. Record the results and plot on an appropriate control chart or other means of determining statistical control.

9.3.3 If the results for the standard indicate that the test is out of control then corrective action must be taken. This may include a check on procedures, instrument settings, maintenance or recalibration. Samples may be stored (see section 8.2 of this

method) until compliance is demonstrated.

9.4 Recovery efficiency must be determined once for each sample type and whenever modifications are made to the method.

9.4.1 For each sample type collect 12 samples from the process (section 8.1 of this method). This should be done when the process is operating in a normal manner and residual hydrocarbon levels are in the normal range. Half the vials and caps should be tared, labeled "spiked" and numbered 1 through 6. The other vials are labeled "unspiked" and need not be tared but are also numbered 1 through 6. Immediately on sampling, the vials should be capped to prevent loss of volatiles. Allow all the samples to cool completely to ambient temperature. Reweigh each of the vials labeled "spiked" to determine the weight of wet crumb inside.

9.4.2 The dry weight of rubber present in the wet crumb is estimated by multiplying the weight of wet crumb by the fraction of nonvolatiles typical for the sample. If this is not known, an additional quantity of crumb may be sampled, weighed, dried in an oven and reweighed to determine the fraction of volatiles and nonvolatiles prior to starting this procedure.

9.4.3 To the vials labeled "spiked" add an amount of a mixture of toluene and styrene that is between 40 and 60 % of the amount expected in the crumb. This is done by removing the cap, adding the mixture by syringe, touching the tip of the needle to the sample in order to remove the drop and then immediately recapping the vials. The mixture is not added through the septum, because a punctured septum may leak and vent vapors as the vial is heated. The weights of toluene and styrene added may be calculated from the volumes of the mixture added, its composition and density, or may be determined by the weight of the vials and caps prior to and after addition. The exact dry weight of rubber present and the concentration of residual toluene and styrene are not known at this time so an exact calculation of the concentration of hydrocarbons is not possible until the test is completed.

9.4.4 Place all the vials onto a shaker or tumbler for 24 ± 2 hours. This is essential in order for the hydrocarbons to be evenly distributed and completely absorbed into the rubber. If this is not followed the toluene and styrene will be mostly at the surface of the rubber and high results will be obtained.

9.4.5 Remove the vials from the shaker and tap them so that all the crumb settles to the bottom of the vials. Allow them to stand for 1 hour prior to analysis to allow any liquid to drain fully to the bottom.

9.4.6 Run the spiked and unspiked samples in the normal manner. Record the concentrations of toluene and styrene reported for each pair of spiked and unspiked samples with the same vial number.

9.4.7 Open each of the vials labeled "spiked", remove all the rubber crumb and place it into a tarred drying pan. Place in a 100 deg C oven for two hours, cool and reweigh. Subtract the weight of the tare to give the dry weight of rubber in each spiked vial. Calculate the concentration of toluene and styrene spiked into each vial as percent of dry rubber weight. This will be slightly different for each vial since the weights of dry rubber will be different.

9.4.8 For each hydrocarbon calculate the average recovery efficiency (R) using the following equations:

$$R = \frac{\sum}{1} (P_n)^{6 \text{ (average of the 6 individual } R_n \text{ values)}}$$

Where:

$R_n = (C_{ns} - C_{nu}) / S_n$

Where:

n=vial number

Cns=concentration of compound measured in spiked sample number n.

Cnu=concentration of compound measured in unspiked sample number n.

Sn=theoretical concentration of compound spiked into sample n calculated in step 9.4.7

9.4.9 A different R value should be obtained for each compound (styrene and toluene) and for each sample type.

9.4.10 A value of R between 0.70 and 1.30 is acceptable.

9.4.11 R is used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type (see section 12.2 of this method.)

10.0 Calibration

10.1 Calibration standards are prepared by dosing known amounts of the hydrocarbons of interest into vials containing known amounts of rubber and water.

10.1.1 Cut a sufficient quantity of dry rubber of the same type as will be analyzed into pieces about the same size as that of the crumb. Place these in a single layer on a piece of aluminum foil or other suitable surface and place into a forced air oven at 100° C for four hours. This is to remove any residual hydrocarbons that may be present. This step may be performed in advance.

10.1.2 Into each of a series of vials add 3.0 g of the dry rubber.

10.1.3 Into each vial add 1.0 ml distilled water or an amount that is close to the amount that will be present in the unknowns. The exact amount of water present does not have much effect on the analysis, but it is necessary to have a saturated environment. The water will also aid in the uniform distribution of the spiked hydrocarbons over the surface of the rubber after the vials are placed on the shaker (in step 10.1.5 of this method).

10.1.4 Into each vial add varying amounts of toluene and styrene by microliter syringe and cap the vials immediately to prevent loss. The tip of the needle should be carefully touched to the rubber in order to transfer the last drop to the rubber. Toluene and styrene may first be mixed together in suitable proportions and added together if desired. The weights of toluene and styrene added may be calculated from the volumes of the mixture added, its composition and density, or may be determined by the weight of the vials and caps prior to and after addition. Concentrations of added hydrocarbons are calculated as percent of the dry rubber weight. At least 5 standards should be prepared with the amounts of hydrocarbons added being calculated to cover the entire range possible in the unknowns. Retain two samples with no added hydrocarbons as blanks.

10.1.5 Place all the vials onto a shaker or tumbler for 24 ± 2 hours. This is essential in order for the hydrocarbons to be evenly distributed and completely absorbed into the rubber. If this is not followed the toluene and styrene will be mostly at the surface of the rubber and high results will be obtained.

10.1.6 Remove the vials from the shaker and tap them so that all the crumb settles to the bottom of the vials. Allow them to stand for 1 hour prior to analysis to allow any liquid to drain fully to the bottom.

10.2 Run the standards and blanks in the same manner as described for unknowns (section 11 of this method), starting with a blank, then in order of increasing hydrocarbon content and ending with the other blank.

10.3 Verify that the blanks are sufficiently free from toluene and styrene or any interfering hydrocarbons.

10.3.1 It is possible that trace levels may be present even in dry product. If levels are high enough that they will interfere with the calibration then the drying procedure in section 10.1.1 of this method should be reviewed and modified as needed to ensure that suitable standards can be prepared.

10.3.2 It is possible that the final blank is contaminated by the previous

standard. If this is the case review and modify the sampler parameters as needed to eliminate this problem. If necessary it is possible to run blank samples between regular samples in order to reduce this problem, though it should not be necessary if the sampler is properly set up.

10.4 Enter the amounts of toluene and styrene added to each of the samples (as calculated in section 10.1.4 of this method) into the calibration table and perform a calibration utilizing the external standard method of analysis.

10.5 At low concentrations the calibration should be close to linear. If a wide range of levels are to be determined it may be desirable to apply a nonlinear calibration to get the best fit.

11.0 Procedure

11.1 Place the vials in the tray of the headspace sampler. Enter the starting and ending positions through the console of the sampler. For unknown samples each is run in duplicate to minimize the effect of variations in crumb composition. If excessive variation is noted it may be desirable to run more than two of each sample.

11.2 Make sure the correct method is loaded on the Chemstation. Turn on the gas flows and light the FID flame.

11.3 Start the sequence on the Chemstation. Press the START button on the headspace unit. The samples will be automatically injected after equilibrating for 30 minutes in the oven. As each sample is completed the Chemstation will calculate and print out the results as percent toluene and styrene in the crumb based on the dry weight of rubber.

12.0 Data Analysis and Calculations

12.1 For each set of duplicate samples calculate the average of the measured concentration of toluene and styrene. If more than two replicates of each sample are run calculate the average over all replicates.

12.2 For each sample correct the measured amounts of toluene and styrene using the following equation:

Corrected Result = C_m/R

Where:

C_m = Average measured concentration for that compound.

R = Recovery efficiency for that compound in the same sample type (see section 9.4 of this method)

12.3 Report the recovery efficiency (R) and the corrected results of toluene and styrene for each sample.

13.0 Method Performance

13.1 This method can be very sensitive and reproducible. The actual performance depends largely on the exact nature of the samples being analyzed. Actual performance must be determined by each laboratory for each sample type.

13.2 The main source of variation is the actual variation in the composition of non homogeneous crumb in a stripping system and the small sample sizes employed here. It therefore is the responsibility of each laboratory to determine the optimum number of replicates of each sample required to obtain accurate results.

14.0 Pollution Prevention

14.1 Samples should be kept sealed when possible in order to prevent evaporation of hydrocarbons.

14.2 When drying of samples is required it should be done in an oven which vents into a suitable device that can trap the hydrocarbons released.

14.3 Dispose of samples as described in section 15.

15.0 Waste Management

15.1 Excess stripper crumb and water as well as the contents of the used sample vials should be properly disposed of in accordance with local and federal regulations.

15.2 Preferably this will be accomplished by having a system of returning unused and spent samples to the process.

16.0 References

16.1 "HP 7694 Headspace Sampler—Operating and Service Manual", Hewlett-Packard Company, publication number G1290–90310, June 1993.

METHOD 313B—THE DETERMINATION OF RESIDUAL HYDROCARBON IN SOLUTION POLYMERS BY CAPILLARY GAS CHROMATOGRAPHY

1.0 Scope

1.1 This method is applicable to solution polymerized polybutadiene (PBD).

1.2 This method quantitatively determines n-hexane in wet crumb polymer at levels from 0.08 to 0.15% by weight.

1.3 This method may be extended to the determination of other hydrocarbons in solution produced polymers with proper experimentation and documentation.

2.0 Principle of Method

2.1 A weighed sample of polymer is dissolved in chloroform and the cement is coagulated with an isopropyl alcohol solution containing a specific amount of alpha-methyl styrene (AMS) as the internal standard. The extract of this coagulation is then injected into a gas chromatograph and separated into individual components. Quantification is achieved by the method of internal standardization.

3.0 Definitions

3.1 The definitions are included in the text as needed.

4.0 Interferences

(Reserved)

5.0 Safety

5.1 This method may involve hazardous materials, operations, and equipment. This method does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

6.0 Equipment and Supplies

6.1 Analytical balance, 160 g capacity, 0.1-mg resolution

6.2 Bottles, 2-oz capacity with poly-cap screw lids

6.3 Mechanical shaker

6.4 Syringe, 10–ul capacity

6.5 Syringe, 2.5–ml capacity, with 22 gauge 1.25 inch needle, PP/PE material, disposable

6.6 Gas chromatograph, Hewlett Packard model 5890, or equivalent, configured with FID, split injector packed with silanized glass wool.

6.6.1 Establish the following gas chromatographic conditions, and allow the system to thoroughly equilibrate before use.

6.6.2 Injector parameters:
Injection technique=Split
Injector split flow=86 ml/min
Injector temperature=225 deg C

6.6.3 Oven temperature program:
Initial temperature=40 deg C
Initial time=6 min
Program rate=10 deg C/min
Upper limit temperature=175 deg C
Upper limit interval=18 min

6.6.4 Detector parameters:
Detector temperature=300 deg C
Hydrogen flow=30 ml/min
Air flow=350 ml/min
Nitrogen make up=26 ml/min

6.7 Gas chromatographic columns: SE–54 (5%-phenyl) (1%-vinyl)-methylpolysiloxane, 15 M×0.53 mm ID with a 1.2 micron film thickness, and a Carbowax 20M (polyethylene glycol), 15 M×0.53 mm ID with a 1.2 micron film thickness.

6.7.1 Column assembly: using a 0.53 mm ID butt connector union, join the 15 M×0.53 mm SE–54 column

to the 15 M×0.53 mm Carbowax 20M. The SE–54 column will be inserted into the injector and the Carbowax 20M inserted into the detector after they have been joined.

6.7.2 Column parameters:
Helium flow=2.8 ml/min
Helium headpressure=2 psig

6.8 Centrifuge

6.9 Data collection system, Hewlett-Packard Model 3396, or equivalent

6.10 Pipet, 25–ml capacity, automatic dispensing, and 2 liter reservoir

6.11 Pipet, 2–ml capacity, volumetric delivery, class A

6.12 Flasks, 100 and 1000-ml capacity, volumetric, class A

6.13 Vial, serum, 50-ml capacity, red rubber septa and crimp ring seals

6.14 Sample collection basket fabricated out of wire mesh to allow for drainage

7.0 Chemicals and Reagents:

CHEMICALS:

7.1 alpha-Methyl Styrene, C9H10, 99+% purity, CAS 98–83–9

7.2 n-Hexane, C6H14, 99+% purity, CAS 110–54–3

7.3 Isopropyl alcohol, C3H8O 99.5+% purity, reagent grade, CAS 67–63–0

7.4 Chloroform, CHCl3, 99% min., CAS 67–66–3

REAGENTS:

7.5 Internal Standard Stock Solution: 10 mg/25 ml AMS in isopropyl alcohol.

7.5.1 Into a 25-ml beaker, weigh 0.4 g of AMS to the nearest 0.1 mg.

7.5.2 Quantitatively transfer this AMS into a 1-L volumetric flask. Dilute to the mark with isopropyl alcohol.

7.5.3 Transfer this solution to the automatic dispensing pipet reservoir. This will be labeled the AMS STOCK SOLUTION.

7.6 n-Hexane Stock Solution: 13mg/2ml hexane in isopropyl alcohol.

7.6.1 Into a 100-ml volumetric flask, weigh 0.65 g of n-hexane to the nearest 0.1 mg.

7.6.2 Dilute to the mark with isopropyl alcohol. This solution will be labeled the n-HEXANE STOCK SOLUTION.

8.0 Sample Collection, Preservation and Storage

8.1 A sampling device similar to Figure 1 is used to collect a non-vented crumb rubber sample at a location that is after the stripping operation but before the sample is exposed to the atmosphere.

8.2 The crumb rubber is allowed to cool before opening the sampling device and removing the sample.

8.3 The sampling device is opened and the crumb rubber sample is collected in the sampling basket.

8.4 One pound of crumb rubber sample is placed into a polyethylene bag. The bag is labeled with the time, date and sample location.

8.5 The sample should be delivered to the laboratory for testing within one hour of sampling.

8.6 Laboratory testing will be done within 3 hours of the sampling time.

8.7 No special storage conditions are required unless the storage time exceeds 3 hours in which case refrigeration of the samples is recommended.

9.0 Quality Control

9.1 For each sample type, 12 samples shall be obtained from the process for the recovery study. Half of the vials and caps shall be tared, labeled "spiked", and numbered 1 through 6. The other vials shall be labeled "unspiked" and need not be tared, but are also numbered 1 through 6.

9.2 Determine the % moisture content of the crumb sample. After determining the % moisture content, the correction factor for calculating the dry crumb weight can be determined by using the equation in section 12.2 of this method.

9.3 Run the spiked and unspiked samples in the normal manner. Record the concentrations of the n-hexane content of the mixed hexane reported for each pair of spiked and unspiked samples.

9.4 For the recovery study, each sample of crumb shall be dissolved in chloroform containing a known amount of mixed hexane solvent.

9.5 For each hydrocarbon, calculate the recovery efficiency (R) using the following equations:

$M_c = M_s - M_u$

$R = M_c / S$

Where:

M_u=Measured amount of compound in the unspiked sample

M_s=Measured amount of compound in the spiked sample

M_c=Measured amount of the spiked compound

S=Amount of compound added to the spiked sample

R=Fraction of spiked compound recovered

9.6 Normally a value of R between 0.70 and 1.30 is acceptable.

9.7 R is used to correct all reported results for each compound by dividing the measured results of each compound by the R for that compound for the same sample type.

10.0 Calibration

10.1 Using the AMS STOCK SOLUTION equipped with the automatic dispensing pipet (7.5.3 of this method), transfer 25.0 ml of the internal standard solution into an uncapped 50-ml serum vial.

10.2 Using a 2.0 ml volumetric pipet, quantitatively transfer 2.0 ml of the n-HEXANE STOCK SOLUTION (7.6.2 of this method) into the 50-ml serum vial and cap. This solution will be labeled the CALIBRATION SOLUTION.

10.3 Using the conditions prescribed (6.6 of this method), inject 1 µl of the supernate.

10.4 Obtain the peak areas and calculate the response factor as described in the calculations section (12.1 of this method).

11.0 Procedure

11.1 Determination of Dry Polymer Weight

11.1.1 Remove wet crumb from the polyethylene bag and place on paper towels to absorb excess surface moisture.

11.1.2 Cut small slices or cubes from the center of the crumb sample to improve sample uniformity and further eliminate surface moisture.

11.1.3 A suitable gravimetric measurement should be made on a sample of this wet crumb to determine the correction factor needed to calculate the dry polymer weight.

11.2 Determination of n-Hexane in Wet Crumb

11.2.1 Remove wet crumb from the polyethylene bag and place on paper towels to absorb excess surface moisture.

11.2.2 Cut small slices or cubes from the center of the crumb sample to improve sample uniformity and further eliminate surface moisture.

11.2.3 Into a tared 2 oz bottle, weigh 1.5 g of wet polymer to the nearest 0.1 mg.

11.2.4 Add 25 ml of chloroform to the 2 oz bottle and cap.

11.2.5 Using a mechanical shaker, shake the bottle until the polymer dissolves.

11.2.6 Using the autodispensing pipet, add 25.0 ml of the AMS STOCK SOLUTION (7.5.3 of this method) to the dissolved polymer solution and cap.

11.2.7 Using a mechanical shaker, shake the bottle for 10 minutes to

coagulate the dissolved polymer.

11.2.8 Centrifuge the sample for 3 minutes at 2000 rpm.

11.2.9 Using the conditions prescribed (6.6 of this method), chromatograph 1 µl of the supernate.

11.2.10 Obtain the peak areas and calculate the concentration of the component of interest as described in the calculations (12.2 of this method).

12.0 Calculations

12.1 Calibration:

$RF_x = (W_x \times A_{is}) / (W_{is} \times A_x)$

Where:

RF_x=the relative response factor for n-hexane

W_x=the weight (g) of n-hexane in the GALIBRATION SOLUTION

A_{is}=the area of AMS

W_{is}=the weight (g) of AMS in the CALIBRATION SOLUTION

A_x=the area of n-hexane

12.2 Procedure:

12.2.1 Correction Factor for calculating dry crumb weight.

$F = 1 - (\%\ moisture / 100)$

Where:

F=Correction factor for calculating dry crumb weight

% moisture determined by appropriate method

12.2.2 Moisture adjustment for chromatographic determination.

$W_s = F \times W_c$

Where:

W_s=the weight (g) of the dry polymer corrected for moisture

F=Correction factor for calculating dry crumb weight

W_c=the weight (g) of the wet crumb in section 9.6

12.2.3 Concentration (ppm) of hexane in the wet crumb.

$ppm_x = (A_x \times RF_x \times W_{is} \times 10000) / (A_{is} \times W_s)$

Where:

ppm_x=parts per million of n-hexane in the polymer

A_x=the area of n-hexane

RF_x=the relative response factor for n-hexane

W_{is}=the weight (g) of AMS in the sample solution

A_{is}=the area of AMS

W_s=the weight (g) of the dry polymer corrected for moisture

13.0 Method Performance

13.1 Precision for the method was determined at the 0.08% level.

The standard deviation was 0.01 and the percent relative standard deviation (RSD) was 16.3 % with five degrees of freedom.

14.0 Waste Generation

14.1 Waste generation should be minimized where possible.

15.0 Waste Management

15.1 Discard liquid chemical waste into the chemical waste drum.

15.2 Discard polymer waste into the polymer waste container.

16.0 References

16.1 This method is based on Goodyear Chemical Division Test Method E–964.

[FR Doc. 97–6506 Filed 3–14–97; 8:45 am]
BILLING CODE 6560–50–P

40 CFR Part 79

[FRL–5707–7]

Registration of Fuels and Fuel Additives: Changes in Requirements, and Applicability to Blenders of Deposit Control Gasoline Additives

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This action finalizes several specific changes to existing regulations which require the registration and testing of designated motor vehicle fuels and fuel additives (F/FAs) by their manufacturers. Included are changes to the regulatory definitions of "fuel manufacturer," "additive," and "small business," as well as modifications to grouping rules for biodiesel and synthetic fuels. These changes will streamline F/FA registration and testing burdens and reduce the number of respondents, while maintaining the informational value of the program and its contributions to the public health and environmental goals of the Clean Air Act.

Another previously proposed change, to establish a *de minimis* provision for F/FAs containing certain "atypical" elements, is not addressed in this action. However, in a direct final rule also published elsewhere in this issue of the **Federal Register**, certain deadlines related to testing of atypical F/FAs are extended while EPA determines the most appropriate disposition of the *de minimis* proposal.

EFFECTIVE DATE: This action will be effective on May 16, 1997.

ADDRESSES: Documents related to this final rule have been placed in Public Docket No. A–90–07 located at the U.S. EPA, Air Docket Section, Room M–1500, 401 M Street S.W., Washington, DC 20460. The docket is open for public inspection from 8:00 a.m. until 5:30 p.m., Monday through Friday, except on Federal holidays. A reasonable fee may be charged for photocopying.

FOR FURTHER INFORMATION CONTACT: Jim Caldwell (202–233–9303) or Joseph Fernandes (202–233–9016), U.S. EPA, Office of Mobile Sources, Fuels and Energy Division, Mail Code 6406J, 401 M Street SW, Washington, DC 20460.

SUPPLEMENTARY INFORMATION: Electronic copies of this rule and earlier rulemaking documents related to the F/FA Registration Program are available free of charge on EPA's Technology Transfer Network Bulletin Board System (TTNBBS, phone access 919–541–5742) and on the Internet (http://www.epa.gov/omswww). Parties requiring assistance may call Mr. Fernandes at (202) 233–9016.

I. Regulated Entities

Regulated categories and entities potentially affected by this action include:

Category	Examples of regulated entities
Industry	Manufacturers of gasoline and diesel fuel.
	Manufacturers of additives for gasoline and diesel fuel.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your entity is regulated by this action, you should carefully examine this preamble and the changes to the regulatory text. You should also carefully examine all provisions of the registration program at 40 CFR part 79.

II. Introduction

A. Background

The F/FA registration program is authorized by section 211 of the Clean Air Act (CAA) and codified in 40 CFR part 79. In accordance with CAA sections 211(a) and (b)(1), basic registration requirements applicable to gasoline and diesel fuels and their additives were issued in 1975. These regulations require manufacturers to submit information on their F/FA products, such as the commercial identity, chemical composition, purpose-in-use, and range of concentration, in order to have such products registered by the EPA.

Additional registration requirements, implementing sections 211(b)(2) and (e), were proposed in April 1992 and

compounds, nitrogen oxides, and carbon monoxide. The inventory covers point, area, non-road mobile, on-road mobile, and biogenic sources.

(c) The Knox and Lincoln Counties nonattainment area is classified as moderate. The Lewiston and Auburn nonattainment area is classified as moderate and consists of Androscoggin and Kennebec Counties. The Portland nonattainment area is classified as moderate and consists of Cumberland, Sagadahoc and York Counties. The Hancock and Waldo Counties nonattainment area is classified as attainment.

(d) The Governor's designee for the State of Maine submitted 1993 periodic year emission inventories for the Hancock and Waldo Counties area on May 13, 1996 as a revision to the State Implementation Plan (SIP). The 1993 periodic year emission inventory requirement of section 182(3)(A) of the Clean Air Act, as amended in 1990, has been satisfied for the Hancock and Waldo counties area.

PART 81—[AMENDED]

1. The authority citation for part 81 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

2. In § 81.320 the "Maine-Ozone" table is amended by revising the entry for "Hancock County and Waldo County Area" to read as follows:

§ 81.320 Maine.

* * * * * * *

MAINE—OZONE

Designated area	Designation		Classification	
	Date[1]	Type	Date[1]	Type
Hancock County and Waldo County Area:				
Hancock County	Apr. 29, 1997	Attainment.		
Waldo County	Apr. 29, 1997	Attainment.		

[1] This date is November 15, 1990, unless otherwise noted.

[FR Doc. 97–4963 Filed 2–27–97; 8:45 am]
BILLING CODE 6560–50–P

40 CFR Part 63

[AD–FRL–5695–9] X/CSHAPS,

RIN 2060–AD93

National Emission Standards for Hazardous Air Pollutants for Source Categories: Gasoline Distribution (Stage I)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule: amendments.

SUMMARY: The EPA is promulgating, as a direct final rule, amendments to the "National Emission Standards for Hazardous Air Pollutants for Source Categories: Gasoline Distribution (Stage I)" (the "Gasoline Distribution NESHAP"). These amendments implement a proposed settlement agreement with the American Petroleum Institute noticed for comment on November 15, 1996 regarding improvements in the screening equations for determining applicability of the Gasoline Distribution NESHAP. This action also addresses some clarifications to the NESHAP that were requested by other parties. These clarifications do not change the level of the standards or the intent of the NESHAP promulgated in 1994.

In the proposed rules section of this **Federal Register**, the EPA is proposing a rule that is identical to this direct final rule. If significant, adverse comments are received on the proposed rule by the due date (see **DATES** section below), this direct final rule will be withdrawn and all such comments will be addressed in a subsequent final rule based on the proposed rule. If no significant, adverse comments are timely received on the proposed rule, then the direct final rule remains effective upon publication, and no further action is contemplated on the parallel proposal published today.

DATES: This rule is effective April 14, 1997, unless adverse comments are received by March 31, 1997. If adverse comments are received, the EPA will publish timely notice in the **Federal Register** withdrawing the direct final rule.

Judicial Review. Under section 307(b)(1) of the Clean Air Act (Act), judicial review of 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 these direct final amendments. 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: *Docket.* Docket No. A–92–38, category VIII 1997 Amendments, containing information considered by the EPA in developing the final amendments, is available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, except for Federal holidays, at the EPA's Air and Radiation Docket and Information Center, room M1500, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460; telephone (202) 260–7548. A reasonable fee may be charged for copying. This docket also contains information considered by the EPA in proposing and promulgating the original Gasoline Distribution NESHAP.

FOR FURTHER INFORMATION CONTACT: For information concerning applicability and rule determinations, contact the appropriate EPA regional or Office of Enforcement and Compliance Assurance (OECA) representative:

Region I: Greg Roscoe, Air Programs Enforcement Office Chief, U.S. EPA, Region I, JFK Federal Building (SEA), Boston, MA 02203, Telephone number (617) 565–3221

Region II: Kenneth Eng, Air Compliance Branch Chief, U.S. EPA, Region II, 290 Broadway, New York, NY 10007, Telephone number (212) 637–4080, Fax number (212) 637–3998

Region III: Walter K. Wilkie, U.S. EPA, Region III (3AT12), 841 Chestnut Building, Philadelphia, PA 19107, Telephone number (215) 566–2150, Fax number (215) 566–2114

Region IV: Lee Page, U.S. EPA, Region IV (AR–4), 100 Alabama Street, SW, Atlanta, GA 30303–3104, Telephone number (404) 562–9131, Fax number (404) 562–9095

Region V: Howard Caine (AE–17J), U.S. EPA, Region V, 77 W. Jackson Blvd., Chicago, IL 60604, Telephone number (312) 353–9685, Fax number (312) 353–8289

Region VI: Sandra A. Cotter (6EN–AT), U.S. EPA, Region VI (6PD–R), 1445 Ross Avenue, Dallas, TX 75202–2733, Telephone number (214) 665–7347, Fax number (214) 665–7446

Region VII: Bill Peterson, U.S. EPA, Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, Telephone number (913) 551–7881

Region VIII: Heather Rooney, U.S. EPA, Region VIII (8ART–AP), 999 18th Street, Suite 500, Denver, CO 80202–2405, Telephone number (303) 312–6971, Fax number (303) 312–6826

Region IX: Christine Vineyard, U.S. EPA, Region IX (Air-4), 75 Hawthorne Street, San Francisco, CA 94105, Telephone number (415) 744–1197

Region X: Chris Hall, Office of Air Quality (OAQ–107), U.S. EPA, Region X, 1200 Sixth Avenue, Seattle, WA 98101–9797, Telephone number (206) 553–1949 or (800) 424–4372 x1949

OECA: Julie Tankersley, U.S. EPA, Office of Enforcement and Compliance Assurance (2223A), 401 M Street, SW, Washington, DC 20460, Telephone number (202) 564–7002, Fax number (202) 564–0050.

For information concerning the analyses performed in developing the final rule amendments, contact Mr. Stephen Shedd, Waste and Chemical Processes Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone number (919) 541–5397 or fax number (919) 541–0246.

SUPPLEMENTARY INFORMATION: An electronic version of these final amendments and the proposal preamble is available for download from the EPA Technology Transfer Network (TTN), a network of electronic bulletin boards developed and operated by the Office of Air Quality Planning and Standards. The TTN provides information and technology exchange in various areas of air pollution control. The service is free, except for the cost of a phone call. Dial (919) 541–5742 for data transfer of up to 14,400 bits per second. If more information on the operation of the TTN is needed, contact the systems operator at (919) 541–5384. The TTN is also available on the Internet (access: http://ttnwww.rtpnc.epa.gov).

The information presented in this preamble is organized as follows:

I. Background and Summary of Action
II. Summary of and Rationale for Rule Changes
A. Improvement of Emission Estimation Screening Equations
B. Clarifications
1. Excess Emissions Reports
2. Definition of Bulk Gasoline Terminal
3. Potential to Emit and Federal Enforcement
4. Demonstration of Compliance
5. Oxygenated Gasoline
6. Reporting Emissions Inventories
III. Administrative Requirements
A. Paperwork Reduction Act
B. Executive Order 12866
C. Regulatory Flexibility
D. Unfunded Mandates Reform Act
E. Regulatory Review
F. Submission to Congress and the General Accounting Office

I. Background and Summary of Action

On December 14, 1994 (59 FR 64303), the EPA promulgated the "National Emission Standards for Hazardous Air Pollutants for Source Categories: Gasoline Distribution (Stage I)" (the "Gasoline Distribution NESHAP"). The Gasoline Distribution NESHAP regulates all hazardous air pollutants (HAP) emitted from new and existing bulk gasoline terminals and pipeline breakout stations that are major sources of HAP emissions or are located at sites that are major sources of HAP emissions. The regulated category and entities affected by this action include:

Category	Examples of regulated entities
Industry	Bulk gasoline terminals. Pipeline breakout stations.

This table is not intended to be exhaustive but, rather, provides a guide for readers regarding entities likely to be interested in the revisions to the regulation affected by this action. To determine whether your facility is regulated by this action, you should carefully examine all of the applicability criteria in 40 CFR 63.420. If you have questions regarding the applicability of this action to a particular entity, consult the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

On March 29, 1995, the American Petroleum Institute (API), a trade association having members who own or operate facilities potentially subject to the Gasoline Distribution NESHAP, submitted a Petition for Administrative Stay and for Reconsideration of the Gasoline Distribution NESHAP. After lengthy negotiations with API, the EPA provided notice and requested public comment on a proposed settlement in the **Federal Register** on November 15, 1996 (61 FR 58547). No comments were received on the proposed settlement during the 30-day comment period. The EPA also issued a guidance memorandum (available on the TTN and in the docket), "Guidance Concerning Notifications Required by December 16, 1996 Under Gasoline Distribution NESHAP (40 CFR Part 63, Subpart R)," Bruce Jordan to EPA Regional Offices, November 21, 1996, clarifying the notification requirements for major sources that plan to be an area source by the first substantive compliance date of the rule, December 15, 1997.

As a result of the settlement agreement, the EPA has made modifications to the screening equations in the promulgated rule to make them more useful to facilities attempting to demonstrate that they are area sources, and therefore not subject to the control requirements of the NESHAP. These modifications are discussed in detail in Section II.A of this notice.

In response to requests by other parties, the EPA has also made several clarifications to the final NESHAP, as discussed in Section II.B of this notice, that are not a direct result of the settlement agreement. First, the language of the rule has been revised to clarify that the requirement for an excess emissions report applies to all affected facilities whether or not they have a continuous monitoring system. Second, the definition for *bulk gasoline terminal* has been inserted directly into the rule instead of cross-referencing the definition in the new source performance standards for bulk terminals. Third, the term "federally enforceable" has been replaced with the term "limitations on potential to emit" (PTE) to accommodate any eventual outcome of the EPA's current consideration of PTE issues. Fourth, the requirement that compliance be demonstrated upon the EPA's request has been clarified to include the calculations and assumptions used for the applicability screening equations. Fifth, the EPA has clarified the intended meaning of the term "reformulated or oxygenated gasoline containing methyl tert-butyl ether (MTBE)" as used in defining the parameter "CF" for the applicability screening equations. Sixth, the EPA has clarified that there is no requirement to submit emissions inventory documentation that a facility is not a major source to the Administrator for approval. These emissions inventory documents need only be maintained at the facility and provided upon request.

II. Summary of and Rationale for Rule Changes

A. Improvement of Emission Estimation Screening Equations

The final Gasoline Distribution NESHAP provides two options for facilities to obtain area source status for this rule and thus not be subject to the control requirements of this major source standard. These options are the use of an emission screening equation or performance of an HAP emissions inventory for the facility. The emissions inventory provision is currently implemented outside the provisions of this rule and approved by the permitting authority. The screening equation option allows facilities to use a specified equation in the 1994 final rule to determine their area source status under this rule, as long as they are in compliance with the equation parameters and the recordkeeping and reporting requirements in the rule. These screening equations were developed to provide facilities with a way of determining whether they are a major source without obtaining an area source determination outside the provisions of this rule.

The 1994 final rule contains two screening equations in § 63.420 (one for use by bulk gasoline terminals and one for pipeline breakout stations) to make an estimation of the total HAP emissions from the major gasoline operations at the facility. The equations identify facilities that have the potential to emit (PTE) less than 10 tons per year (tpy) of a single HAP or less than 25 tpy of a combination of HAP, which are the criteria for area sources. Since the equations in the final rule included only gasoline storage and transfer operations, the rule did not allow the equations to be used by facilities that have HAP emissions from other products (such as distillates) or that emit HAP from gasoline operations not accounted for in the equations.

The API, as part of the settlement, requested that the EPA incorporate additional modifications to those changes made to the screening equations before the 1994 promulgation in order to make the equations more useful to facilities attempting to demonstrate that they are area sources within the structure of the rule. The API said that the "other" HAP emissions not considered in the equation are routinely very low, and virtually every bulk gasoline terminal has such HAP emission sources. (The API's comments were directed toward bulk terminals, but they can be applied to also cover pipeline breakout stations.) As a result, they felt that the equation, as promulgated, had very little utility as a means of screening for rule applicability. The EPA reviewed API's supporting information and agreed that the utility of the screening equations needed to be improved.

The EPA and API investigated the development of a factor or expression to account for "other" HAP emission sources at marketing facilities. These other HAP sources consist of activities not already accounted for in the screening equations (i.e., sources other than gasoline storage vessels, gasoline loading racks and cargo tanks, and gasoline vapor leaks from equipment components). HAP emission sources not arising directly from the storage and handling of gasoline occur routinely in this source category, and include distillate fuel; additive tanks, wastewater storage/handling tanks, cleaning/degassing of tanks, subsurface recovery (and other remedial actions), service station tank bottoms storage, sample handling/laboratory activities, and pipeline transmix (interface) storage (i.e., transmix with no gasoline content). Gasoline mixtures in storage tanks, such as transmix containing gasoline, are considered to be "gasoline" in the emission screening equations and also in the standards.

The EPA agreed that the utility of the equations would be further enhanced by including a factor to account for these other HAP emission sources (OE). However, the EPA believed that it was necessary to limit the percentage of total facility HAP emissions that a facility could claim from other emission sources because such sources are most likely not currently permitted or subject to current enforceable limits on emissions, are part of another source category ["Organic Liquids Distribution (Non-Gasoline)"] that has yet to be studied, or are collocated at other facilities (refineries, chemical plants, military bases) and not the primary source of emissions. The API surveyed some of its member companies and concluded that HAP emissions from other sources at gasoline bulk terminals are low, ranging from 0.1 to 3.5 tons/yr. Based on this information, API suggested limiting the OE value to 5 percent of total facility HAP emissions. The EPA agrees with API that limiting the value of OE to 5 percent is appropriate to represent typical facilities in this source category. If a facility finds that OE contributes more than 5 percent of its total HAP emissions, then the facility fits into a combination of source categories and must use the emissions inventory approach to determine HAP emissions and the applicability of the Gasoline Distribution NESHAP.

Since the screening equations were originally and continue to be normalized, or set equal to "1," to determine area source status, OE should thus be divided by either 10 or 25 (the tpy cutoffs defining a major source) to be incorporated into the equation. The API suggested, and the EPA agreed, that OE (in tpy) should be normalized by dividing by 25 (or multiplying by 0.04), since the OE factor will be calculated from a variety of emission sources and these emissions will most likely be composed of a combination of HAP, rather than a single HAP. Additionally, since the allowable value is small (5 percent of total facility HAP emissions), the resulting environmental effect from adding this parameter to an equation designed for screening purposes is expected to be small.

B. Clarifications

1. Excess Emissions Reports

The EPA was requested after promulgation to clarify whether the owner or operator of a pipeline breakout station needs to submit the excess emissions report required under § 63.428(h), even though the facility is not required to install a continuous monitoring system (CMS) in conjunction with the operation of a control device. The commenter also asked whether the information to be included in such a report would be limited to that indicated in § 63.428(h)(4) (late repairs of leaking equipment), and whether the required reporting frequency would be semiannual or quarterly.

The final rule promulgated in 1994, in § 63.428(h) (1) through (4), specifies information that must be included in excess emissions reports submitted by bulk gasoline terminals and pipeline breakout stations. In summary, there are four elements of information required to be included in the excess emissions report as excess emissions. They are:

(1) Exceedances or failures to maintain the monitored operating parameter value of the vapor processor,

(2) Failures to take steps to assure that reloadings of nonvapor-tight gasoline cargo tanks will not occur,

(3) Reloadings of nonvapor-tight gasoline cargo tanks before vapor tightness documentation on those tanks is obtained by the facility, and (4) certain information on equipment leaks for which no repair was attempted within 5 days or completed within 15 days after detection. The section also states that the excess emissions report is to be filed as required under § 63.10(e)(3) of CFR part 63, subpart A (General Provisions). Section

63.10(e)(3)(i) specifies that an "excess emissions and continuous monitoring system performance report and/or a summary report" shall be submitted by each owner or operator of an affected source required to install a CMS. Also, if the CMS data are to be used for compliance and the source experienced excess emissions, quarterly reporting is required. [(§ 63.10(e)(3)(i)(C)].

The EPA believes that this question may have arisen due to the different characteristics of bulk terminals versus pipeline breakout stations, and the different elements of information specified for the reports in § 63.428 and § 63.10. Items (1) through (3) required under § 63.428 are primarily intended to refer to activities at a bulk terminal, where the loading of gasoline cargo tanks will be controlled with a vapor processor combined with a vapor tightness (test and repair) program for the cargo tanks. However, item (1) would also apply to pipeline breakout stations that elect to install a control device and CMS for storage vessel emission control in response to § 63.427(c) and § 60.112b(a)(3). In that case, the report required from sources "required to install a CMS" under § 63.10(e)(3)(i) would be appropriate for pipeline breakout stations. However, for most breakout pipeline breakout stations, only item (4) pertaining to the repair of equipment leaks is applicable.

The EPA's intent in the final rule [as described in the preamble to the 1994 promulgated standards (59 FR 64316)] was to require a semiannual report under § 63.428(g) and § 63.10(e)(3) for bulk terminals and pipeline breakout stations, with this frequency increasing to quarterly in the event that any specified excess emissions occur that are listed in § 63.428(h)(1) through (4). Section 63.10(e)(3)(i)(C) requires the quarterly reporting frequency to be followed until a facility's request to reduce the frequency is approved.

In summary, all bulk terminals and pipeline breakout stations are required to submit this report, and each facility should include the information pertinent to its own situation. The initial reporting frequency is semiannual, but will increase to quarterly if excess emissions are experienced. The EPA reviewed the language of the rule and found that the rule needed revision to clarify this approach. Today's action revises the language of the rule to clarify and make more explicit the EPA's original intent that the requirement for an excess emissions report applies to all affected bulk terminals and pipeline breakout stations with or without a CMS.

2. Definition of Bulk Gasoline Terminal

In the 1994 promulgated rule, several terms were defined in § 63.421 through cross-referencing with definitions already provided in the Act; in 40 CFR 60, subparts A, K, Ka, Kb, and XX; and in 40 CFR 63, subpart A. One term intended to be defined in this way was "bulk gasoline terminal." The definition for bulk gasoline terminal (as included in 40 CFR 60, subpart XX) is as follows:

Bulk gasoline terminal means any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person.

The approach of cross-referencing the definition of one of the affected sources apparently created confusion, possibly because a definition for "pipeline breakout station" was explicitly included in § 63.421. In order to lessen the confusion, and to clearly specify that the Agency intended to apply the same facility definition to bulk terminals as was used in the bulk terminal NSPS, the definition is being inserted directly into subpart R under § 63.421. This change does not create new requirements in the rule, but merely makes more explicit the EPA's intent concerning the definition of a bulk gasoline terminal.

3. Potential To Emit and Federal Enforcement

The EPA is also replacing the term "federally enforceable" as a condition for some of the emission screening equation parameters with the term "limitations on potential to emit" (PTE). The purpose of this change is not to make any substantive decision regarding the PTE issues that are currently under review by the Agency, but rather to recognize that those issues exist and to minimize any confusion regarding how those issues should be dealt with in the interim as they relate to the Gasoline Distribution NESHAP. The EPA believes that using the term "limitations on potential to emit" will eliminate the need for subsequent amendments to this rule as it relates to PTE issues. PTE is defined in § 63.2 Definitions, of the General Provisions of subpart A of part 63, and the term "limitations on potential to emit" has been added to the list of definitions in § 63.421.

As discussed in the February 29, 1996 (61 FR 7718) Gasoline Distribution final rule amendments, the EPA is considering a number of options regarding the requirements on potential to emit limits, in response to the *National Mining* court decision. In addition, the EPA created a 2-year transition period (January 1995 until January 1997) during which the EPA will recognize limitations on PTE, so long as those limits are enforceable as a practical matter. In a policy memorandum (available on the TTN and in the docket), "Extension of January 25, Potential to Emit Transition Policy," John S. Seitz and Robert I. Van Heuvelen to EPA Regional Offices, August 27, 1996, the EPA has extended this transition period for 18 months until July 31, 1998, which is later than the December 15, 1997 control equipment compliance date for all MACT source categories, including the Gasoline Distribution NESHAP. Accordingly, for the critical applicability date[1] for the Gasoline Distribution NESHAP, the EPA wishes to clarify that State-enforceable limits that are enforceable as a practical matter will be treated by the EPA as acceptable limitations on potential to emit. If, as a result of the PTE rulemaking, a decision is made that yields a requirement that PTE limitations must be federally enforceable for some or all sources, an appropriate transition period will be given to allow time for such sources to obtain federally enforceable limits.

4. Demonstration of Compliance

Section § 63.420(f) of the final rule requires an owner or operator to demonstrate compliance with any provision of the rule to which the facility is subject, upon request by the EPA. The rule has been amended to clarify that this demonstration also needs to be made, upon request, for the parameters and assumptions used in performing calculations for the applicability screening equations. This change does not impose any new requirements, but has been made to eliminate any chance for ambiguity in interpreting this rule provision.

[1] Affected sources must either be in full compliance with the major source emission standards in the Gasoline Distribution NESHAP or have been determined to be an area source no later than December 15, 1997. Additionally, each affected source was required to submit an initial notification by December 16, 1996 if it is (1) a major source, (2) a major source on December 16, 1996 and plans to be an area source by December 15, 1997, or (3) using one of the emission screening equations in § 63.420. These latter major sources (no. 3) must include in the notification a non-binding description of and a schedule for the actions that are planned to achieve area source status [§ 63.428(a)].

5. Oxygenated Gasoline

The emission screening equations in § 63.420 of the final rule use the parameter "CF" to account for the higher HAP content of the modified gasolines that are marketed to comply with Federal and State ozone and carbon monoxide control programs. These *reformulated* and *oxygenated* gasolines, in addition to other formula changes, contain significant levels of oxygenate, frequently the HAP methyl tert-butyl ether (MTBE), which supplies oxygen in the combustion process to reduce the amount of carbon monoxide emitted in tailpipe exhaust. The higher CF factor of 1.0 for these gasolines that use MTBE as an oxygenate, versus a CF factor of 0.161 for "normal" gasolines, reflects the fact that the overall HAP content of reformulated and oxygenated gasolines using MTBE as an oxygenate is significantly higher than the HAP content of normal gasoline.

The definitions given in § 63.421 for reformulated and oxygenated gasolines cross-reference existing definitions already codified at 40 CFR 80.2(ee) and 40 CFR 80.2(rr), respectively. The CFR defines *oxygenated gasoline* as "gasoline which contains a measurable amount of oxygenate." However, this definition may not adequately distinguish oxygenated gasoline from normal gasoline. The reason is that, in addition to its use as an oxygenate, MTBE is often used in generally smaller concentrations to boost the octane rating of normal gasoline. Although the MTBE present in these gasolines is generally minimal, the EPA was concerned that even these small amounts could be construed as qualifying a gasoline as "oxygenated." The EPA's intent was not to specify the higher CF factor for normal gasolines with minor amounts of MTBE, but only for those gasolines with a sufficient quantity of MTBE to create a substantially higher HAP content than found in normal gasolines.

Section 211(k) of the Act specifies a minimum oxygen content for reformulated gasolines of 2.0 percent by weight, while EPA guidelines issued in response to section 211(m) recommend a minimum oxygen content of 2.7 percent by weight for oxygenated gasolines. The EPA's final regulations to implement the reformulated gasoline program, promulgated on February 16, 1994 (59 FR 7716), specify a minimum allowable per-gallon oxygen content for reformulated gasoline of 1.5 weight percent when the standards are being achieved on an average basis. In order to include all of the allowable modified fuels in the CF factor definition, the same oxygen content of 1.5 weight percent is being used in these rule amendments as the cutoff defining these high-HAP gasolines. Since reformulated and oxygenated gasolines are frequently oxygenated using MTBE, this minimum oxygen content was converted to MTBE volume percent. Based on the molecular composition and density of MTBE and a typical density for gasoline, the value of 1.5 percent oxygen by weight was calculated to be equivalent to 7.6 percent MTBE by volume (available in the docket). Since this value is not inconsistent with the existing definitions for reformulated and oxygenated gasolines, but only specifies a minimum gasoline MTBE content, the promulgated definitions for "reformulated gasoline" and "oxygenated gasoline" are being retained in the rule. The two definitions for the term CF have been amended to incorporate this minimum MTBE content.

The EPA emphasizes that this change merely clarifies the Agency's intent in specifying a higher CF value for reformulated and oxygenated gasolines that use MTBE as an oxygenate. The higher CF factor of 1.0 is intended to be used in the screening equations by those facilities that handle gasoline blended with significant amounts (7.6 volume percent or more) of MTBE. The 1.0 factor should *not* be used by facilities that handle only gasoline having trace amounts of MTBE. The change has no effect on the control programs that require the marketing of these fuels, nor does it change or add any reporting, recordkeeping, or testing requirements for affected facilities.

6. Reporting Emissions Inventories

The owner or operator of a stationary source in this category is allowed to use methods other than the emission screening equations (typically an emissions inventory) to establish that the facility is not a major source, provided that he or she "has documented and recorded to the Administrator's satisfaction that the facility is not a major source, or is not [collocated with] a major source" [40 CFR 63.420(a)(2) and (b)(2)]. Some confusion has been expressed as to whether these documents must in all cases be submitted to the Administrator for approval prior to December 16, 1996 as an alternative to the results of the screening equation or whether it is appropriate to maintain these records at the facility. This action clarifies that there is no requirement to submit these emissions inventory type documents for approval either prior to or after December 16, 1996, and that these documents may be maintained at the facility. However, the owner or operator is required [§ 63.420(f)], upon request, to demonstrate compliance with all of the applicability provisions, including this determination that the facility is not a major source.

III. Administrative Requirements

A. Paperwork Reduction Act

The information collection requirements of the previously promulgated NESHAP were submitted to and approved by the Office of Management and Budget (OMB). A copy of this Information Collection Request (ICR) document (OMB control number 2060–0325) may be obtained from Ms. Sandy Farmer, Information Policy Branch, Environmental Protection Agency, 401 M Street, S.W. (mail code 2136), Washington, DC 20460, or by calling (202) 260–2740.

Today's amendments to the Gasoline Distribution NESHAP have no impact on the information collection burden estimates made previously. No additional certifications or filings were promulgated. Therefore, the ICR has not been revised.

B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether a regulation is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The criteria set forth in section 1 of the Order for determining whether a regulation is a significant rule are as follows:

(1) Is likely to 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 government communities;

(2) Is likely to create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Is likely to materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Is likely to raise novel or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The Gasoline Distribution NESHAP promulgated on December 14, 1994 was treated as a "significant regulatory action" within the meaning of the Executive Order. An estimate of the cost and benefits of the NESHAP was prepared at proposal as part of the background information document

(BID). This estimate was updated in the BID for the final rule to reflect comments and changes made in developing the final rule. The amendments issued today have no impact on the estimates in the final BID. Pursuant to the terms of Executive Order 12866, it has been determined that this action is a "non-significant regulatory action" within the meaning of the Executive Order. As such, this action was not submitted to OMB for review.

C. Regulatory Flexibility

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. When the Agency promulgated the Gasoline Distribution NESHAP, it analyzed the potential impacts on small businesses, discussed the results of this analysis in the **Federal Register**, and concluded that the promulgated regulation would not result in financial impacts that significantly or differentially stress affected small companies. Since today's action imposes no additional impacts, the EPA has determined that these amendments will not have a significant economic impact on a substantial number of small entities.

D. Unfunded Mandates Reform Act

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

The EPA has determined that today's action does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Reform Act do not apply to this action.

E. Regulatory Review

In accordance with sections 112(d)(6) and 112(f)(2) of the Act, this regulation will be reviewed 8 years from the date of promulgation. This review may include an assessment of such factors as evaluation of the residual health risk, any overlap with other programs, the existence of alternative methods of control, enforceability, improvements in emission control technology and health data, and the recordkeeping and reporting requirements.

F. Submission to Congress and the General Accounting Office

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

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Petroleum bulk stations and terminals, Reporting and recordkeeping requirements.

Dated: February 21, 1997.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, part 63 of chapter I of title 40 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: 42 U.S.C. 7401 *et seq.*

2. Section 63.420 is amended by revising the equation and the terms "CF" "CE", "Q" and "EF" in paragraph (a)(1), and by adding the term "OE" to the list in paragraph (a)(1) to read as follows:

§ 63.420 Applicability.

(a) * * *

(1) * * *

$$E_T = CF[0.59(T_F)(1-CE)+0.17(T_E)+0.08(T_{ES})+0.038(T_I)+8.5\times10-6(C)+KQ]+0.04(OE)$$

* * * * *

CF=1.0 for bulk gasoline terminals and pipeline breakout stations that handle reformulated or oxygenated gasoline containing 7.6 percent by volume or greater MTBE;

CF=0.161 for bulk gasoline terminals and pipeline breakout stations that do not handle any reformulated or oxygenated gasoline containing 7.6 percent by volume or greater methyl tert-butyl ether (MTBE), OR

CE=control efficiency limitation on potential to emit for the vapor processing system used to control emissions from fixed-roof gasoline storage vessels [value should be added in decimal form (percent divided by 100)];

* * * * *

Q=gasoline throughput limitation on potential to emit or gasoline throughput limit in compliance with paragraphs (c), (d), and (f) of this section (liters/day);

* * * * *

EF=emission rate limitation on potential to emit for the gasoline cargo tank loading rack vapor processor outlet emissions (mg of total organic compounds per liter of gasoline loaded);

OE=other HAP emissions screening factor for bulk gasoline terminals or pipeline breakout stations (tons per year). OE equals the total HAP from other emission sources not specified in parameters in the equations for E_T or E_P. If the value of 0.04(OE) is greater than 5 percent of either E_T or E_P, then paragraphs (a)(1) and (b)(1) of this section shall not be used to determine applicability; * * *

* * * * *

3. Section 63.420 is amended in paragarph (b)(1) by revising the equation and the text following the equation to read as follows:

§ 63.420 Applicability.

* * * * *

(b) * * *

(1) * * *

$$E_P = CF\,[6.7(T_F)(1-CE)+0.21(T_E)+0.093(T_{ES})+0.1(T_I)+5.31\times10^{-6}(C)]+0.04(OE);$$

where:

EP=emissions screening factor for pipeline breakout stations,

and the definitions for CF, T_F, CE, T_E, T_{ES}, TI, C, and OE are the same as provided in paragraph (a)(1) of this section; or

* * * * *

4. Section 63.420 is amended by revising paragraph (f) to read as follows:

§ 63.420 Applicability.

* * * * *

(f) Upon request by the Administrator, the owner or operator of a bulk gasoline terminal or pipeline breakout station subject to the provisions of any paragraphs in this section including, but

not limited to, the parameters and assumptions used in the applicable equation in paragraph (a)(1) or (b)(1) of this section, shall demonstrate compliance with those paragraphs.

* * * * *

5. Section 63.421 is amended by adding in alphabetical order definitions for "bulk gasoline terminal" and "limitation(s) on potential to emit" to read as follows:

§ 63.421 Definitions.

* * * * *

Bulk gasoline terminal means any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person.

* * * * *

Limitation(s) on potential to emit means limitation(s) limiting a source's potential to emit as defined in § 63.2 of subpart A of this part.

* * * * *

6. Section 63.428 is amended by revising paragraphs (g) introductory text and (h) introductory text to read as follows:

§ 63.428 Reporting and recordkeeping.

* * * * *

(g) Each owner or operator of a bulk gasoline terminal or pipeline breakout station subject to the provisions of this subpart shall include in a semiannual report to the Administrator the following information, as applicable:

* * * * *

(h) Each owner or operator of a bulk gasoline terminal or pipeline breakout station subject to the provisions of this subpart shall submit an excess emissions report to the Administrator in accordance with § 63.10(e)(3), whether or not a CMS is installed at the facility. The following occurrences are excess emissions events under this subpart, and the following information shall be included in the excess emissions report, as applicable:

* * * * *

[FR Doc. 97–4885 Filed 2–27–97; 8:45 am]

BILLING CODE 6560–50–P

40 CFR Part 180

[PP–5F4578/R2277A; FRL–5590–4]

RIN 2070–AB78

Glufosinate Ammonium; Tolerances for Residues

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: EPA is correcting the table under § 180.473, paragraph (c) to reflect the tolerance for residues of glufosinate-ammonium on corn, field, forage as stated in the petition submitted by AgrEvo USA Co.

DATES: This correction is effective on February 5, 1997.

FOR FURTHER INFORMATION CONTACT: By mail: Joanne Miller, Product Manager (PM) 23, Registration Division, (7505C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Office location, telephone number, and e-mail address: Rm. 237, CM #2, 1921 Jefferson Davis Highway, Arlington, VA 22202, 703–305–7830, e-mail: miller.joanne@epamail.epa.gov.

In FR Doc. 97-2838, appearing at page 5333 in the issue for Wednesday, February 5, 1997, on page 5338, in § 180.473, in the table to paragraph (c), the entry for "corn, field, forage," is corrected as follows:

§ 180.473 Glufosinate ammonium; tolerances for residues.

* * * * *

Commodity	Parts per million	Expiration
* *	* *	* *
Corn, field, forage	4.0	July 13, 1999
* *	* *	* *

List of Subjects in Part 180

Environmental protection.

Dated: February 18, 1997.

Stephen L. Johnson,

Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 97–4624 Filed 2–27–97; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Part 3800

[WO–660–4120–02–24 1A]

RIN 1004–AC40

Mining Claims Under the General Mining Laws; Surface Management

AGENCY: Bureau of Land Management, Interior.

ACTION: Final rule.

SUMMARY: The Bureau of Land Management (BLM) is amending its surface management regulations at 43 CFR subpart 3809. The final rule requires submission of financial guarantees for reclamation of all hardrock mining operations greater than casual use, increases the types of financial instruments acceptable to satisfy the requirement for a financial guarantee, and amends the noncompliance section of the regulations to require the filing of plans of operations by operators who have a record of noncompliance. In addition, the final rule removes section 3809.1–8 on existing operations, which is no longer applicable, because all activities that were in operation in 1980 and continue in operation have now complied with this section.

EFFECTIVE DATE: March 31, 1997.

ADDRESSES: Inquiries or suggestions should be sent to the Solid Minerals Group at Director (320), Bureau of Land Management, Room 501 LS, 1849 C Street, N.W., Washington, D.C. 20240.

FOR FURTHER INFORMATION CONTACT: Richard Deery, (202) 452–0350.

SUPPLEMENTARY INFORMATION: On July 11, 1991 (56 FR 31602), BLM published a proposed rule to require submission of financial guarantees for reclamation for all hardrock mining operations greater than casual use, to designate additional financial instruments that would satisfy the requirement for a financial guarantee, and to amend the noncompliance section of the regulations to require the filing of plans of operations by operators who have a record of noncompliance. The extended 90-day comment period expired on October 9, 1991. The BLM received 218 comments on the proposed rule, including 3 citizen-petitions with numerous signatures. Of these comments, 58 were from public interest groups, 51 were from business entities or associations, 22 were from government agencies, and 135 were from individuals, not including the petitions. All of the comments were

carefully considered in developing this final rule.

Three basic points of view as to the proposed rule emerged in the comments. First, a number of comments dealt with the adequacy of the bond levels, self-certification, and the number of financial instruments acceptable under the rule. The comments stated that the bond levels set in the proposed rule were too low, and that BLM should require full cost bonding for both notices and plans of operation. Those expressing concern regarding self-certification and the number of financial instruments believe the proposed rule could lead to less security. Others simply objected to self-bonding in any form. Second, mining associations and some individuals agreed that the proposed rules were necessary, but argued that the $5,000 bond for notice level operations is excessive. Third, many of the individuals argued that the proposal discriminates against small miners and would force them out of business, if implemented.

In response to the comments regarding bond levels, BLM has amended the rule to require bonds for 100 percent of the amount that would be needed to pay for reclamation by a third-party contractor using equipment from an off-site location. This will ensure that, if the bonded party fails to perform its reclamation responsibilities, BLM will have access to adequate funds through these financial guarantee arrangements to reclaim the lands, and thereby protect the interest of the public, including Federal taxpayers. Calculation of the amount is at the operator's expense, and must be certified by a third-party professional engineer registered to practice in the State in which the operations are proposed. However, this engineer's certification is not required when the requirement for a financial guarantee is met by providing evidence of an instrument held or approved by a State agency.

The comments suggesting that the bonds were insufficient also raised several other issues. For example, they asserted that the rule did not contain detailed reclamation and bond release language. Detailed guidance on reclamation is beyond the scope of this rule. However, the final rule addresses concerns about bond release in section 3809.1–9(m), as discussed below. Under the subpart 3809 regulations, further guidance on the standards for reclamation and bond release will be dealt with on a case-by-case basis at the time a notice provided for under section 3809.1–3 or a plan of operations provided for under section 3809.1–4 is received and reviewed, and would be covered as part of the review of reclamation measures incorporated into the notice or plan.

The majority of the individual comments objected to the $5,000 minimum bond required for a notice level operation. They stated that the $5,000 self-certification would be an unnecessary regulation, because reclamation of any damage caused by small miners occurs naturally during the first winter. Those who identified themselves as recreational miners considered the proposal to be unfair, because it requires too great an expenditure. Many individual comments opposed the $5,000 financial guarantee, arguing that even self-certification would be burdensome and force small miners and prospectors out of business. Two individual comments favored the proposal, citing firsthand experience of the environmental impact of small mining operations.

The proposed rule was drafted with the assumption that notice-level operators likely would use the full 5 acres allowed and certify the existence of the full $5,000 guarantee for the entire acreage at the $1,000 per acre exploration level cap. The final rule requires the financial guarantee to cover 100 percent of the estimated costs of reclamation, with the minimum acceptable amount being $1,000 for each acre or fraction thereof disturbed.

Specific Comments

In the following portion of the preamble, comments will be discussed as they relate to various specific sections of the rule.

Section 3809.0–5 Definitions

This section of the proposed rule would have added definitions for the terms "exploration operations" and "mining operations," and redesignated the other paragraphs to accommodate these additions. These proposed definitions were to be used to differentiate between the maximum guarantee amounts ordinarily to be required. However, since the rule has been changed elsewhere in accordance with public comments to require financial guarantees to cover 100 percent of the estimated costs of reclamation for all operations other than casual use, these definitions are no longer needed. Therefore, the proposed revisions to section 3809.0–5 are omitted in the final rule.

Section 3809.0–9 Information Collection

This section codifies the note that appeared at the beginning of Group 3800, and revises it to comply with current OMB regulations. A notice of BLM's request for approval of the information collections in subparts 3802 and 3809 was published in the **Federal Register** on March 5, 1996. Three comments responded to the notice, two within the public comment period. Two of the comments supported the information collection. A third objected to perceived redundancies in the information collection proposal. The supposed repetitiveness was only apparent; similar information is to be collected under each of two subparts covered by the request, but will not be collected twice for the same operation. The comment also seemed to treat the notice as pertaining to a proposed rule rather than in part to existing regulations, and objected to provisions dealing with aircraft operations in subpart 3802, arguing that BLM lacked jurisdiction. However, BLM managers do in fact manage aircraft landing areas in wilderness study areas under subpart 3802. These comments did not lead to changes in the information collection. The estimated public reporting burden is estimated to be 16 hours per response for notices and 32 hours per response for plans of operations.

Section 3809.1–9 Financial Guarantees

This section states clearly that obtaining a bond or other financial guarantee is a prerequisite to operating on an unpatented mining claim under a notice or plan of operations. It lists the types of guarantees that are acceptable, and requires that they cover the entire estimated cost of reclamation. It requires that operators report their financial guarantees to BLM and include certain enumerated information with the report. The section also provides for partial release under the guarantees when phases of reclamation are completed, and states the consequences of default or bond deficiency.

A new paragraph (a) has been added to this section in the final rule to make it clear that initiating operations under a notice or conducting operations under a plan of operations without a required financial guarantee is prohibited by regulation. Among other remedies available to the government, such conduct may be prosecuted under section 303(a) of the Federal Land Policy and Management Act (FLPMA), which provides criminal penalties for the knowing and willful violation of the regulations.

Proposed paragraph (a) is redesignated as (b) in the final rule. This paragraph, as proposed, removed language from the current regulations

List of Subjects in 33 CFR Part 100

Marine safety, Navigation (water), Reporting and recordkeeping requirements, Waterways.

Final Regulations

In consideration of the foregoing, the Coast Guard amends Part 100 of Title 33, Code of Federal Regulations, as follows:

PART 100—[AMENDED]

1. The authority citation for part 100 continues to read as follows:

Authority: 33 U.S.C. 1233; 49 CFR 1.46.

2. A new section 100.724 is added to read as follows:

§ 100.724 Annual Augusta Invitational Rowing Regatta; Savannah River, Augusta, GA.

(a) *Definitions. (1) Regualted area.* The regulated area is formed by a line drawn directly across the Savannah River at U.S. Highway 1 (Fifth Street) Bridge at mile marker 199.45 and directly across the Savannah River at Eliot's Fish Camp at mile marker 197. The regulated area includes the width of the Savannah River between these two lines.

(2) *Coast Guard Patrol Commander.* The Coast Guard patrol Commander is a commissioned, warrant, or petty officer of the Coast Guard who been designated by the Commander, Coast Guard Group Charleston, SC.

(b) *Special local regulations.* (1) Entry into the regulated area is prohibited to all non-participants.

(2) After the termination of the Invitational Rowing Regatta each day, and during intervals between scheduled events, at the discretion of the Coast Guard Patrol Commander, all vessels may resume normal operations.

(c) *Effective dates.* This section is effective at 7 a.m. and terminates at 5 p.m. local time annually, on Thursday, Friday, Saturday and Sunday of the third weekend of March.

Dated: February 6, 1997.

R.D. Utley,

Captain, U.S. Coast Guard, Commander, Seventh Coast Guard District Acting.

[FR Doc. 97–4358 Filed 9–20–97; 8:45 am]

BILLING CODE 4910–14–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5690–9]

NESHAP 5/

RIN 2060–AD94

National Emission Standards for Hazardous Air Pollutants: Petroleum Refineries

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: This action expands and clarifies definitions in the "National Emission Standards for Hazardous Air Pollutants: Petroleum Refineries," which was issued as a final rule on August 18, 1995.

DATES: The direct final rule will be effective April 22, 1997 unless significant, adverse comments are received by March 24, 1997. If significant, adverse comments are timely received EPA will publish timely notice in the Federal Register withdrawing the final rule.

FOR FURTHER INFORMATION CONTACT: Mr. James Durham, Waste and Chemical Processes Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5672.

SUPPLEMENTARY INFORMATION: If significant adverse comments are timely received on this direct final rule, all such comments will be addressed in a subsequent final rule based on the proposed rule contained in the Proposed Rules Section of this Federal Register that is identical to this direct final rule. The Direct Final Rule will be withdrawn. If no significant adverse comments are timely filed on any provision of this direct final rule then the entire direct final rule will become effective 60 days from today's Federal Register notice and no further action is contemplated on the parallel proposal published today.

On August 18, 1995 (60 FR 43243), EPA promulgated in the Federal Register national emission standards for hazardous air pollutants (NESHAP) for petroleum refineries. These regulations were promulgated as subpart CC of 40 CFR part 63. This document contains additions to definitions which will clarify the applicability of control requirements and provide flexibility for the regulated population.

I. Description of Changes

A. Addition of Annual Average True Vapor Pressure Cut-Off to Definition of a Group 1 Storage Vessel

On July 15, 1994 (59 FR 36130) the EPA proposed national emission standards for hazardous air pollutants for petroleum refineries. In the proposed rule, a Group 1 storage vessel was defined as a vessel with a maximum true vapor pressure above a specified number.

Comments received regarding this definition stated that the storage tank vapor pressure information provided by refineries, on which the true vapor pressure limit for Group 1 storage vessels at existing sources was based, was most likely reflective of annual average, as opposed to maximum true vapor pressures. The EPA agreed with the commenters and increased the maximum true vapor pressure applicability cut-off for storage vessels at an existing source from 8.3 to 10.4 kilopascals to account for the difference between annual average and maximum true vapor pressure. This change was made in the final rule (60 FR 43243).

Additional comments were received after the rule was promulgated stating that a true vapor pressure cut-off based on an annual average temperature would provide flexibility to refiners. Having determined that true vapor pressure cut-offs of 8.3 and 10.4 kilopascals based on annual average and maximum monthly temperature, respectively, provide equivalent emission control, EPA has decided to provide both annual average and maximum true vapor pressure applicability cut-offs for existing storage tanks. Refineries may use either cut-off to determine if an existing storage vessel is subject to the control requirements of the rule. This amendment does not change the stringency of the requirement, or the estimated cost effectiveness of this regulation.

Adding an annual average true vapor pressure applicability cut-off to the Group 1 storage vessel definition necessitates adding a definition for annual average true vapor pressure. A definition for annual average true vapor pressure is included in this direct final rule.

B. Clarification of the Group 1 Storage Vessel HAP Content Applicability Cut-Off

In the promulgated Petroleum Refineries NESHAP, the Group 1 storage

vessel definition does not indicate whether the HAP concentration applicability cut-off refers to the maximum or annual average HAP concentration. By this direct final rule, EPA clarifies that the HAP concentration Group 1 applicability cut-off for both new and existing storage vessels refers to the annual average HAP concentration. HAP concentrations in stored liquids were determined based on information solicited from refineries for use in development of the Petroleum Refineries NESHAP. It is most likely that HAP content information used to determine the HAP concentration cut-offs was provided on an annual basis.

II. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of the actions taken by this final rule is available only on 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 action. Under section 307(b)(2) of the CAA, the requirements that are subject to today's notice 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 were submitted to and approved by the Office of Management and Budget (OMB). A copy of this Information Collection Request (ICR) document (OMB Control Number 2060–0340) may be obtained from the Information Policy Branch (PY–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 have no impact on the information collection burden estimates made previously. The changes consist of new and revised definitions which clarify applicability of control requirements in the NESHAP. No additional information collection is being required. Consequently, the ICR has not been revised.

B. Executive Order 12866 Review

Under Executive Order 12866 [58 FR 51735, (October 4, 1993)], 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 a "significant regulatory action" as one that is likely to result in a rule that may:

1. Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, 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 land programs or the rights and obligations of recipients thereof; or

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.

Because today's action clarifies existing control requirements and does not add any additional control, monitoring, recordkeeping, or reporting requirements, 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

EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities. This direct final rule would not have a significant impact on a substantial number of small entities because it simply clarifies the applicability of control requirements in the Petroleum Refineries NESHAP, does not alter control, monitoring, recordkeeping, or reporting requirements, and does not include any provisions that create a burden for any of the regulated entities.

D. Unfunded Mandates Reform Act

Under the unfunded mandates reform act, EPA must prepare a statement to accompany any rule where the estimated costs to State, local, or Tribal governments, or to the private sector, will be $100 million or more per year. At the time of promulgation, EPA determined that the petroleum refineries NESHAP does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate or to the private sector. This determination is not altered by today's action, the purpose of which is to add clarity and flexibility to existing requirements. Consequently, an unfunded mandates statement has not been prepared.

E. Submission to Congress

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

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous air pollutants, Petroleum refineries, Reporting and recordkeeping requirements, Storage vessels.

Dated: February 11, 1997.

Mary D. Nichols,

Assistant Administrator for Air and Radiation.

For the reasons set out in the preamble, part 63 of title 40, chapter I, of the Code of Federal Regulations 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.*

Subpart CC—National Emission Standards for Hazardous Air Pollutants: Petroleum Refineries

2. Section 63.641 is amended by adding, in alphabetical order, a definition for "annual average true vapor pressure" and revising the definition for "Group 1 storage vessel" to read as follows:

§ 63.641 Definitions.

* * * * *

Annual average true vapor pressure means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the annual average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local annual average temperature reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

(1) In accordance with methods specified in § 63.111 of subpart G of this part;

(2) From standard reference texts; or

(3) By any other method approved by the Administrator.

* * * * *

Group 1 storage vessel means a storage vessel at an existing source that has a design capacity greater than or

equal to 177 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 10.4 kilopascals and stored-liquid annual average true vapor pressure greater than or equal to 8.3 kilopascals and annual average HAP liquid concentration greater than 4 percent by weight total organic HAP; a storage vessel at a new source that has a design storage capacity greater than or equal to 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 3.4 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP; or a storage vessel at a new source that has a design storage capacity greater than or equal to 76 cubic meters and less than 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 77 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP.

* * * * *

3. Section 63.646 is amended by revising paragraph (b)(2) to read as follows:

§ 63.646 Storage vessel provisions.

* * * * *

(b) * * *

(2) When an owner or operator and the Administrator do not agree on whether the annual average weight percent organic HAP in the stored liquid is above or below 4 percent for a storage vessel at an existing source or above or below 2 percent for a storage vessel at a new source, Method 18 of 40 CFR part 60, appendix A shall be used.

* * * * *

[FR Doc. 97–4326 Filed 2–20–97; 8:45 am]
BILLING CODE 6560–50–P

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40 CFR Part 70

[AD–FRL–5689–6]

Clean Air Act Final Interim Approval of Operating Permits Program; Delegation of Section 112 Standards; State of Maine

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final interim approval.

SUMMARY: The EPA is promulgating source category-limited interim approval of the Operating Permits Program submitted by the State of Maine for the purpose of complying with Federal requirements for an approvable State program to issue operating permits to all major stationary sources, and to certain other sources. EPA is also proposing elsewhere in this **Federal Register** to add a sixth interim approval issue which would require Maine to remove some of the activities listed as insignificant in the State's rules. See the proposed rulemaking on Maine's Title V program.

EFFECTIVE DATE: March 24, 1997.

ADDRESSES: Copies of the State's submittal and other supporting information used in developing the final interim approval are available for inspection during normal business hours at the following location: Office of Ecosystem Protection, U.S. Environmental Protection Agency, Region I, One Congress Street, 11th floor, Boston, MA.

FOR FURTHER INFORMATION CONTACT: Donald Dahl, (617) 565–4298.

SUPPLEMENTARY INFORMATION:

I. Background

Title V of the 1990 Clean Air Act Amendments (sections 501–507 of the Clean Air Act ("the Act")), and implementing regulations at 40 Code of Federal Regulations (CFR) part 70 require that States develop and submit operating permits programs to EPA by November 15, 1993, and that EPA act to approve or disapprove each program within 1 year after receiving the submittal. The EPA's program review occurs pursuant to section 502 of the Act and the part 70 regulations, which together outline criteria for approval or disapproval. Where a program substantially, but not fully, meets the requirements of part 70, EPA may grant the program interim approval for a period of up to 2 years. If EPA has not fully approved a program by the end of an interim program, it must establish and implement a Federal program.

On September 19, 1996, EPA proposed interim approval of the operating permits program for the State of Maine. See 61 FR 49289. The EPA received comments from the Town of Jay on the proposal. In this document EPA is taking final action to promulgate interim approval of the operating permits program for the State of Maine. In addition, EPA is also proposing in this **Federal Register** to add a sixth interim approval issue in response to the comment from the Town of Jay and information submitted by other parties concerned about Jay's comment.

II. Response to Comments

The comments received on EPA's September 19, 1996 proposal to grant interim approval to the Maine Program and EPA's response to those comments are as follows:

Comment: The Town of Jay believes that EPA should require the State of Maine to remove six activities from the State's list of insignificant activities. The six activities are: (1) Paper forming; (2) vacuum system exhaust; (3) liquor clarifier and storage tanks and associated pumping, piping, and handling; (4) stock cleaning and pressurized pulp washing; (5) broke beaters, repulpers, pulp and repulping tanks, stock chests and bulk pulp handling; and (6) sewer manholes, junction boxes, sumps and lift stations associated with wastewater treatment systems.

Response: Based on the Town's comment and other information EPA has received concerning this issue, EPA is proposing in this **Federal Register** to require the State of Maine to remove the six activities listed above from its list of insignificant activities. Please refer to the proposed action elsewhere in this **Federal Register** for a discussion of this issue.

III. Final Action

The EPA is promulgating source category-limited interim approval of the operating permits program submitted by the State of Maine on October 23, 1995. The State must make the changes specified in the proposed rulemaking, under II.B., Proposed Action, in order to be granted full approval. See 61 FR 49292–49293 (September 19, 1996) for a complete discussion of those conditions. In brief they are: (1) Failure to allow for Section 502(b)(10) changes; (2) failure to require processing "Part 70 Minor Change" within 90 days; (3) allowing a change at a facility, defined as "Part 70 Minor Revision," that could increase emissions up to 4 tons per year of a regulated pollutant or 8 tons per year for all regulated pollutants to be processed without EPA or affected state review; (4) allowing a facility, under limited circumstances, to continue to emit up to the previous licensed level for up to 24 months after the license is amended; and (5) allowing an activity that emits between 1 and 4 tons of hazardous air pollutants to be classified as insignificant.

The scope of the State of Maine's Part 70 program approved in this document applies to all Part 70 sources (as defined in the approved program) within the State of Maine, except any sources of air pollution over which an Indian Tribe has jurisdiction. *See, e.g.*, 59 FR 55813, 55815–18 (Nov. 9, 1994). The term "Indian Tribe" is defined under the Act as "any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is Federally recognized as eligible for the special programs and services provided by the United States to Indians because of their status as

Indians." See section 302(r) of the CAA; *see also* 59 FR 43956, 43962 (Aug. 25, 1994); 58 FR 54364 (Oct. 21, 1993). EPA is taking no position in this notice on the question whether any Indian Tribe located in Maine has jurisdiction over sources of air pollution.

This interim approval extends until March 22, 1999. During this interim approval period, the State of Maine is protected from sanctions, and EPA is not obligated to promulgate, administer and enforce a Federal operating permits program in the State of Maine. Permits issued under a program with interim approval have full standing with respect to part 70, and the 1-year time period for submittal of permit applications by subject sources begins upon the effective date of this interim approval, as does the 3-year time period for processing the initial permit applications.

If the State of Maine fails to submit a complete corrective program for full approval by September 21, 1998, EPA will start an 18-month clock for mandatory sanctions. If the State of Maine then fails to submit a corrective program that EPA finds complete before the expiration of that 18-month period, EPA will be required to apply one of the sanctions in section 179(b) of the Act, which will remain in effect until EPA determines that the State of Maine has corrected the deficiency by submitting a complete corrective program. If, six months after application of the first sanction, the State of Maine still has not submitted a corrective program that EPA has found complete, a second sanction will be required.

If EPA disapproves the State of Maine's complete corrective program, EPA will be required to apply one of the section 179(b) sanctions on the date 18 months after the effective date of the disapproval, unless prior to that date the State of Maine has submitted a revised program and EPA has determined that it corrected the deficiencies that prompted the disapproval. If, six months after EPA applies the first sanction, the State of Maine has not submitted a revised program that EPA has determined corrects the deficiencies, a second sanction is required.

In addition, discretionary sanctions may be applied where warranted any time after the expiration of an interim approval period if the State of Maine has not timely submitted a complete corrective program or EPA has disapproved its submitted corrective program. Moreover, if EPA has not granted full approval to the State of Maine program by the expiration of this interim approval, since the expiration would occur after November 15, 1995, EPA would be required to promulgate, administer and enforce a Federal permits program for the State of Maine upon interim approval expiration.

Requirements for approval, specified in 40 CFR 70.4(b), encompass section 112(l)(5) requirements for approval of a program for delegation of section 112 standards as promulgated by EPA as they apply to Part 70 sources. Section 112(l)(5) requires that the State's program contain adequate authorities, adequate resources for implementation, and an expeditious compliance schedule, which are also requirements under part 70. As discussed in the September 19, 1996 proposal to approve Maine's authority to take delegation of section 112 standards, Maine submitted a supplemental letter dated June 24, 1996 addressing the 112(l)(5) requirements for area/minor sources. Therefore, the EPA is also promulgating approval under section 112(l)(5) and 40 CFR 63.91 of the State's program for receiving delegation of section 112 standards that are unchanged from Federal standards as promulgated. This program for delegations applies to sources covered by the Part 70 program as well as area/minor sources.

IV. Administrative Requirements

A. Docket

Copies of the State's submittal and other information relied upon for the final interim approval, including comments received by the State of Maine and reviewed by EPA on the proposal, are contained in the docket maintained at the EPA Regional Office. The docket is an organized and complete file of all the information submitted to, or otherwise considered by, EPA in the development of this final interim approval. The docket is available for public inspection at the location listed under the ADDRESSES section of this document.

B. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by April 22, 1997. 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).)

C. Executive Order 12866

The Office of Management and Budget has exempted this action from Executive Order 12866 review.

D. Regulatory Flexibility Act

The EPA's actions under section 502 of the Act do not create any new requirements, but simply address operating permits programs submitted to satisfy the requirements of 40 CFR part 70. Because this action does not impose any new requirements, it does not have a significant impact on a substantial number of small entities.

E. Unfunded Mandates

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

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

F. Submission to Congress and the General Accounting Office

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

Federal Register

Friday
January 17, 1997

Part II

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Rule Clarifications; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5672–5]

RIN 2060–AC19

National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Rule Clarifications

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule: Amendments.

SUMMARY: On April 22, 1994 and June 6, 1994, the EPA issued the National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks. This rule is commonly known as the Hazardous Organic NESHAP or the HON. In June 1994, petitions for review of the April 1994 rule were filed in the U.S. Court of Appeals for the District of Columbia Circuit. The petitioners raised over 75 technical issues and concerns with drafting clarity of the rule.

On August 26, 1996, the EPA proposed correcting amendments to the rule to address the petitioners' issues. Among the proposed amendments were proposed revisions to definitions that apply to wastewater and wastewater treatment and revised control and compliance provisions for wastewater. A new compliance date of April 22, 1999, was proposed for process wastewater, heat exchange systems, equipment subject to the provisions of §63.149, and maintenance wastewater. The EPA also proposed a separate compliance date for wastewater streams affected by the omission of nitrobenzene from the list of compounds subject to the wastewater provisions. The proposed revisions to the other provisions to the rule also included corrections and clarifications to ensure the rule is implemented as intended. The proposed amendments also included some additional compliance options that would reduce the burden associated with the recordkeeping and reporting requirements of the rule. Today's action takes final action on those proposed amendments.

These amendments to the rule will not change the basic control requirements of the rule or the level of health protection it provides. The rule requires new and existing major sources to control emissions of hazardous air pollutants to the level reflecting application of the maximum achievable control technology.

EFFECTIVE DATE: January 17, 1997.

FOR FURTHER INFORMATION CONTACT: For general questions, contact Dr. Janet S. Meyer, Coatings and Consumer Products Group, at (919) 541–5254 or Mary Tom Kissell, Waste and Chemical Processes Group, at (919) 541–4516. For technical questions on wastewater provisions, contact Elaine Manning, Waste and Chemical Processes Group, telephone number (919) 541–5499. The mailing address for the contacts is Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

I. Regulated Entities and Background Information

A. Regulated Entities

The regulated category and entities affected by this action include:

Category	Examples of regulated entities
Industry	Synthetic organic chemical manufacturing industry (SOCMI) units, e.g., producers of benzene, toluene, or any other chemical listed in Table 1 of 40 CFR part 63, subpart F.

This table is not intended to be exhaustive but, rather, provides a guide for readers regarding entities likely to be interested in the revisions to the regulation affected by this action. Entities potentially regulated by the HON are those which produce as primary intended products any of the chemicals listed in table 1 of 40 CFR part 63, subpart F and are located at facilities that are major sources as defined in section 112 of the Clean Air Act (CAA). To determine whether your facility is regulated by this action, you should carefully examine all of the applicability criteria in 40 CFR 63.100. If you have questions regarding the applicability of this action to a particular entity, consult one of the individuals listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Background on Rule

On April 22, 1994 (59 FR 19402), and June 6, 1994 (59 FR 29196), the EPA published in the **Federal Register** the NESHAP for the synthetic organic chemical manufacturing industry (SOCMI), and for several other processes subject to the equipment leaks portion of the rule. These regulations were promulgated as subparts F, G, H, and I in 40 CFR part 63, and are commonly referred to as the hazardous organic NESHAP, or the HON. Since the April 22, 1994 notice, there have been several amendments to clarify various aspects of the rule. Readers should see the following **Federal Register** notices for more information: September 20, 1994 (59 FR 48175); October 24, 1994 (59 FR 53359); October 28, 1994 (59 FR 54131); January 27, 1995 (60 FR 5321); April 10, 1995 (60 FR 18020); April 10, 1995 (60 FR 18026); December 12, 1995 (60 FR 63624); February 29, 1996 (61 FR 7716); June 20, 1996 (61 FR 31435); August 26, 1996 (61 FR 43698); and December 5, 1996 (61 FR 64571).

In June 1994, the Chemical Manufacturers Association (CMA) and Dow Chemical Company filed petitions for review of the promulgated rule in the U.S. Court of Appeals for the District of Columbia Circuit, *Chemical Manufacturers Association* v. *EPA*, 94–1463 and 94–1464 (D.C. Cir.) and *Dow Chemical Company* v. *EPA*, 94–1465 (D.C. Cir). The petitioners raised over 75 technical issues on the rule's structure and applicability. Issues were raised regarding details of the technical requirements, drafting clarity, and structural errors in the drafting of certain sections of the rule. On August 26, 1996, the EPA proposed clarifying and correcting amendments to subparts F, G, H, and I of part 63 to address the issues raised by CMA and Dow on the April 1994 rule.

In the August 26, 1996 document, the EPA committed to taking final action on some portions of the proposed amendments to the rule as soon as possible after the close of the comment period in order to give sources as much lead time as possible. In the December 5, 1996 **Federal Register**, the EPA took final action on those portions of the proposed amendments that would eliminate the need for filing some implementation plans that would otherwise be due December 31, 1996, and would allow the filing of requests for compliance extensions up to 4 months before the April 1997 compliance date.

Today the EPA is taking final action on the remaining portions of the amendments proposed on August 26, 1996.

C. Public Comment on the August 26, 1996 Proposal

Eighteen comment letters were received on the August 26, 1996 **Federal Register** document that proposed

changes to the rule. All comment letters received were from industry representatives and trade associations. Most of the comment letters were supportive of the proposed amendments. A few of these comment letters also included suggested editorial revisions to further clarify some aspects of the proposed amendments or to address oversights in the proposed amendments. The EPA considered these suggestions and, where appropriate, made changes to the proposed amendments. The significant issues raised and the changes to the proposed amendments are summarized in this preamble. A memorandum containing the EPA's response to all comments can be found in Docket A–90–19, item number IX–C–1. The response to comments may also be obtained over the Internet at http://ttnwww.rtpnc.epa.gov or from the EPA's Technology Transfer Network (TTN). The TTN is a network of electronic bulletin boards developed and operated by the Office of Air Quality Planning and Standards. The service is free, except for the cost of a phone call. Dial (919) 541–5742 for up to a 14,400 bits per second modem. Select TTN Bulletin Board: Clean Air Act Amendments and select menu item Recently Signed Rules. If more information on TTN is needed, contact the systems operator at (919) 541–5384.

D. Judicial Review

Under Section 307(b)(1) of the CAA, judicial review of this final action is available only on 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 final rule. Under Section 307(b)(2) of the CAA, the requirements that are subject to today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

II. Overview of Amendments to Rule

With today's action, the EPA is issuing clarifying and correcting amendments to subparts F, G, H, and I of 40 CFR part 63 that were proposed on August 26, 1996. Readers should refer to the August 26, 1996 **Federal Register** document for a complete discussion of the background and the proposed changes to the rule. Today's revisions are intended to remove any ambiguity and clearly convey the EPA's intent, to make the rule easier to read and implement, and to increase flexibility for the source.

These amendments include an extension of the existing source compliance date to April 22, 1999 for process wastewater, heat exchange systems, maintenance wastewater, and equipment subject to the provisions of §63.149 and also establish a separate compliance date for wastewater streams affected by the omission of nitrobenzene from table 9 of subpart G. A three year compliance date is being established for process wastewater streams that are subject to control requirements due to the presence of nitrobenzene due to an error in the April 22, 1994 rule. Equipment subject to the other provisions of the rule must be in compliance by April 22, 1997, unless a compliance extension is granted.

Today's amendments also include the revisions to the wastewater sections of subpart G, §§63.132 through 63.147. As discussed in the August 26, 1996 document, the wastewater sections have been redrafted to improve organizational structure and clarity. The revised wastewater sections reflect the concept that only when water is "discarded" from a process is it "wastewater," and thus subject to the HON wastewater provisions. The revised wastewater sections in subpart G also include provisions that: (1) Ensure that streams traveling from one piece of process equipment to another are handled appropriately to avoid emissions to the environment, and (2) ensure that the changes in the wastewater definition do not permit sources to dilute their streams prior to the point the streams are considered wastewater, thus avoiding control requirements. The amendments to the wastewater provisions also include the provisions that would allow a HON source owner or operator to ship waste off-site for treatment. Under these revisions to the rule, the owner or operator choosing not to treat wastewater on-site may only ship to a facility that has certified that it will treat the waste to the standard required by the HON.

In contrast to the significant revisions of the wastewater provisions, only minor changes are being made to other sections of the rule. In addition to removing ambiguity and increasing flexibility for the source, some revisions reduce the reporting and recordkeeping burden for sources. The reporting and recordkeeping revisions include changes that (1) reduce the number of copies of reports that must be submitted to the EPA and the States, and (2) provide for alternative, less frequent recordkeeping of monitoring data where sources are able to demonstrate that no violations have occurred for prolonged stretches of time.

III. Summary of Major Comments and Changes to the Proposed Amendments to the Rule

A. Applicability of Rule to Storage Vessels Located in a Tank Farm or Marine Terminal

In the August 26, 1996 document, the EPA proposed amendments to clarify the applicability of the rule to storage vessels located in tank farms and marine tank farms. Due to an oversight, the provisions currently in § 63.100(g) of subpart F of the April 1994 rule did not include instructions regarding allocation of tanks in remote locations, such as tank farms. The proposed amendments, § 63.100(g)(3), provided explicit procedures to be followed to assign the storage vessels to a process and then to determine the applicability of the rule.

Most commenters were supportive of the proposed amendment. However, one commenter requested clarification of the difference between a remote storage tank owned by a chemical process facility and a remote storage tank owned by a for-hire, bulk liquid terminal. The commenter thought the proposed amendments to § 63.100(g) could inappropriately cause a remote storage tank owned by a for-hire, bulk liquid terminal to be considered subject to the HON. The commenter requested that the rule specifically state that remote storage vessels at independent tank farm distribution facilities are not subject to the rule.

The EPA agrees with the commenter that the focus of this rule is on chemical manufacturing plants and not on for-hire terminals that store products for distribution. The EPA believes that the commenter's concern arose because the preamble description of this proposed change was not sufficiently clear that this assignment procedure was for allocation of storage vessels at remote locations within the plant site. The EPA believes that when the provisions of § 63.100(g)(3) are considered within context of all the applicability criteria in subpart F it is clear that this proposed assignment procedure for storage vessels in tank farms does not extend the applicability to for-hire terminals that are not part of the major source. For the amendments to affect any specific storage vessel (or transfer rack or distillation unit), it would have to be part of a chemical manufacturing process unit at a major source subject to the rule. In order for a storage vessel (or transfer rack or distillation unit) to be part of a major source, it would have to be (among other things) under the control of the owner or operator of the chemical manufacturing process unit

and located within the same contiguous area as the chemical manufacturing process unit. A storage vessel owned by a for-hire bulk liquid terminal could only be subject to the HON if it was under the control of the owner or operator of the HON chemical manufacturing process unit; and contiguously located, and therefore part of the same major source. The EPA believes that the applicability of the rule is clear and it is not necessary to add explicit language to the rule to specify that storage vessels at for-hire terminals that are not part of the major source are not subject to the rule.

B. Revision to Table 2 of Subpart F List of Regulated Organic Hazardous Air Pollutants

In the August proposal, the EPA proposed to revise table 2 of subpart F to list 21 specific compounds that are to be regulated as polycyclic organic matter (POM) in the HON. The specific compounds listed were identified as being consistent with the historical working definition of POM, which emphasizes emissions from incomplete combustion and pyrolysis processes (49 FR 31680). This change was proposed to address requests for clarification of the scope of the term POM in the HON.

Several commenters contended that 1,2-naphthylamine sulfonic acid, 1,4-naphthylamine sulfonic acid, α-naphthol, and β-naphthol should not have been included on the list of specific compounds proposed to be added to table 2 to replace the hazardous air pollutants category POM. These commenters all asserted that these compounds do not meet the historical working definition of POM, as claimed by the EPA in the August 26, 1996 document. In support of that view, the commenters stated that, in 1992, the EPA acknowledged the potential problems with the statutory definition of POM and stated that, although the definition would remain, the EPA would emphasize emissions from combustion and pyrolysis activities (letter from John Seitz to Larry Thomas, The Society of the Plastics Industry, March 3, 1992). The commenters also believe that, in 1994, the EPA announced a new POM definition in a response to comments Background Information Document (EPA–453/R–94–003d) for the HON that states:

> Polycyclic organic matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels. (HON BID, Vol. 2D, p.4)

The commenters believe that these four compounds do not meet what they describe as the revised definitions of POM since the compounds are not produced by combustion processes and are not used in the types of processes intended to be covered by this listing. The commenters recommended that these specific compounds not be added to table 2 of subpart F. One commenter also argued that the EPA should follow the listing process in section 112(b) of the CAA if the EPA wished to list these specific compounds as hazardous air pollutants.

The EPA does not agree with the commenters that these four compounds do not meet the historical working definition of POM and thus, should not be added to table 2 of subpart F. The term POM, as defined in section 112(b) of the CAA, includes organic compounds with more than one benzene ring and which have a boiling point greater than or equal to 100° C. This definition is very broad and does not limit the term to the group of compounds which the EPA believes are principally responsible for mutagenicity and carcinogenicity in humans and animals. This arises because the current statutory definition includes any compound with more than one benzene ring and is not limited to fused ring compounds. Neither the March 1992 Seitz letter, nor the HON Background Information Document amend the statutory definition of POM. The August 26, 1996 proposal, to list 21 specific compounds on table 2 of subpart F instead of listing POM generally, is consistent with the molecular structures of concern in the historical definition. Specifically, the 21 compounds have molecular structures with two or more fused rings at least one of which is benzenoid in structure. These chemicals were identified as chemical products produced by the chemical manufacturing processes considered to be within the definition of the SOCMI source category. Whether these compounds were produced by extraction from materials produced by pyrolysis processes or derived from petroleum feedstocks, was not a consideration in the listing. The EPA does not agree with the commenter's interpretation that compounds can be considered POM only if formed by incomplete combustion and/or pyrolysis operations; the statutory definition of POM is not limited in that fashion.

The reason for including these specific compounds on table 2 instead of listing POM generally was to ensure that emissions of these compounds from the chemical manufacturing process unit producing these chemicals would be subject to the requirements of the rule. All of these compounds meet the definition of POM in section 112(b) of the CAA. Specification of these compounds on table 2 will not result in application of the rule to sources using these chemical products to produce other products. It will require that emissions of these substances from sources subject to this rule to be subject to the requirements of the rule. Before today's changes to table 2 of subpart F, emissions of the 21 substances were subject to the requirements of the rule. Today's changes merely clarify what the substances are rather than referring to POM generally.

Finally, the EPA disagrees with the commenter who argued that the EPA should follow the listing process in section 112(b) to list these compounds as hazardous air pollutants. The specific hazardous air pollutants added to table 2 meet the definition of POM in section 112(b) and therefore are already subject to the requirements of section 112 without further listing action.

One commenter also asserted that listing 1,2-naphthylamine sulfonic acid and 1,4-naphthylamine sulfonic acid as Hazardous Air Pollutants has potential consequences under other statutes. The commenter noted that the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 101(14)(e) incorporates by reference any hazardous air pollutant listed under the CAA. This, in turn, establishes Federal authority to respond to releases or threats of releases of hazardous substances and triggers notification requirements of releases to the National Response Center above the Reportable Quantity (RQ) and liability for costs associated with cleanup and any natural resources damages resulting from the release. Another possible result is under section 304 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) that the owner or operator of a facility from which an RQ or more of a CERCLA hazardous substance has been released must immediately notify state and local emergency response authorities.

The EPA does not agree with the commenter's assessment of the potential consequences of the proposed listing of the 21 compounds in table 2 of 40 CFR part 63, subpart F. The commenter's opinion that the listing of the chemicals of interest in table 2 in place of POM generally triggers new CERCLA and EPCRA reporting requirements is incorrect, as the requirements were effective upon enactment of the CAA by virtue of CERCLA section 101(14) and, in turn, section 102(b). The POM category was one of five broad generic

categories of CAA section 112 hazardous air pollutants codified as a hazardous substance pursuant to CERCLA section 101(14) in 40 CFR 302.4. Section 101(14) of CERCLA states that the term "hazardous substance" includes "any hazardous air pollutant listed under section 112 of the Clean Air Act." Thus, the CAA categories automatically became hazardous substances under CERCLA when listed as hazardous air pollutants under section 112 in 1990. In the June 12, 1995 **Federal Register** (60 FR 30926), the EPA stated that "All substances within the (CAA section 112 hazardous air pollutants) categories, as well as the categories themselves, are CERCLA hazardous substances" and that "CERCLA section 102(b) provides that an RQ of one pound applies to hazardous substances (which include the CAA hazardous air pollutants) until this RQ is adjusted by regulation. Therefore, the section 112 listing of POM in the CAA automatically triggers a one pound RQ for any chemical which falls within the section 112(b) definition of POM. Issuance of a MACT standard requiring control of specific hazardous air pollutants has no additional effect on CERCLA coverage.

C. Compliance Extension for New Sources

The August 26, 1996 proposal included an extension of the compliance date to April 22, 1999 for heat exchange systems, maintenance wastewater, equipment subject to § 63.149, and process wastewater for existing sources. This proposed change was in § 63.100(k)(2)(ii) of the proposed rule.

Several commenters suggested that the compliance schedule should be extended for new sources to April 22, 1999 or initial startup, whichever is later. The commenter's did not state the basis for their belief that more than 2 additional years should be provided for new sources.

While the EPA believes that, in some limited instances new sources may need more time for compliance than was provided in the April 1994 rule, the EPA does not believe that 2 years is justified. In today's final rule the EPA has provided that, in general, new sources that commenced construction or reconstruction up to the date of proposal of the August 1996 amendments continue to have a compliance date of April 22, 1994, (the date of the original final rule) or start-up, whichever is later.

However, some exceptions have been added. Commenters had requested more compliance time for heat exchange systems, maintenance and process wastewater streams, and equipment subject to §63.149 (those pieces of equipment for which a new, later compliance date has been set with respect to existing sources). In response to this request the EPA has decided that heat exchange systems, maintenance wastewater streams, process wastewater streams, and equipment subject to §63.149 that are part of new sources on which construction or reconstruction commenced before proposal of the August 1996 amendments will have a compliance date that is the later of start-up or 180 days from the date of today's final rule.

These exceptions will provide new sources that commenced planning for, or actually achieved compliance with, the April 22, 1994 rule, 6 months more time to allow any minor adjustments necessary to comply with the provisions of today's final rule applicable to the heat exchange system, maintenance and process wastewater streams, and equipment subject to §63.149.

In addition, today's final rule provides that new sources upon which construction or reconstruction commenced after the August 1996 proposal, must be in compliance upon the later of initial start-up or the date of today's final rule.

The EPA believes that 180 days from today is ample time for any new sources that are already in compliance with the April 1994 final rule to make the necessary adjustments to their recordkeeping and reporting procedures to ensure compliance with today's rule. Those sources that commenced construction after December 31, 1992, but have not yet reached start-up will be able to adjust their start-up date to allow time to reach compliance as will any new sources commencing construction after the August 26, 1996 proposal.

D. Delay of Repair for Heat Exchangers

The August proposal included new §63.104 requirements for monitoring heat exchange systems for leaks of process fluids into cooling water. The proposed §63.104 would replace the existing provisions in §63.104 of subpart F. The revisions were proposed to address issues with the existing provisions related to the availability of monitoring methods with sufficient analytical sensitivity, lack of flexibility in some of the requirements, and the burden associated with the monitoring requirements. The proposed §63.104 also included revisions to the delay of repair provisions to allow delay until the next shutdown if a shutdown is planned within 2 months of determination that delay of repair is necessary. The proposed revisions to §63.104 also provided that repair may be delayed up to a maximum of 120 days if the necessary parts or personnel were not available. These new provisions would replace the provisions in the April 1994 rule which only allows delay of repair when it can be demonstrated that immediate shutdown for repair would create more emissions than the emissions that would result from delaying repair of the leaking heat exchanger until the next shutdown. In the August 26, 1996 document, it was explained that the proposed revisions to the delay of repair provisions of the rule were being made to make these provisions workable and to minimize debate over modeling of emissions from heat exchanger systems.

Several commenters objected to this change in the delay of repair provisions in §63.104. The commenters argued that it is inappropriate to require an unscheduled shutdown if it can be demonstrated that greater emissions would result than would occur if the leak were repaired at the next scheduled shutdown. The commenters thought that this change was an unintended result of other changes to the wording of the provision.

As a result of this comment, the EPA reconsidered the circumstances where delay of repair would be appropriate and the approach used to develop an enforceable provision. Based on further examination of situations that might arise in a facility subject to the standard, the EPA concluded that §63.104(e)(2) could be revised to allow delay of repair in situations where greater emissions would result than would occur if the leak were repaired at the next scheduled shutdown if the procedure for calculating emissions were specified in the rule. The revised §63.104(e)(2) includes delay of repair provisions for cases where the maximum potential emissions from the leaking heat exchanger are less than the emissions that would result from an unscheduled shutdown. The proposed 120 day maximum delay due to unavailability of parts or personnel to effect the repair is also retained in the final provisions. The EPA believes that the added provision will address cases involving low flow rate heat exchangers that can not be isolated from the process and where process unit shutdowns may result in substantial emissions. The EPA believes that the revised §63.104(e)(2) provides the flexibility needed while maintaining the enforcability of the provision.

E. Wastewater Issues

1. Point of Determination

In the August 26, 1996 proposal, the EPA proposed to revise the wastewater provisions to base the determination of applicability of control requirements to a wastewater stream on its characteristics at the point where the wastewater stream exits the last recovery device instead of at the point of generation (POG). The new location for determining the characteristics of a wastewater stream was termed the point of determination (POD) to distinguish it from the POG concept used in other air rules for waste and wastewater such as the Benzene Waste NESHAP. This proposed revision was one of several changes proposed to address problems with the clarity and structure of the wastewater provisions in the April 1994 rule.

The public comment on the proposal was supportive of the new POD concept. Therefore, the proposed revision changing from a POG approach to the POD approach is being incorporated into the final rule without revision. However, some public inquiries on the proposal also indicated that confusion exists regarding some details of the concept. Specifically, some readers have mistakenly interpreted POD by confusing the meaning of "recovery device" and "treatment process." This section of the preamble sets forth the EPA's intent and emphasizes that key definitions and provisions should be used together to understand and correctly implement the POD concept in this rule.

The EPA's intent in developing the POD approach was to have a decision criterion that is replicable and clearly specifies the location for evaluation of a wastewater stream for the purposes of control. All equipment prior to the POD is considered to be part of the process and equipment downstream of the POD is not considered to be part of the process. The POD is defined as each point where process wastewater exits the chemical manufacturing process unit. To understand the POD approach, other portions of the rule must be understood, especially the definitions of wastewater, recovery device, and treatment process and the provisions in §63.149.

"Wastewater" is defined, inter alia, as water that is discarded from a chemical manufacturing process unit. Under the revised approach for defining wastewater, a stream does not become wastewater until it exits the last recovery device. At that point, because the stream is no longer being processed or used, it is considered to be discarded. "Recovery device" is defined as an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value, use, or reuse or for sale for one of these purposes.

A "treatment process" is defined in the HON as a specific technique that removes or destroys organics in a wastewater stream or residual. Examples of treatment processes are a steam stripper (which separate the organic material from the water) and a biological treatment process (which destroys the organic compounds).

The EPA recognizes that the same categories of equipment, such as oil-water separators or organic removal devices such as decanters or strippers, may be recovery devices or treatment devices depending upon the specific application in a particular process' operations. To determine whether a particular item of equipment should be considered a recovery device or a treatment process, it is necessary to consider the subsequent utilization or disposition of the materials that pass through the item of equipment. If the recovered materials are then used for the same general purpose for which chemicals are utilized within the facility (i.e., used for the chemical properties of the material or for use as a fuel), then the equipment would be considered a recovery device. If the material is not recovered for use, reuse, or fuel value or for sale for use, reuse, or fuel value (under normal circumstances), the equipment can not be considered a recovery device. For example, an organic water separator, such as a steam stripper could not be considered to be a recovery device if the separated organic material is later sent to an incinerator for disposal. However, if the separated organic material were used in a process or incorporated into product, the steam stripper would be considered part of the process.

In developing the POD approach, the EPA assumed that organic hazardous air pollutants containing fluids within the process would be managed in closed systems to minimize losses of a recoverable material. The EPA based this assumption on information provided by industry representatives and the EPA's experience with the chemical industry. The provisions in table 35 of subpart G and the new §63.149 were designed to ensure that conveyance and handling of organic hazardous air pollutants containing process fluids would be handled in a manner consistent with the requirements for wastewater streams subject to control.

The EPA considers the POD approach as appropriate for this rule because the HON addresses the other emission points in the chemical manufacturing process unit. The EPA does not believe that the POD approach would be appropriate for other rules that are not as comprehensive in the coverage of emission points. For example, the POD concept would not be appropriate in cases where it is known that other emission points would not be subject to any control requirements.

2. Clarification of Safety Relief Device Provisions for Waste Management Units

The August proposed revisions to §63.132 included provisions to allow waste management units to be equipped with pressure relief devices needed for safety purposes, §63.132 (a)(2)(i) and (b)(3)(i). Although no comments were received on these proposed provisions, the EPA has received inquiries from some industry representatives and consultants requesting clarification of the intent of these provisions. The inquiries concerned whether these provisions prohibit the use of pressure-vacuum vents on wastewater tanks storing wastewater streams or whether these provisions would allow venting of emissions to the atmosphere of wastewater tanks storing Group 1 wastewater streams.

The intent of the pressure relief valve provisions in §63.132 (a)(2)(i) and (b)(3)(i) is to provide for safety releases in emergency situations only. These provisions provide that a pressure relief device on waste management units is allowed "provided the pressure relief device is not used for planned or routine venting of emissions." These provisions should not be interpreted as providing for routine venting of emissions from waste management units.

Neither should these provisions be interpreted as prohibiting pressure-vacuum vents on fixed roof wastewater tanks allowed for tanks storing wastewater streams with a maximum true vapor pressure of less than: (1) 13.1 kPa if the tank capacity is greater than or equal to 75 m^3 but less than 151 m^3; or (2) less than 5.2 kPa if the tank capacity exceeds 151 m^3 as specified in §63.133(a)(1). The rule requires that tanks meeting these criteria be equipped with a fixed roof and allows the roof to be equipped with openings necessary for operation, inspection, and maintenance. There is no requirement control emissions from tanks meeting these criteria.

3. Issues Associated With Biological Treatment Processes

The August proposal included provisions that provided easier compliance demonstration options for well-mixed activated sludge systems that are used to control readily biodegraded compounds. In this proposed change to the April 1994 rule, the compounds listed in table 9 of subpart G were divided into three lists. In the proposal, a performance evaluation would not be required for activated sludge systems that met the definition of enhanced biological treatment system and the unit was controlling wastewater streams that contained only list 1 compounds. The proposed revisions to appendix C still required a performance demonstration for activated sludge systems used to treat a combination of list 1 and list 2 and/or list 3 compounds.

All comments on the proposed compliance demonstration provisions for biological treatment systems were supportive of this approach. However, based on conversations with industry representatives, the EPA has learned that some people are misinterpreting the proposed definition of "enhanced biological treatment system or biological treatment process." This section of the preamble sets forth the EPA's intent and reiterates the basis for the proposed compliance demonstration exemption for certain biological treatment units. Because of the potential for misinterpretation of the term, a clarifying change has been made to the proposed definition for "enhanced biological treatment system or enhanced biological treatment process."

The proposed revisions to the rule defined an enhanced biological treatment system as an aerated treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation. The EPA's intent in defining the enhanced biological treatment system was to reflect the modeling of an activated sludge system with a well-mixed biological treatment unit that was used to develop the three lists of compounds in table 36. (A well-mixed or completely mixed system is a biological treatment unit where particles entering the tank are dispersed immediately throughout the tank and the system has uniform characteristics (Docket A–90–23, item VII–B–8).) The requirement to recycle biomass indicated an activated sludge system. The requirement to have the biomass suspended and aerated indicated an aerobic biological unit. The phase "throughout each aeration unit" was intended to mean that the unit was well-mixed. It is this phrase that is being misinterpreted or overlooked by readers. Therefore, the EPA has slightly revised the definition for enhanced biological treatment systems in today's rule to help clarify the intent. In today's rule the second sentence of the definition reads, "the mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter homogeneously distributed throughout each aeration unit." The additional phrase, "homogeneously distributed," was added to clarify the EPA's intent to define a uniformly well-mixed biological treatment unit. The EPA believes this revision clarifies the original intent and does not alter the meaning of the term.

An example of a system that would meet the enhanced biological treatment system definition would be a conventional well-designed, operated, and maintained activated sludge system. The biological treatment unit of this enhanced biological treatment system would contain a homogeneous mixture or, in other words, the biological treatment unit would have the same concentration, mixed liquor volatile suspended solids (MLVSS), and dissolved oxygen throughout the vessel where the biological reactions occur.

A plug-flow system is an example of a biological treatment system that does not meet the HON enhanced biological treatment system definition. Plug-flow systems typically occur in long tanks with a high length-to-width ratio in which longitudinal dispersion is minimal or absent (Docket A–90–23, item VII–B–8). Plug-flow systems are not considered acceptable units for the compliance demonstration exemption because they may tend to have higher air emissions at the front of the system where the concentration is higher. This is not to say that a well operated plug-flow system would not be an acceptable biological treatment system; however, the EPA was not as confident that the parameters required to operate an acceptable plug-flow system could be defined. These systems are required to demonstrate compliance through use of the procedures in appendix C. Appendix C has been revised to state that the calculation procedures (forms) in the appendix are for well-mixed systems and to include suggestions for ways to address systems that are not uniform well-mixed systems.

F. Miscellaneous Changes

The EPA also made a number of clarifying changes to several sections of the August 1996 proposal. Examples of provisions that were revised to clarify requirements include § 63.145(f)(5), § 63.146(d)(1), and the oxygen control system requirements in section 2.1.6 of Methods 304A and 304B. The EPA believes that these revisions clarify the original intent and do not alter the effect of the rule.

In addition to clarifying changes to the August 1996 proposed amendments to the rule, the EPA also made minor revisions to provide consistency with other similar provisions elsewhere in the rule or in other rules. The EPA slightly revised the provisions in § 63.144(b)(5)(i)(C) to provide consistency between the requirements for use of alternative methods allowed in the HON with similar requirements in 40 CFR part 265, subpart CC (61 FR 59932). One of the changes is to remove a requirement to perform the initial calibration of the analytical system with the compounds for which the analysis is being conducted for Methods 624 and 625. This requirement is already addressed in the procedures outlined in Methods 624 and 625. The other change is to reference a procedure that may be used to add compounds to a method's published list of approved compounds for Methods 624, 625, 1624, and 1625. The record retention requirements for the heat exchanger monitoring plan in § 63.104(c) were revised from the requirements in § 63.103(c) to specify requirements that are similar to the proposed requirements in § 63.152(g)(1)(vi)(D). The revised provisions require that the owner or operator maintain, at all times, the monitoring plan that is currently in use and retain copies of the most recently superceded plan for 15 years. This revision was made to ensure that there could be no misunderstanding that copies of the current plan must be maintained regardless of the duration of the retention period.

G. Technical Corrections

The following amendments are minor technical corrections that were not part of the August 26, 1996 proposal. These changes are being made as part of today's action as a matter of efficiency in rulemaking. Furthermore, these changes are noncontroversial and do not substantively change the requirements of the rule. By promulgating these technical corrections directly as a final rule, the EPA is foregoing an

opportunity for public comment on a notice of proposed rulemaking. Section 553(b) of title 5 of the United States Code and section 307(b) of the CAA permit an agency to forego notice and comment when "the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefore in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest." The EPA finds that notice and comment regarding these minor technical corrections are unnecessary due to their noncontroversial nature and because they do not substantively change the requirements of the HON. The EPA finds that this constitutes good cause under 5 U.S.C. 553(b) for a determination that the issuance of a notice of proposed rulemaking is unncessary.

1. Removal of Caprolactam From Table 2 of 40 CFR Part 63, Subpart F

On June 18, 1996 (61 FR 30816), the EPA took final action deleting caprolactam from the list of hazardous air pollutants under section 112(b) of the CAA. Accordingly, as caprolactam is no longer subject to regulation under section 112(d) of the CAA, the EPA is removing caprolactam from table 2 of 40 CFR part 63, subpart F.

2. Correction of § 63.174(h)(2)

On June 20, 1996 (61 FR 31440), the EPA amended § 63.174(h)(1) of subpart H to replace references to "glass or glass-lined connectors" with the terminology "ceramic or ceramic-lined connectors." This change was made to use the more generic terminology for these connectors (60 FR 18074). The need to amend § 63.174(h)(2) was overlooked at the time these amendments were issued. In today's action, the EPA is revising § 63.174(h)(2) to use the terminology "ceramic or ceramic-lined connectors" instead of "glass or glass-lined connectors". This change will remove an inconsistency in the drafting of § 63.174(h).

IV. Administrative Requirements

A. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in the rule under the Provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060–0282. An Information Collection Request (ICR) document was prepared by the EPA (ICR No. 1414.02) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., S.W.; Washington DC 20460 or by calling (202) 260–2740.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15.

The changes included in this rule will have no impact on the information collection burden estimates previously made. The changes consist of new definitions, alternative test procedures, and clarifications of requirements. The changes are not additional requirements. Consequently, the ICR has not been revised for this rule.

B. Executive Order 12866 Review

Under Executive Order 12866, the EPA must determine whether the proposed 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 affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in 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 obligations of recipients thereof; or

(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.

The HON rule promulgated on April 22, 1994 was considered "significant" under Executive Order 12866, and a regulatory impact analysis was prepared. The amendments issued today clarify the rule and correct structural problems with the drafting of some sections. The amendments also provide additional flexibility for sources and provide opportunities to reduce the recordkeeping and reporting burden. These amendments do not add any new control requirements. Therefore, this regulatory action is considered "not significant."

C. Regulatory Flexibility

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities. See the April 22, 1994 **Federal Register** (59 FR 19449) for the basis for this determination. The changes to the rule remove a reporting requirement and provide additional time to request compliance extensions. Therefore, the changes do not create a burden for any of the regulated entities.

D. Submission to Congress and the General Accounting Office

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

E. Unfunded Mandates Reform Act

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

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

List of Subjects in 40 CFR Part 63

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

Dated: December 26, 1996.

Carol M. Browner,

Administrator.

Chapter I, part 63 of the Code of Federal Regulations 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.*

Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

2. Section 63.100 is amended as follows:

a. By revising paragraphs (b)(2), (c), (e), (f) introductory text, (f)(1), (g) introductory text, (g)(1) introductory text in paragraphs, (g)(2) introductory text, (h)(1) introductory text, (h)(2) introductory text, (h)(1)(i), (h)(2)(i), (h)(2)(ii)(A), (j)(4), (k)(1), (k)(2), (k)(3) introductory text;

b. By redesignating paragraphs (f)(6) through (f)(9) as (f)(8) through (f)(11);

c. By adding paragraphs (f)(6), (f)(7), (g)(3), (g)(4), (h)(3), and (k)(9); and

d. By removing paragraph (h)(2)(v).

The revisions and additions read as follows:

§63.100 Applicability and designation of source.

* * * * *

(b) * * *

(2) Use as a reactant or manufacture as a product, or co-product, one or more of the organic hazardous air pollutants listed in table 2 of this subpart;

* * * * *

(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 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.

* * * * *

(e) The source to which this subpart applies is the collection of the process vents; storage vessels; transfer racks; waste management units; maintenance wastewater; heat exchange systems; equipment identified in § 63.149 of subpart G; 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 collection of all chemical manufacturing process units at a major source that meet the criteria specified in paragraphs (b)(1) through (b)(3) of this section. The source also includes equipment required by, or utilized as a method of compliance with this subpart F, subpart G or H of this part which may include control devices and recovery devices.

(1) This subpart applies to maintenance wastewater and heat exchange systems within a source that is subject to this subpart.

(2) This subpart F and subpart G of this part apply to process vents, storage vessels, transfer racks, equipment identified in § 63.149 of subpart G of this part, and wastewater streams and associated treatment residuals within a source that is subject to this subpart.

(3) This subpart F and subpart H of this part apply to 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. If specific items of equipment, comprising part of a chemical manufacturing process unit subject to this subpart, are managed by different administrative organizations (e.g., different companies, affiliates, departments, divisions, etc.), those items of equipment may be aggregated with any chemical manufacturing process unit within the source for all purposes under subpart H of this part, providing there is no delay in the applicable compliance date in § 63.100(k).

(f) The source includes the emission points listed in paragraphs (f)(1) through (f)(11) of this section, but those emission points are not subject to the requirements of this subpart F and subparts G and H of this part. This subpart does not require emission points that are listed in paragraphs (f)(1) through (f)(11) of this section to comply with the provisions of subpart A of this part.

(1) Equipment that is located within a chemical manufacturing process unit that is subject to this subpart but the equipment does not contain organic hazardous air pollutants.

* * * * *

(6) Water from testing of deluge systems;

(7) Water from testing of firefighting systems;

* * * * *

(g) The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(4) 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 dedicated to a chemical manufacturing process unit, the storage vessel shall be considered part of that chemical manufacturing process unit.

* * * * *

(2) If a storage vessel is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

* * * * *

(3) Where a storage vessel is located at a major source that includes one or more chemical manufacturing process units which place material into, or receive materials from the storage vessel, but the storage vessel is located in a tank farm (including a marine tank farm), the applicability of this subpart F and subpart G of this part shall be determined according to the provisions in paragraphs (g)(3)(i) through (g)(3)(iv) of this section.

(i) The storage vessel may only be assigned to a chemical manufacturing process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw material, as appropriate). With respect to any chemical manufacturing process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the chemical manufacturing process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the chemical manufacturing process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, this subpart F and subpart G of this part do not apply to the storage vessel.

(iii) If there is only one chemical manufacturing process unit at the major source that meets the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that chemical manufacturing process unit. Applicability of this subpart F and subpart G to this part to the storage vessel shall then be determined

according to the provisions of paragraph (b) of this section.

(iv) If there are two or more chemical manufacturing process units at the major source that meet the criteria of paragraph (g)(3)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those chemical manufacturing process units according to the provisions of paragraph (g)(2) of this section. The predominant use shall be determined among only those chemical manufacturing process units that meet the criteria of paragraph (g)(3)(i) of this section. Applicability of this subpart F and subpart G of this part to the storage vessel shall then be determined according to the provisions of paragraph (b) of this section.

(4) If the storage vessel begins receiving material from (or sending material to) another chemical manufacturing process unit, or ceasing to receive material from (or send material to) a chemical manufacturing process unit, or if the applicability of this subpart F and subpart G of this part to a storage vessel has been determined according to the provisions of paragraphs (g)(2)(i) through (g)(2)(iii) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(h) * * *

(1) Where a loading rack is dedicated to 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)(9) and (f)(10) 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.

* * * * *

(2) If a loading rack is shared among chemical manufacturing process units, then the applicability of this subpart F and subpart 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)(iv) 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 paragraphs (f)(9) or (f)(10) of this section.

(ii) * * *

(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 paragraphs (f)(9) or (f)(10) of this section.

* * * * *

(3) If a loading rack that was dedicated to a single chemical manufacturing process unit begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (h)(2)(i) through (h)(2)(iv) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the loading rack, loading arm, or loading hose.

* * * * *

(j) * * *

(4) Process vents from batch operations within a chemical manufacturing process unit;

* * * * *

(k) * * *

(1)(i) New sources that commence construction or reconstruction after December 31, 1992, but before August 27, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by April 22, 1994, whichever is later, as provided in § 63.6(b) of subpart A of this part, and further, where start-up occurs before January 17, 1997 shall also be in compliance with this subpart F and subparts G and H of this part (as amended on January 17, 1997) by January 17, 1997, except that, with respect to all new sources that commenced construction or reconstruction after December 31, 1992, and before August 27, 1996:

(A) Heat exchange systems and maintenance wastewater, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F no later than initial start-up or 180 days after January 17, 1997, whichever is later;

(B) Process wastewater streams and equipment subject to § 63.149, that are part of a new source on which construction or reconstruction commenced after December 31, 1992, but before August 27, 1996, shall be in compliance with this subpart F and subpart G of this part no later than initial start-up or 180 days after January 17, 1997, whichever is later; and

(ii) New sources that commence construction after August 26, 1996 shall be in compliance with this subpart F, subparts G and H of this part upon initial start-up or by January 17, 1997, whichever is later.

(2) Existing sources shall be in compliance with this subpart F and subpart G of this part no later than the dates specified in paragraphs (k)(2)(i) and (k)(2)(ii) of this section, 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 permitting authority as provided in § 63.6(i) of subpart A of this part.

(i) Process vents, storage vessels, and transfer racks at an existing source shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1997.

(ii) Heat exchange systems and maintenance wastewater shall be in compliance with the applicable sections of this subpart, and equipment subject to § 63.149 and process wastewater streams shall be in compliance with the applicable sections of this subpart and subpart G of this part no later than April 22, 1999, except as provided in paragraphs (k)(2)(ii)(A) and (k)(2)(ii)(B) of this section.

(A) If a process wastewater stream or equipment subject to § 63.149 is subject to the control requirements of subpart G of this part due to the contribution of nitrobenzene to the total annual average concentration (as determined according to the procedures in § 63.144(b) of subpart G of this part), the wastewater stream shall be in compliance no later than January 18, 2000.

(B) If a process wastewater stream is used to generate credits in an emissions average in accordance with § 63.150 of subpart G of this part, the process wastewater stream shall be in compliance with the applicable sections of subpart G of this part no later than April 22, 1997.

(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, except as provided for in paragraphs (k)(4) through (k)(8) of this section, unless an extension has been granted by the Administrator as provided in § 63.182(a)(6) of this part or granted by the permitting authority as provided in § 63.6(i) of subpart A of this part. The group designation for each

process unit is indicated in table 1 of this subpart.

* * * * *

(9) All terms in this subpart F or subpart G of this part that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods.

(i) Notwithstanding time periods specified in this subpart F or subpart G of this part for completion of required tasks, such time periods may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(ii) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraphs (k)(9)(ii)(A) or (k)(9)(ii)(B) of this section, as appropriate.

(A) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(B) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(iii) In all instances where a provision of this subpart F or subpart G of this part requires completion of a task during each of multiple successive periods, an owner or operator may perform the required task at any time during the specified period, provided the task is conducted at a reasonable interval after completion of the task during the previous period.

* * * * *

3. Section 63.101 is amended as follows:

a. By revising the definitions of "Chemical manufacturing process unit," "Control device", "Process vent", "Recovery device," "Shutdown", and "Start-up", the first sentence in the definition for "Transfer rack", and revising the definitions for "Unit operation", and "Vapor balancing system"; and "Wastewater"; and

b. By adding in alphabetical order the definitions of "Fuel gas," "Fuel gas system", "On-site or On site", "Recapture device", and "Waste management unit" to read as follows:

§ 63.101 Definitions.

* * * * *

Chemical manufacturing process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. A chemical manufacturing process unit consists of more than one unit operation. 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; associated recovery devices; 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 combustion device, recovery device, or recapture device. 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), recapture devices are considered control devices but recovery devices are not considered control devices. For a steam stripper, a primary condenser is not considered a control device.

* * * * *

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment such as furnaces and gas turbines either singly or in combination.

* * * * *

On-site or *On site* means, with respect to records required to be maintained by this subpart, that the records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the chemical manufacturing process unit to which the records pertain, or storage in central files elsewhere at the major source.

* * * * *

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 are gas streams that are discharged to the atmosphere (with or without passing through a control device) either directly or after passing through one or more recovery devices. Process vents exclude relief valve discharges, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under subpart H of this part.

* * * * *

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes of the monitoring, recordkeeping, and reporting requirements of subpart G of this part, recapture devices are considered recovery devices.

* * * * *

Shutdown means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of a chemical manufacturing

process unit or a reactor, air oxidation reactor, distillation unit, waste management unit, equipment required or used to comply with this subpart F, subparts G, or H of this part or the emptying and degassing of a storage vessel. Shutdown does not include the routine rinsing or washing of equipment in batch operation between batches.

* * * * *

Start-up means the setting into operation of a chemical manufacturing process unit or a reactor, air oxidation reactor, distillation unit, waste management unit, or equipment required or used to comply with this subpart F, subpart G, or H of this part or a storage vessel after emptying and degassing. Start-up includes initial start-up, operation solely for testing equipment, the recharging of equipment in batch operation, and transitional conditions due to changes in product for flexible operation units.

* * * * *

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/or railcars with organic liquids that contain one or more of the organic hazardous air pollutants listed in table 2 of this subpart. * * *

* * * * *

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 units, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Vapor balancing system means a piping system that is designed to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected organic hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected by a common header or to compress and route to a process or a fuel gas system the collected organic hazardous air pollutants vapors.

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: Wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery then it is part of a chemical manufacturing process unit and is not a waste management unit.

Wastewater means water that:

(1) Contains either:

(i) an annual average concentration of Table 9 compounds (as defined in § 63.111 of subpart G of this part) of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater, or

(ii) An annual average concentration of Table 9 compounds (as defined in § 63.111 of subpart G) of at least 10,000 parts per million by weight at any flow rate, and that

(2) Is discarded from a chemical manufacturing process unit that meets all of the criteria specified in § 63.100 (b)(1) through (b)(3) of this subpart. Wastewater is process wastewater or maintenance wastewater.

4. Section 63.102 is amended by revising paragraphs (a)(1) and (a)(2); adding paragraphs (a)(3) and (a)(4) to read as follows:

§ 63.102 General standards.

(a) * * *

(1) The provisions set forth in this subpart F and subpart G of this part shall apply at all times except during periods of start-up or shutdown (as defined in § 63.101 of this subpart), malfunction, or non-operation of the chemical manufacturing process unit (or specific portion thereof) resulting in cessation of the emissions to which this subpart F and subpart G of this part apply. However, if a start-up, shutdown, malfunction or period of non-operation 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 this subpart F and subpart G of this part during the start-up, shutdown, malfunction or period of non-operation. 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 the 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 or shutdown, as defined in § 63.101(b) of this subpart, malfunction, process unit shutdown (as defined in § 63.161 of subpart H of this part), or non-operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which subpart H of this part applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the provisions of this subpart F, subpart G or H of this part during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene requirements of this subpart F, subpart G or H of this part applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning, or if the owner or operator must shut down the equipment to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the chemical manufacturing process unit or portion thereof.

(4) During start-ups, shutdowns, and malfunctions when the requirements o this subpart F, subparts G and/or H of this part do not apply pursuant to paragraphs (a)(1) through (a)(3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of this paragraph, the term "excess emissions" means emissions in excess of those that would have occurred if there were no start-up, shutdown, or malfunction and the owner or operator complied with the relevant provisions of this subpart F, subparts G and/or H of this part. The measures to be taken shall be identified in the applicable start-up, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the source. Back-up control devices are not required, but may be used if available.

* * * * *

5. Section 63.103 is amended by adding two sentences to the end of the introductory text of paragraph (c); revising paragraphs (c)(1), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii); removing paragraph (c)(2)(iv); revising paragrap. (d)(1); revising paragraph (e); and

revising the last sentence of paragraph (f) to read as follows:

§ 63.103 General compliance, reporting, and recordkeeping provisions.

* * * * *

(c) * * * If an owner or operator submits copies of reports to the applicable EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining four and one-half 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) * * *

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment or continuous monitoring systems used to comply with this subpart F, subpart G, or H of this part during which excess emissions (as defined in § 63.102(a)(4)) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions (as defined in § 63.102(a)(4)) occur, 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. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(iii) For continuous monitoring systems used to comply with subpart G of this part, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

* * * * *

(d) * * *

(1) Wherever subpart A of this part 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 on or before the specified date.

* * * * *

(e) The owner or operator of a chemical manufacturing process unit which meets the criteria of § 63.100(b)(1) and § 63.100(b)(3), but not the criteria of § 63.100(b)(2), shall comply with the requirements of either paragraph (e)(1) or (e)(2) of this section.

(1) Retain information, data, and analysis used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant. 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.

(2) When requested by the Administrator, demonstrate that the chemical manufacturing process unit does not use as a reactant or manufacture as a product or co-product any organic hazardous air pollutant.

* * * * *

(f) * * * Compliance with this subpart F and subpart G of this part shall be no later than April 22, 1997, or as otherwise specified in § 63.100(k)(2)(ii) of this subpart, unless an extension has been granted by the EPA Regional Office or permitting authority as provided in § 63.6(i) of subpart A of this part.

* * * * *

6. Section 63.104 is revised to read as follows:

§ 63.104 Heat exchange system requirements.

(a) Unless one or more of the conditions specified in paragraphs (a)(1) through (a)(6) of this section are met, owners and operators of sources subject to this subpart shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of § 63.100 (b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in § 63.100(c) of this subpart, according to the provisions in either paragraph (b) or (c) of this section. Whenever a leak is detected, the owner or operator shall comply with the requirements in paragraph (d) of this section.

(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) There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(3) The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 part per million or less above influent concentration or 10 percent or less above influent concentration, whichever is greater.

(4) The once-through heat exchange system is subject to an NPDES permit that:

(i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water;

(ii) Specifies or includes the normal range of the parameter or condition;

(iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and

(iv) Requires the owner or operator to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart.

(6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 9 of subpart G of this part.

(b) The owner or operator who elects to comply with the requirements of paragraph (a) of this section by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section. The cooling water shall be monitored for total hazardous

air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system.

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(2)(i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of this subpart.

(ii) For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 9 of subpart G of this part.

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers.

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units.

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of this section. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

(c) The owner or operator who elects to comply with the requirement of paragraph (a) of this section by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section. Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators.

(1) The owner or operator shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of this section. The plan shall include the information specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.

(iii) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the owner or operator shall revise the plan and document the basis for the changes. The owner or operator shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) The owner or operator shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on-site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the owner or operator shall retain the most recent superseded plan at least until 5 years from the date of its creation. The superseded plan shall be retained on-site (or accessible from a central location by computer or other means that provides access within two hours after a request) for at least 6 months after its creation.

(d) If a leak is detected according to the criteria of paragraph (b) or (c) of this section, the owner or operator shall comply with the requirements in paragraphs (d)(1) and (d)(2) of this section, except as provided in paragraph (e) of this section.

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the owner or operator receives results of monitoring tests indicating a leak. The leak shall be repaired unless the owner or operator demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

(e) Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in paragraph (e)(1) or (e)(2) of this section is met. All time periods in paragraphs (e)(1) and (e)(2) of this section shall be determined from the date when the owner or operator determines that delay of repair is necessary.

(1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.

(2) If a shutdown is not expected within the next 2 months, the owner or operator may delay repair as provided in paragraph (e)(2)(i) or (e)(2)(ii) of this section. Documentation of a decision t delay repair shall state the reasons repair was delayed and shall specify a

schedule for completing the repair as soon as practical.

(i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the owner or operator may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The owner or operator shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section.

(A) The owner or operator shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total hazardous air pollutants listed in table 4 of this subpart in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The owner or operator may calculate potential emissions using total organic carbon concentration instead of total hazardous air pollutants listed in table 4 of this subpart.

(B) The owner or operator shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(ii) If repair is delayed for reasons other than those specified in paragraph (e)(2)(i) of this section, the owner or operator may delay repair up to a maximum of 120 calendar days. The owner shall demonstrate that the necessary parts or personnel were not available.

(f)(1) *Required records.* The owner or operator shall retain the records identified in paragraphs (f)(1)(i) through (f)(1)(iv) of this section as specified in § 63.103(c)(1).

(i) Monitoring data required by this section indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;

(ii) Records of any leaks detected by procedures subject to paragraph (c)(2) of this section and the date the leak was discovered;

(iii) The dates of efforts to repair leaks; and

(iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

(2) *Reports.* 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 (e)(2) 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 the leak was successfully repaired.

7. Current tables 2 and 3 of subpart F are revised and table 4 is added to read as follows:

TABLE 2 TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS

Chemical name[a,b]	CAS No.[c]
Acenaphthene	83329
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Allzarin	72480
Allyl chloride	107051
Aniline	62533
Anisidine (o-)	90040
Anthracene	120127
Anthraquinone	84651
Benzene	71432
Benzotrichloride	98077
Benzyl chloride	100447
Biphenyl	92524
Bis(chloromethyl)ether	542881
Bromoform	75252
Bromonaphthalene	27497514
Butadiene (1,3-)	106990
Carbon disulfide	75150
Carbon tetrachloride	56235
Chloroacetic acid	79118
Chloroacetophenone (2-)	532274
Chlorobenzene	108907
2-Chloro-,1,3-butadiene (Chloroprene)	126998
Chloroform	67663
Chloronaphthalene	25586430
Chrysene	218019
Cresols and cresylic acids (mixed)	1319773
Cresol and cresylic acid (o-)	95487
Cresol and cresylic acid (m-)	108394

TABLE 2 TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS—Continued

Chemical name[a,b]	CAS No.[c]
Cresol and cresylic acid (p-)	106445
Cumene	98828
Dichlorobenzene (p-)	106467
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-)	58147
Dimethylphthalate	131113
Dimethylsulfate	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
Fluoranthene	206440
Formaldehyde	50000
Glycol ethers[d].	
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	110543
Hydroquinone	123319
Isophorone	78591
Maleic anhydride	108316
Methanol	67561
Methylbromide (Bromomethane)	74839
Methylchloride (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
Naphthalene sulfonic acid (α)	85472
Naphthalene sulfonic acid (β)	120183
Naphthol (α)	90153
Naphthol (β)	135193
Naphtholsulfonic acid (1-)	567180
Naphthylamine sulfonic acid (1,4-)	84866
Naphthylamine sulfonic acid (2,1-)	81163
Naphthylamine (1-)	134327
Naphthylamine (2-)	91598
Nitronaphthalene (1-)	86577
Nitrobenzene	98953
Nitrophenol (p-)	100027
Nitropropane (2-)	79469
Phenanthrene	85018
Phenol	108952
Phenylenediamine (p-)	106503
Phosgene	75445
Phthalic anhydride	85449
Propiolactone (beta-)	57578
Propionaldehyde	123386
Propylene dichloride (1,2–Dichloropropane)	78875
Propylene oxide	75569

TABLE 2 TO SUBPART F—ORGANIC HAZARDOUS AIR POLLUTANTS—Continued

Chemical name [a,b]	CAS No.[c]
Pyrene	129000
Quinone	106514
Styrene	100425
Tetrachloroethane (1,1,2,2-)	79345
Tetrachloroethylene (Perchloroethylene)	127184
Tetrahydronaphthalene	119642
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," 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 No.=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.

TABLE 3.—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.	
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.[a]
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 §63.101(a) 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	This is a reserved paragraph in subpart A of part 63.
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)(1)	Yes	Except the terms "source" and "stationary source" in §63.5(a)(1) should be interpreted as having the same meaning as "affected source."

TABLE 3.—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H[a]—Continued

Reference	Applies to subparts F, G, and H	Comment
63.5(a)(2)	Yes.	
63.5(b)(1)	Yes	Except § 63.100(l) defines when construction or reconstruction is subject to standards for new sources.
63.5(b)(2)	No	This is a reserved paragraph in subpart A of part 63.
63.5(b)(3)	Yes.	
63.5(b)(4)	Yes	Except the cross reference to § 63.9(b) is limited to § 63.9(b) (4) and (5). Subpart F overrides § 63.9 (b)(1) through (b)(3).
63.5(b)(5)	Yes.	
63.5(b)(6)	Yes	Except § 63.100(l) defines when construction or reconstruction is subject to standards for new sources.
63.5(c)	No	This is a reserved paragraph in subpart A of part 63.
63.5(d)(1)(i)	No	For subpart G, see § 63.151(b) (2)(ii) and (2)(iii) for the applicability and timing of this submittal; for subpart H, see § 63.182(b) (2)(ii) and (b)(2)(iii) for applicability and timing of this submittal.
63.5(d)(1)(ii)	Yes	Except § 63.5(d)(1)(ii)(H) does not apply.
63.5(d)(1)(iii)	No	Subpart G requires submittal of the Notification of Compliance Status in § 63.152(b); subpart H specifies requirements in § 63.182(c).
63.5(d)(2)	No.	
63.5(d)(3)	Yes—subpart G No—subpart H.	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	Except the cross-reference to § 63.5(d)(1) is changed to § 63.151(b)(2)(ii) of subpart G and to § 63.182(b)(2)(ii) of subpart H. The cross-reference to § 63.5(b)(2) does not apply.
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 Clean Air 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 dates for subparts G and H.
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	Except as otherwise specified for individual paragraphs. Does not apply to Group 2 emission points unless they are included in an emissions average.[b]
63.6(e)(1)(i)	No	This is addressed by § 63.102(a)(4) of subpart F.
63.6(e)(1)(ii)	Yes.	
63.6(e)(1)(iii)	Yes.	
63.6(e)(2)	Yes.	
63.6(e)(3)(i)	Yes	For subpart H, the startup, shutdown, and malfunction plan requirement of § 63.6(e)(3)(i) is limited to control devices subject to the provisions of subpart H and is optional for other equipment subject to subpart H. The startup, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair.
63.6(e)(3)(i)(A)	No	This is addressed by § 63.102(a)(4).
63.6(e)(3)(i)(B)	Yes.	
63.6(e)(3)(i)(C)	Yes.	
63.6(e)(3)(ii)	Yes.	
63.6(e)(3)(iii)	No	Recordkeeping and reporting are specified in § 63.103(c)(2) of subpart F and § 63.152(d)(1) of subpart G.
63.6(e)(3)(iv)	No	Recordkeeping and reporting are specified in § 63.103(c)(2) of subpart F and § 63.152(d)(1) of subpart G.
63.6(e)(3)(v)	No	Records retention requirements are specified in § 63.103(c).
63.6(e)(3)(vi)	Yes.	
63.6(e)(3)(vii)	Yes.	
63.6(e)(3)(vii)(A)	Yes.	
63.6(e)(3)(vii)(B)	Yes	Except the plan must provide for operation in compliance with § 63.102(a)(4).
63.6(e)(3)(vii)(C)	Yes.	
63.6(e)(3)(viii)	Yes.	
63.6(f)(1)	No	§ 63.102(a) of subpart F specifies when the standards apply.

TABLE 3.—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H[a]—Continued

Reference	Applies to subparts F, G, and H	Comment
63.6(f)(2)(i)	Yes.	
63.6(f)(2)(ii)	Yes—subpart G No—subpart H.	§63.152(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	For subpart G, §63.151(a)(6) specifies procedures; for subpart H, §63.182(a)(6) specifies procedures.
63.6(i)(4)(i)(A)	Yes.	
63.6(i)(4)(i)(B)	No	Dates are specified in §63.151(a)(6)(i) of subpart G and §63.182(a)(6)(i) of subpart H.
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. For subpart G, test results must be submitted in the Notification of Compliance Status due 150 days after compliance date, as specified in §63.152(b); for subpart H, all test results subject to reporting are reported in periodic reports.
63.7(a)(2)	No	
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 subpart G: Not applicable to subpart H because no performance test required by subpart 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	For subpart G, submit as part of periodic report required by §63.152(c); for subpart H, retain as required by §63.181(g)(2)(ii).
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	Subpart G specifies monitoring frequency by kind of emission point and control technology used (e.g., §63.111, §63.120(d)(2), §63.143, and §63.152(f)); subpart H does not require use of continuous monitoring systems.
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 §63.151(f) or (g) of subpart G; not applicable to subpart H because subpart H specifies acceptable alternative methods.

TABLE 3.—GENERAL PROVISIONS APPLICABILITY TO SUBPARTS F, G, AND H[a]—Continued

Reference	Applies to subparts F, G, and H	Comment
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 continuous emission monitoring.
63.8(g)	No	Data reduction procedures specified in §63.152(f) and (g) of subpart G; not applicable to subpart H.
63.9(a)	Yes.	
63.9(b)(1)	No	Specified in §63.151(b)(2) of subpart G; specified in §63.182(b) of subpart H.
63.9(b)(2)	No	Initial Notification provisions are specified in §63.151(b) of subpart G; in §63.182(b) of subpart H.
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; in §63,182(b)(2) of subpart H.
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; in §63.182 (b)(2) of subpart H.
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 and §63.182 (c) of subpart H specify 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 G specifies performance test reporting; not applicable to subpart H.
63.10(d)(3)	No.	
63.10(d)(4)	Yes.	
63.10(d)(5)	Yes	Except that reports required by §63.10(d)(5) shall be submitted at the time specified in §63.152(d) of subpart G and in §63.182(d) of subpart H.
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.

TABLE 4. TO SUBPART F.—ORGANIC HAZARDOUS AIR POLLUTANTS SUBJECT TO COOLING TOWER MONITORING REQUIREMENTS IN §63.104

Chemical name	CAS Number[a]
Acetaldehyde	75070
Acetonitrile	75058
Acetophenone	98862
Acrolein	107028
Acrylonitrile	107131
Allyl chloride	107051
Aniline	62533
Anisidine (o-)	90040
Benzene	71432
Benzyl chloride	100447
Biphenyl	92524
Bromoform	75252
Butadiene (1,3-)	106990
Carbon disulfide	75150

TABLE 4. TO SUBPART F.—ORGANIC HAZARDOUS AIR POLLUTANTS SUBJECT TO COOLING TOWER MONITORING REQUIREMENTS IN § 63.104—Continued

Chemical name	CAS Number*
Carbon tetrachloride	56235
Chloroacetophenone (2-)	532274
Chlorobenzene	108907
2-Chloro-1,3-butadiene (Chloroprene)	126998
Chloroform	67663
Cresol and cresylic acid (o-)	95487
Cresol and cresylic acid (m-)	108394
Cresol and cresylic acid (p-)	106445
Cumene	98828
Dichlorobenzene (p-)	106467
Dichlorobenzidine (3,3'-)	91941
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107062
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444
Dichloropropene (1,3-)	542756
Diethylene glycol diethyl ether	112367
Diethylene glycol dimethyl ether	111966
Diethyl sulfate	64675
Dimethylaniline (N,N-)	121697
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
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl chloride (Chloroethane)	75003
Ethylene dibromide (Dibromoethane)	106934
Ethylene glycol dimethyl ether	110714
Ethylene glycol monobutyl ether	111762
Ethylene glycol monobutyl ether acetate	112072
Ethylene glycol monoethyl ether acetate	111159
Ethylene glycol monoethyl ether	110805
Ethylene glycol monomethyl ether	109864
Ethylene glycol monomethyl ether acetate	110496
Ethylene glycol monopropyl ether	2807309
Ethylene oxide	75218
Ethylidene dichloride (1,1-Dichloroethane)	75343
Formaldehyde	50000
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachloroethane	67721
Hexane	110543
Isophorone	78591
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 methacrylate	80626
Methyl tert-butyl ether	1634044
Methylene chloride (Dichloromethane)	75092
Methylenedianiline (4,4'-)	101779
Naphthalene	91203
Nitrobenzene	98953
Nitropropane (2-)	79469
Phenol	108952
Phenylenediamine (p-)	106503
Phosgene	75445
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
Toluidine (o-)	95534

TABLE 4. TO SUBPART F.—ORGANIC HAZARDOUS AIR POLLUTANTS SUBJECT TO COOLING TOWER MONITORING REQUIREMENTS IN § 63.104—Continued

Chemical name	CAS Number*
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
Xylene (m-)	108383
Xylene (o-)	95476
Xylene (p-)	106423

*CAS Number=Chemical Abstract Service number.

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

8. Section 63.110 is amended by adding paragraphs (d)(10) and (h) and by revising paragraph (e)(1) to read as follows:

§ 63.110 Applicability.

* * * * *

(d) * * *

(10) As an alternative to the requirements of paragraphs (d)(2), (d)(3), (d)(5), (d)(6), (d)(8), and/or (d)(9) of this section as applicable, if a chemical manufacturing process unit has equipment subject to the provisions of this subpart and equipment subject to the provisions of 40 CFR part 60, subpart III, NNN, or RRR, the owner or operator may elect to apply this subpart to all such equipment in the chemical manufacturing process unit. If the owner or operator elects this method of compliance, all total organic compounds minus methane and ethane, in such equipment shall be considered for purposes of applicability and compliance with this subpart, as if they were organic hazardous air pollutants. Compliance with the provisions of this subpart, in the manner described in this paragraph, shall be deemed to constitute compliance with 40 CFR part 60, subpart III, NNN, or RRR, as applicable.

(e) * * *

(1) 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 FF is required to comply with the provisions of both this subpart and 40 CFR part 61, subpart FF. Alternatively, the owner or operator may elect to comply with the provisions of paragraphs (e)(1)(i) and (e)(1)(ii) of this section, which shall constitute compliance with the provisions of 40 CFR part 61, subpart FF.

(i) Comply with the provisions of this subpart; and

(ii) For any Group 2 wastewater stream or organic stream whose benzene emissions are subject to control through the use of one or more treatment processes or waste management units under the provisions of 40 CFR part 61, subpart FF on or after December 31, 1992, comply with the requirements of this subpart for Group 1 wastewater streams.

* * * * *

(h) *Overlap with other regulations for monitoring, recordkeeping, or reporting with respect to combustion devices, recovery devices, or recapture devices.* After the compliance dates specified in § 63.100 of subpart F of this part, if any combustion device, recovery device, or recapture device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA or CC, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA or CC and the owner or operator complies with the periodic reporting requirements under 40 CFR part 264, subpart AA or CC that would apply to the device if the facility had final-permitted status, the owner or operator may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. The owner or operator shall identify which option has been selected in the Notification of Compliance Status required by § 63.152(b).

9. Section 63.111 is amended by redesignating "average concentration" as "annual average concentration" and "average flow rate" as "annual average flow rate"; revising the definition for "boiler"; adding the definition for "chemical manufacturing process unit"; adding the definition for "closed biological treatment process"; revising the definitions for "closed vent system," "combustion device," "continuous record," "continuous seal," "control device," and "cover"; adding the definition for "enhanced biological treatment system or enhanced biological treatment process"; revising the definitions for "flame zone" and "flow indicator"; adding the definitions for "fuel gas" and "fuel gas system"; revising the definitions for "Group 1 wastewater stream," "individual drain system," and "junction box"; removing the definition for "mass flow rate"; revising the definition for "metallic shoe seal or mechanical shoe seal"; adding the definition for "open biological treatment process"; removing the definition for "point of generation"; adding the definition for "point of determination"; revising the definition for "process unit," adding the definition for "recapture device"; revising the definitions for "recovery device," "reference control technology for process vents," "reference control technology for transfer racks," "reference control technology for wastewater" and "residual"; revising the definition for "specific gravity monitoring device"; adding the definitions for "Table 8 compound" and "Table 9 compound"; revising the definition for "temperature monitoring

device"; removing the definitions for "total volatile organic hazardous air pollutant concentration," "volatile organic concentration or VO concentration," and "volatile organic hazardous air pollutant concentration or VOHAP concentration"; and revising the definition of "waste management unit" to read as follows:

§ 63.111 Definitions.

* * * * *

Annual average concentration * * *

Annual average flow rate * * *

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator. Boiler also means any industrial furnace as defined in 40 CFR 260.10.

* * * * *

Chemical manufacturing process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product. A chemical manufacturing process unit consists of more than one unit operation. 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; associated recovery devices; 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.

Closed biological treatment process means a tank or surface impoundment where biological treatment occurs and air emissions from the treatment process are routed to either a control device by means of a closed vent system or to a fuel gas system by means of hard-piping. The tank or surface impoundment has a fixed roof, as defined in § 63.111 of this subpart, or a floating flexible membrane cover that meets the requirements specified in § 63.134 of this subpart.

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.

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 emissions.

* * * * *

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) or § 63.152(g) of this subpart.

* * * * *

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. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

* * * * *

Control device means any combustion device, recovery device, or recapture device. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents, recapture devices are considered control devices but 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 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 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.

* * * * *

Enhanced biological treatment system or enhanced biological treatment process means an aerated treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter homogeneously distributed throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation.

* * * * *

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

* * * * *

Flow indicator means a device which indicates whether gas flow is, or whether the valve position would allow gas flow to be, present in a line.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices, or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

* * * * *

Group 1 wastewater stream means a wastewater stream consisting of process wastewater as defined in § 63.101 of subpart F at an existing or new source that meets the criteria for Group 1 status in § 63.132(c) of this subpart for Table 9 compounds and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in § 63.132(d) of this subpart for Table 8 compounds.

* * * * *

Individual drain system means the stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes hard-piping, all process drains and junction boxes, together with their associated sewer lines and other junction boxes, manholes, sumps, and lift stations, conveying wastewater streams or residuals. 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.

* * * * *

Junction box means a manhole or access point to a wastewater sewer line or a lift station.

* * * * *

Metallic shoe seal or *mechanical shoe seal* means metal sheets that are held vertically against the wall of the storage

vessel by springs, weighted levers, or other mechanisms and 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.

* * * * *

Open biological treatment process means a biological treatment process that is not a closed biological treatment process as defined in this section.

* * * * *

Point of determination means each point where process wastewater exits the chemical manufacturing process unit.

Note to definition for point of determination: The regulation allows determination of the characteristics of a wastewater stream (1) at the point of determination or (2) downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of Table 8 or Table 9 compounds as determined in § 63.144 of this subpart. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy hazardous air pollutants.

* * * * *

Process unit has the same meaning as *chemical manufacturing process unit* as defined in this section.

* * * * *

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

* * * * *

Reference control technology for process vents means a combustion device or recapture device used to reduce organic hazardous air pollutant emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.

* * * * *

Reference control technology for transfer racks means a combustion device, recapture device, or recovery device used to reduce organic hazardous air pollutants 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(d) of this subpart or any of the other alternative control measures specified in § 63.138(b), (c), (e), (f), (g), or (h) 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 or for noncombustion devices controlling air emissions from waste management units other than surface impoundments or containers) the organic hazardous air pollutants 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 liquid or solid material containing Table 9 compounds 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.

* * * * *

Specific gravity monitoring device means a unit of equipment used to monitor specific gravity and having a minimum accuracy of ± 0.02 specific gravity units.

* * * * *

Table 8 compound means a compound listed in table 8 of this subpart.

Table 9 compound means a compound listed in table 9 of this subpart.

Temperature monitoring device means a unit of equipment used to monitor temperature and having a minimum accuracy of (a) ±1 percent of the temperature being monitored expressed in degrees Celsius (°C) or (b) ±0.5 degrees (°C), whichever is greater.

* * * * *

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: Wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is used for recovery, then it is part of a chemical manufacturing process unit and is not a waste management unit.

* * * * *

10. Section 63.112 is amended by revising the introductory text of paragraph (e) and adding paragraphs (e)(3) and (h) to read as follows:

§ 63.112 Emission standard.

* * * * *

(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, the leak inspection provisions in § 63.148, and the provisions in § 63.149 of this subpart.

* * * * *

(3) When emissions of different kinds (e.g., emissions from process vents, transfer operations, storage vessels, process wastewater, and/or in-process equipment subject to § 63.149 of this subpart) are combined, and at least one of the emission streams would be classified as Group 1 in the absence of combination with other emission streams, the owner or operator shall comply with the requirements of either paragraph (e)(3)(i) or paragraph (e)(3)(ii) of this section.

(i) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the

requirements in §§ 63.113 through 63.118 of this subpart G for process vents, and the requirements of §§ 63.126 through 63.130 for transfer operations); or

(ii) Comply with the first set of requirements identified in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section which applies to any individual emission stream that is included in the combined stream, where either that emission stream would be classified as Group 1 in the absence of combination with other emission streams, or the owner chooses to consider that emission stream to be Group 1 for purposes of this paragraph. Compliance with the first applicable set of requirements identified in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section constitutes compliance with all other requirements in paragraphs (e)(3)(ii)(A) through (e)(3)(ii)(E) of this section applicable to other types of emissions in the combined stream.

(A) The requirements of this subpart for Group 1 process vents, including applicable monitoring, recordkeeping, and reporting;

(B) The requirements of this subpart for Group 1 transfer racks, including applicable monitoring, recordkeeping, and reporting;

(C) The requirements of § 63.119(e) for control of emissions from Group 1 storage vessels, including monitoring, recordkeeping, and reporting;

(D) The requirements of § 63.139 for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting; or

(E) The requirements of § 63.139 for closed vent systems for control of emissions from in-process equipment subject to § 63.149, including applicable monitoring, recordkeeping, and reporting.

* * * * *

(h) Where the provisions of this subpart require a performance test, waiver of that requirement shall be addressed only as provided in § 63.103(b)(5) of subpart F of this part.

11. Section 63.113 is amended by revising the introductory text of paragraph (a); revising paragraph (a)(2); revising the second sentence in paragraph (a)(3); and revising paragraphs (c)(1) and (c)(2) to read as follows:

§ 63.113 Process vent provisions.

(a) The owner or operator of a Group 1 process vent as defined in this subpart shall comply with the requirements of paragraph (a)(1), (a)(2), or (a)(3) of this section.

* * * * *

(2) Reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen, and compliance can be determined by measuring either organic hazardous air pollutants or total organic carbon using the procedures in § 63.116 of this subpart.

(i) Compliance with paragraph (a)(2) of this section may be achieved by using any combination of combustion, recovery, and/or recapture devices, except that a recovery device may not be used to comply with paragraph (a)(2) of this section by reducing emissions of total organic hazardous air pollutants by 98 weight-percent, except as provided in paragraph (a)(2)(ii) of this section.

(ii) An owner or operator may use a recovery device, alone or in combination with one or more combustion or recapture devices, to reduce emissions of total organic hazardous air pollutants by 98 weight-percent if all the conditions of paragraphs (a)(2)(ii)(A) through (a)(2)(ii)(D) of this section are met.

(A) The recovery device (and any combustion device or recapture device which operates in combination with the recovery device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent) was installed before the date of proposal of the subpart of this part 63 that makes this subpart G applicable to process vents in the chemical manufacturing process unit.

(B) The recovery device that will be used to reduce emissions of total organic hazardous air pollutants by 98 weight-percent is the last recovery device before emission to the atmosphere.

(C) The recovery device, alone or in combination with one or more combustion or recapture devices, is capable of reducing emissions of total organic hazardous air pollutants by 98 weight-percent, but is not capable of reliably reducing emissions of total organic hazardous air pollutants to a concentration of 20 parts per million by volume.

(D) If the owner or operator disposed of the recovered material, the recovery device would comply with the requirements of this subpart for recapture devices.

(3) * * * If the TRE index value is greater than 1.0, 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.

* * * * *

(c) * * *

(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 exiting the combustion device shall be ducted to a halogen reduction 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 halogen reduction 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 reduction device was installed prior to December 31, 1992, the 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 halogen reduction 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.

* * * * *

12. Section 63.114 is amended by revising the introductory text of paragraph (a); revising paragraph (a)(4)(ii); adding paragraph (a)(5); revising the introductory text of paragraph (b); revising paragraphs (b)(3), (c)(1), (c)(3), revising the first sentence of paragraph (d)(1), and revising paragraph (d)(2); and adding a sentence to the end of paragraph (e) to read as follows:

§ 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, or that uses a recovery device or recapture device to comply with the requirements in § 63.113(a)(2) of this subpart, shall install monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), (a)(4), or (a)(5) of this section, depending on the type of device used. All monitoring equipment shall be installed, calibrated, maintained, and

operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

* * * * *

(4) * * *

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (a)(4)(ii)(A) through (a)(4)(ii)(C) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart specified in § 63.100(k) of subpart F of this part, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.

(C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in § 63.103(c).

(5) Where a recovery device or recapture device is used to comply with the requirements of § 63.113(a)(2) of this subpart, the owner or operator shall utilize the appropriate monitoring device identified in paragraph (b), (b)(1), (b)(2), or (b)(3) of this section.

(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 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 manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in § 63.113(e) of this subpart.

* * * * *

(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 or better, capable of recording the total regeneration stream mass or volumetric 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) * * *

(1) Uses a combustion device other than an incinerator, boiler, process heater, or flare; or

* * * * *

(3) Uses one of the combustion or recovery or recapture 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) * * *

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes.

* * *

(2) Secure the bypass line valve in the non-diverting 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 non-diverting position and the vent stream is not diverted through the bypass line.

(e) * * * The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under § 63.116 of this subpart, if the prior performance test was conducted using the same methods specified in § 63.116 and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

13. Section 63.115 is amended by revising the introductory text of paragraph (a) and the first sentence in the introductory text of paragraph (e) to read as follows:

§ 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 hazardous air pollutants or total organic carbon concentration or TRE index value, as specified under paragraph (b), (c), or (d) of this section, the sampling site shall be after the last recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present and prior to release to the atmosphere.

* * * * *

(e) The owner or operator of a Group 2 process vent shall recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent.

* * * * *

14. Section 63.116 is amended by revising paragraph (a)(1); by revising the introductory text of paragraph (b); revising paragraph (b)(3); adding paragraph (b)(5); revising the introductory text of paragraph (d); and revising paragraphs (d)(1), (d)(3), (d)(4), and (e) to read as follows:

§ 63.116 Process vent provisions—performance test methods and procedures to determine compliance.

(a) * * *

(1) The compliance determination shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions.

* * * * *

(b) An owner or operator is not required to conduct a performance test when any control device specified in paragraphs (b)(1) through (b)(5) of this section is used.

* * * * *

(3) A control device for which a performance test was conducted for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same methods specified in this section and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or

without adjustments, reliably demonstrate compliance despite process changes.

* * * * *

(5) 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, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

* * * * *

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction device to control halogenated process vent streams in compliance with § 63.113(c)(1) 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 halogen reduction 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 halogen reduction device and prior to any releases to the atmosphere.

* * * * *

(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 halogen reduction device shall be summed together. The mass emissions of the compounds present at the outlet of the scrubber or other halogen reduction 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 halogen reduction device is below 0.45 kilogram per hour.

* * * * *

(e) An owner or operator using a scrubber or other halogen reduction device 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.

15. Section 63.118 is amended by revising paragraph (a)(2); revising the introductory text of paragraph (b); and revising paragraph (b)(2) to read as follows:

§ 63.118 Process vents provisions—Periodic reporting and recordkeeping requirements.

(a) * * *

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.152(f). For flares, records of the times and duration of all periods during which all pilot flames are absent shall be kept rather than daily averages.

* * * * *

(b) Each owner or operator using a 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 § 63.113(a)(3) or § 63.113(d) of this subpart shall keep the following records up-to-date and readily accessible:

* * * * *

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.152(f). 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.

* * * * *

16. Section 63.119 is amended by revising paragraphs (a)(1), (a)(2), (b)(2), and (c)(4); and by adding new paragraphs (e)(6) and (f) to read as follows:

§ 63.119 Storage vessel provisions—reference control technology.

(a) * * *

(1) For each Group 1 storage vessel (as defined in table 5 of this subpart for existing sources and table 6 for new sources) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining 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, or routing the emissions to a process or a fuel gas system in accordance with the requirements in paragraph (b), (c), (d), (e), or (f) 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 hazardous air pollutants 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 route the emissions to a process or a fuel gas system as specified in paragraph (f) of this section, or equivalent as provided in § 63.121 of this subpart.

* * * * *

(b) * * *

(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 practical.

* * * * *

(c) * * *

(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 practical.

* * * * *

(e) * * *

(6) An owner or operator may use a combination of control devices to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(1) of this section. An owner or operator may use a combination of control devices installed on a storage vessel on or before December 31, 1992 to achieve the required reduction of total organic hazardous air pollutants specified in paragraph (e)(2) of this section.

(f) The owner or operator who elects to route emissions to a fuel gas system or to a process, 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 in paragraphs (f)(1) through (f)(3) of this section, as applicable.

(1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation. If emissions are routed to a process, the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (f)(1)(i) through (f)(1)(iv) of

this section. The owner or operator shall comply with the compliance demonstration requirements in § 63.120(f).

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(2) If the emissions are conveyed by a system other than hard-piping, any conveyance system operated under positive pressure shall be subject to the requirements of § 63.148 of this subpart.

(3) The fuel gas system or process shall be operating at all times when organic hazardous air pollutants emissions are routed to it except as provided in § 63.102(a)(1) of subpart F of this part and in paragraphs (f)(3)(i) through (f)(3)(iii) of this section. Whenever the owner or operator by-passes the fuel gas system or process, the owner or operator shall comply with the recordkeeping requirement in § 63.123(h) of this subpart. Bypassing is permitted if the owner or operator complies with one or more of the conditions specified in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) The liquid level in the storage vessel is not increased;

(ii) The emissions are routed through a closed-vent system to a control device complying with § 63.119(e) of this subpart; or

(iii) The total aggregate amount of time during which the emissions by-pass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except start-ups/shutdowns/malfunctions or product changeovers of flexible operation units and periods when the storage vessel has been emptied and degassed), does not exceed 240 hours.

17. Section 63.120 is amended by revising the last sentence of paragraph (a)(4); revising the first sentence of paragraph (b)(2)(ii); revising the last sentence of paragraphs (b)(7)(ii) and (b)(8); revising the introductory text of paragraph (d); and adding paragraphs (d)(8) and (f) to read as follows:

§ 63.120 Storage vessel provisions—procedures to determine compliance.

(a) * * *

(4) * * * 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 practical.

* * * * *

(b) * * *

(2) * * *

(ii) Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where an 0.32 centimeter (⅛ inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. * * *

* * * * *

(7) * * *

(ii) * * * 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 practical.

(8) * * * 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 practical.

* * * * *

(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, except as provided in paragraph (d)(8) of this section.

* * * * *

(8) A design evaluation or performance test is not required, if the owner or operator uses a combustion device meeting the criteria in paragraph (d)(8)(i), (d)(8)(ii), (d)(8)(iii), or (d)(8)(iv) of this section.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(ii) 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.

(iii) 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 or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(iv) A boiler or process heater into which the vent stream is introduced with the primary fuel.

* * * * *

(f) To demonstrate compliance with § 63.119(f) of this subpart (storage vessel routed to a process), the owner or operator shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the ends specified in § 63.119(f)(1)(i) through (f)(1)(iv) are being met. The owner or operator shall submit the design evaluation as part of the Notification of Compliance Status required by § 63.152(b) of this subpart.

18. Section 63.122 is amended by adding a sentence to the end of the introductory text of paragraph (c); and adding paragraph (c)(3) to read as follows:

§ 63.122 Storage vessel provisions—reporting.

* * * * *

(c) * * * An owner or operator who elects to comply with § 63.119(f) of this subpart by routing emissions to a process or to a fuel gas system shall submit, as part of the Notification of Compliance Status required by § 63.152(b) of this subpart, the information specified in paragraph (c)(3) of this section.

* * * * *

(3) If emissions are routed to a process, the owner or operator shall submit the information specified in § 63.120(f). If emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of § 63.148.

* * * * *

19. Section 63.123 is amended by adding paragraph (h) to read as follows:

§ 63.123 Storage vessel provisions—recordkeeping.

* * * * *

(h) An owner or operator who uses the by-pass provisions of § 63.119(f)(3) of this subpart shall keep in a readily accessible location the records specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The reason it was necessary to by-pass the process equipment or fuel gas system;

(2) The duration of the period when the process equipment or fuel gas system was by-passed;

(3) Documentation or certification of compliance with the applicable provisions of § 63.119(f)(3)(i) through § 63.119(f)(3)(iii).

20. Section 63.126 is amended by revising paragraphs (a)(1) and (a)(3); revising the introductory text of paragraph (b), and revising paragraphs (b)(1) and (b)(3); adding paragraph (b)(4); and revising paragraphs (d)(1), (d)(2), (h), and (i) to read as follows:

§ 63.126 Transfer operations provisions—reference control technology.

(a) * * *

(1) Each vapor collection system shall be designed and operated to collect the organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading, and to route the collected hazardous air pollutants vapors to a process, or to a fuel gas system, or to a control device as provided in paragraph (b) of this section.

* * * * * ,

(3) Whenever organic hazardous air pollutants emissions are vented to a process, fuel gas system, or control device used to comply with the provisions of this subpart, the process, fuel gas system, or control device shall be operating.

(b) For each Group 1 transfer rack the owner or operator shall comply with paragraph (b)(1), (b)(2), (b)(3), or (b)(4) of this section.

(1) Use a control device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to an exit concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen. 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. Compliance may be achieved by using any combination of combustion, recovery, and/or recapture devices.

* * * * *

(3) Reduce emissions of organic hazardous air pollutants using a vapor balancing system designed and operated to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected to a common header, or to compress and route to a process collected hazardous air pollutants vapors.

(4) Route emissions of organic hazardous air pollutants to a fuel gas system or to a process where the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (b)(4)(i) through (b)(4)(iv) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

* * * * *

(d) * * *

(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 exiting the combustion device shall be ducted to a halogen reduction 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 halogen reduction 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 reduction device was installed prior to December 31, 1992, the halogen reduction 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 halogen reduction device, such as a scrubber, or other technique may be used to make the vent stream non-halogenated 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.

* * * * *

(h) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure-relief device in the transfer rack's vapor collection system or in the organic hazardous air pollutants loading equipment of each tank truck or railcar shall begin to open during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(i) Each valve in the vent system that would divert the vent stream to the atmosphere, either directly or indirectly, shall be secured in a non-diverting position using a carseal 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 devices needed for safety purposes is not subject to this paragraph.

21. Section 63.127 is amended by revising the introductory text of paragraph (a) and revising paragraph (a)(4)(ii); revising the introductory text of paragraph (b), revising paragraph (b)(3), and revising the first sentence of paragraph (d)(1) to read as follows:

§ 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 hazardous air pollutants 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 (or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately) the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, as appropriate.

* * * * *

(4) * * *

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (a)(4)(ii)(A) through (a)(4)(ii)(C) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart specified in § 63.100(k) of subpart F of this part, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.

(C) The owner or operator may prepare and implement a gas stream

flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in § 63.103(c).

(b) Each owner or operator of a Group 1 transfer rack that uses a recovery device or recapture device to comply with the 98-percent organic hazardous air pollutants reduction or 20 parts per million by volume hazardous air pollutants 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 or recapture device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

* * * * *

(3) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, 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.

* * * * *

(d) * * *

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes.

* * *

* * * * *

22. Section 63.128 is amended by revising paragraph (a)(9)(iv); by revising the first sentence in the introductory text of paragraph (b)(1); by revising the introductory text of paragraph (c), revising paragraph (c)(3) and adding paragraph (c)(7); revising the introductory text of paragraph (d); and revising paragraphs (d)(1), (f)(2), and (g) to read as follows:

§ 63.128 Transfer operations provisions—test methods and procedures.

(a) * * *

(9) * * *

(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 hazardous air pollutants or organic compound samples, and the samples shall be taken during the same time that the organic hazardous air pollutants or organic compound samples are taken.

* * * * *

(b) * * *

(1) The compliance determination shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions. * * *

* * * * *

(c) An owner or operator is not required to conduct a performance test when any of the conditions specified in paragraphs (c)(1) through (c)(7) of this section are met.

* * * * *

(3) When emissions are routed to a fuel gas system or when a boiler or process heater is used and the vent stream is introduced with the primary fuel.

* * * * *

(7) When a hazardous waste incinerator is used 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, or has certified compliance with the interim status requirements 40 CFR part 265, subpart O.

(d) An owner or operator using a combustion device followed by a scrubber or other halogen reduction 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 halogen reduction device used to reduce halogen emissions. For an owner or operator complying with the 0.45 kilogram 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 halogen reduction device and prior to release to the atmosphere.

* * * * *

(f) * * *

(2) A pressure measurement device which has a precision of ±2.5 millimeters of mercury or better 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 halogen reduction device 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 § 63.126(d)(2) shall determine the halogen atom mass emission rate prior to the combustor according to the procedures in paragraph (d)(3) of this section.

* * * * *

23. Section 63.129 is amended by revising paragraph (a)(1) and the last sentence of paragraph (a)(4)(ii), and by adding paragraph (a)(8) to read as follows:

§ 63.129 Transfer operations provisions—reporting and recordkeeping for performance tests and Notification of Compliance Status.

(a) * * *

(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.

* * * * *

(4) * * *

(ii) * * * For combustion devices, the concentration shall be reported on a dry basis corrected to 3-percent oxygen.

* * * * *

(8) Report that the emission stream is being routed to a fuel gas system or a process, when complying using § 63.126(b)(4).

* * * * *

24. Section 63.130 is amended by revising the introductory text of paragraph (a)(2); removing paragraphs (a)(2)(i) through (a)(2)(iv); redesignating paragraphs (a)(2)(v) through (a)(2)(vii) as (a)(2)(i) through (a)(2)(iii); and revising paragraph (b)(1), the last sentence of paragraph (b)(2), and revising paragraph (d)(4) to read as follows:

§ 63.130 Transfer operations provisions—periodic recordkeeping and reporting.

(a) * * *

(2) Records of the daily average value of each monitored parameter for each operating day determined according to

the procedures specified in § 63.152(f), except as provided in paragraphs (a)(2)(i) through (a)(2)(iii) of this section.

* * * * *

(b) * * *

(1) Hourly records of whether the flow indicator specified under § 63.127(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(2) * * * 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 occurrence 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.

* * * * *

(d) * * *

(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 configuration has been checked out.

* * * * *

§ 63.131 [Removed and Reserved]

25. Section 63.131 is removed and reserved.

26. Sections 63.132 through 63.147 are revised to read as follows:

§ 63.132 Process wastewater provisions—general.

(a) *Existing sources.* This paragraph specifies the requirements applicable to process wastewater streams located at existing sources. The owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, no later than the applicable dates specified in § 63.100 of subpart F of this part.

(1) *Determine wastewater streams to be controlled for Table 9 compounds.* Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (a)(1)(i) or (a)(1)(ii) of this section, and comply with the requirements in paragraph (a)(1)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(2) *Requirements for Group 1 wastewater streams.* For wastewater streams that are Group 1 for Table 9 compounds, comply with paragraphs (a)(2)(i) through (a)(2)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators as specified in § 63.133 through § 63.137 of this subpart, except as provided in paragraphs (a)(2)(i)(A) and (a)(2)(i)(B) of this section and § 63.138(a)(3) of this subpart.

(A) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(ii) Comply with the applicable requirements for control of Table 9 compounds as specified in § 63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the treatment provisions specified in § 63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in § 63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in §§ 63.146 and 63.147 of this subpart.

(3) *Requirements for Group 2 wastewater streams.* For wastewater streams that are Group 2, comply with the applicable recordkeeping and reporting requirements specified in §§ 63.146 and 63.147 of this subpart.

(b) *New sources.* This paragraph specifies the requirements applicable to process wastewater streams located at new sources. The owner or operator shall comply with the requirements in paragraphs (b)(1) through (b)(4) of this section, no later than the applicable dates specified in § 63.100 of subpart F of this part.

(1) *Determine wastewater streams to be controlled for Table 8 compounds.* Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either paragraph (b)(1)(i) or (b)(1)(ii) of this section, and comply with the requirements in paragraph (b)(1)(iii) of this section.

(i) Comply with paragraph (d) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 8 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream for Table 8 compounds.

(iii) Comply with paragraph (f) of this section.

(2) *Determine wastewater streams to be controlled for Table 9 compounds.* Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in either paragraph (b)(2)(i) or (b)(2)(ii) of this section, and comply with the requirements in paragraph (b)(2)(iii) of this section.

(i) Comply with paragraph (c) of this section, determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds; or

(ii) Comply with paragraph (e) of this section, designating the wastewater stream as a Group 1 wastewater stream.

(iii) Comply with paragraph (f) of this section.

(3) *Requirements for Group 1 wastewater streams.* For wastewater streams that are Group 1 for Table 8 compounds and/or Table 9 compounds, comply with paragraphs (b)(3)(i) through (b)(3)(iv) of this section.

(i) Comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators specified in the requirements of § 63.133 through § 63.137 of this subpart, except as provided in paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section and § 63.138(a)(3) of this subpart.

(A) The waste management units may be equipped with pressure relief devices that vent directly to the atmosphere provided the pressure relief device is not used for planned or routine venting of emissions.

(B) The pressure relief device remains in a closed position at all times except when it is necessary for the pressure relief device to open for the purpose of preventing physical damage or permanent deformation of the waste management unit in accordance with good engineering and safety practices.

(ii) Comply with the applicable requirements for control of Table 8 compounds specified in § 63.138 of this subpart. Alternatively, the owner or operator may elect to comply with the provisions specified in § 63.132(g) of this subpart.

(iii) Comply with the applicable monitoring and inspection requirements specified in § 63.143 of this subpart.

(iv) Comply with the applicable recordkeeping and reporting requirements specified in §§ 63.146 and 63.147 of this subpart.

(4) *Requirements for Group 2 wastewater streams.* For wastewater streams that are Group 2 for both Table 8 and Table 9 compounds, comply with the recordkeeping and reporting requirements specified in §§ 63.146 and 63.147 of this subpart.

(c) *How to determine Group 1 or Group 2 status for Table 9 compounds.* This paragraph provides instructions for determining whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Total annual average concentration shall be determined according to the procedures specified in § 63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in § 63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 9 compounds if:

(i) The total annual average concentration of Table 9 compounds is greater than or equal to 10,000 parts per million by weight at any flow rate; or

(ii) The total annual average concentration of Table 9 compounds is greater than or equal to 1,000 parts per million by weight and the annual average flow rate is greater than or equal to 10 liters per minute.

(2) A wastewater stream is a Group 2 wastewater stream for Table 9 compounds if it is not a Group 1 wastewater stream for Table 9 compounds by the criteria in paragraph (c)(1) of this section.

(d) *How to determine Group 1 or Group 2 status for Table 8 compounds.* This paragraph provides instructions for determining whether a wastewater sream is Group 1 or Group 2 for Table 8 compounds. Annual average concentration for each Table 8 compound shall be determined according to the procedures specified in § 63.144(b) of this subpart. Annual average flow rate shall be determined according to the procedures specified in § 63.144(c) of this subpart.

(1) A wastewater stream is a Group 1 wastewater stream for Table 8 compounds if the annual average flow rate is 0.02 liter per minute or greater and the annual average concentration of any individual table 8 compound is 10 parts per million by weight or greater.

(2) A wastewater stream is a Group 2 wastewater stream for Table 8 compounds if the annual average flow rate is less than 0.02 liter per minute or the annual average concentration for each individual Table 8 compound is less than 10 parts per million by weight.

(e) *How to designate a Group 1 wastewater stream.* The owner or operator may elect to designate a wastewater stream a Group 1 wastewater stream in order to comply with paragraph (a)(1) or (b)(1) of this section. To designate a wastewater stream or a mixture of wastewater streams a Group 1 wastewater stream, the procedures specified in paragraphs (e)(1) and (e)(2) of this section and § 63.144(a)(2) of this subpart shall be followed.

(1) From the point of determination 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 a Group 1 wastewater stream, the owner or operator shall 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 a Group 1 wastewater stream, such Group 1 wastewater stream 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.

(f) Owners or operators of sources subject to this subpart shall not discard liquid or solid organic materials with a concentration of greater than 10,000 parts per million of Table 9 compounds (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of § 63.144(b) of this subpart) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. This prohibition does not apply to materials from the activities listed in paragraphs (f)(1) through (f)(4) of this section.

(1) Equipment leaks;

(2) Activities included in maintenance or startup/shutdown/malfunction plans;

(3) Spills; or

(4) Samples of a size not greater than reasonably necessary for the method of analysis that is used.

(g) *Off-site treatment or on-site treatment not owned or operated by the source.* 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, or to an off-site treatment operation.

(1) The owner or operator transferring the wastewater stream or residual shall:

(i) 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 shipment or transport.

(ii) Include a notice with the shipment or transport of each Group 1 wastewater stream or residual removed from a Group 1 wastewater stream. The notice shall state that the wastewater stream or residual contains organic hazardous air pollutants that are to be treated in accordance with the provisions of this subpart. When the transport is continuous or ongoing (for example, discharge to a publicly-owned treatment works), the notice shall be submitted to the treatment operator initially and whenever there is a change in the required treatment.

(2) The owner or operator may not transfer the wastewater stream or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any Group 1 wastewater stream or residual removed from a Group 1 wastewater stream received from a source subject to the requirements of this subpart in accordance with the requirements of either §§ 63.133 through 63.147, or § 63.102(b) of subpart F, or subpart D of this part if alternative emission limitations have been granted the transferor in accordance with those provisions. The certifying entity may revoke the written certification by sending a written statement to the EPA and the owner or operator giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions listed in this paragraph. Upon expiration of the notice period, the owner or operator may not transfer the wastewater stream or residual to the treatment operation.

(3) By providing this written certification to the EPA, the certifying entity accepts responsibility for compliance with the regulatory provisions listed in paragraph (g)(2) of this section with respect to any shipment of wastewater or residual covered by the written certification. Failure to abide by any of those provisions with respect to such shipments may result in enforcement action by the EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of these provisions by owners or operators of sources.

(4) Written certifications and revocation statements, to the EPA from the transferees of wastewater or residuals shall be signed by the responsible official of the certifying entity, provide the name and address of the certifying entity, and be sent to the appropriate EPA Regional Office at the addresses listed in 40 CFR 63.13. Such written certifications are not transferable by the treater.

§ 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) of this section as specified in table 10 of this subpart.

(1) The owner or operator shall operate and maintain a fixed roof except that if the wastewater tank is used for heating wastewater, or treating by means of an exothermic reaction or the contents of the tank is sparged; 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) of this section.

(i) A fixed roof and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device.

(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 hazardous air pollutants 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 position (e.g., covered by a lid) 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 paragraph (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 two 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 practical.

(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 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 stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, cracks or gaps 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 has a crack or gap, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (g)(1)(i) through (g)(1)(viii) of this section 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 two 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 practical.

§ 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 either a cover (e.g., air-supported structure or rigid cover) and a closed-vent system that routes the organic hazardous air pollutants vapors vented from the surface impoundment to a control device in accordance with paragraph (b)(1) of this section, or a floating flexible membrane cover as specified in paragraph (b)(2) 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, 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 position (e.g., covered by a lid) 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) Floating flexible membrane covers shall meet the requirements specified in paragraphs (b)(2)(i) through (b)(2)(vii) of this section.

(i) The floating flexible cover shall be designed to float on the liquid surface during normal operations, and to form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (100 mils); or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (b)(2)(i) of this section, and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in paragraph (b)(2)(v) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of organic hazardous air pollutants to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered in designing the closure devices shall include: The effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(vii) Whenever a Group 1 wastewater stream or residual from a Group 1 wastewater stream is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position. Opening of closure devices or removal of the cover is allowed to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations and/or to remove accumulated sludge or other residues from the bottom of surface impoundment. Openings shall be maintained in accordance with § 63.148 of this subpart.

(3) The control device shall be designed, operated, and inspected in accordance with § 63.139 of this subpart.

(4) Except as provided in paragraph (b)(5) of this section, the closed-vent system shall be inspected in accordance with § 63.148 of this subpart.

(5) 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 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 joint, lid, cover, or door has a crack or gap, or is 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 paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) The container must meet existing Department of Transportation 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 position (e.g., covered by a lid) 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 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 hazardous air pollutants 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 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 cover or door has a gap or crack, or is 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) 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 if vented, route the vapors to a process or through a closed vent system to a control device. 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 position 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.

(c) Each individual drain system shall be inspected initially, and semi-

annually thereafter, for improper work practices and control equipment failures, in accordance with the inspection requirements specified in table 11 of this subpart.

(1) For individual drain systems, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair.

(2) For individual drain systems, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a gap or crack, or is 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 or a tightly fitting 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 equipped with a water seal, the owner or operator shall ensure that the water seal is maintained. 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. Visual observation is also an acceptable alternative.

(ii) If a water seal is used on a drain receiving a Group 1 wastewater, the owner or operator shall either extend the pipe discharging the wastewater below the liquid surface in the water seal of the receiving drain, or install a flexible shield (or other enclosure which restricts wind motion across the open area between the pipe and the drain) that encloses the space between the pipe discharging the wastewater to the drain receiving the wastewater. (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 discharging pipe.)

(2) Each junction box shall be equipped with a tightly fitting solid cover (i.e., no visible gaps, cracks, or holes) which shall be kept in place at all times except during inspection and maintenance. If the junction box is vented, the owner or operator shall comply with the requirements in paragraph (e)(2)(i) or (e)(2)(ii) of this section.

(i) The junction box shall be vented to a process or through a closed vent system to a control device. The closed vent system shall be inspected in accordance with the requirements of §63.148 and the control device shall be designed, operated, and inspected in accordance with the requirements of §63.139.

(ii) If the junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level, the owner or operator may vent the junction box to the atmosphere provided that the junction box complies with the requirements in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) The vent pipe shall be at least 90 centimeters in length and no greater than 10.2 centimeters in nominal inside diameter.

(B) Water seals shall be installed and maintained at the wastewater entrance(s) to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system. The owner or operator shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

(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 fitting cap or plug shall be visually inspected initially, and semi-annually thereafter, to ensure caps or plugs are in place and that there are no gaps, cracks, or other holes in the cap or plug.

(2) Each junction box shall be visually inspected initially, and semi-annually thereafter, to ensure that there are no gaps, cracks, or other holes in the cover.

(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, hole, or crack is identified in a joint or cover, 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 hazardous air pollutants 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 hazardous air pollutants 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 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 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 stored liquid on the floating roof.

(iii) A rim seal is detached from the floating roof.

(iv) There are holes, tears, or other open spaces 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 has a gap or crack, or is broken.

(2) The owner or operator shall inspect for the control equipment failures in paragraphs (e)(1)(i) through (e)(1)(vi) of this section 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—Performance standards for treatment processes managing Group 1 wastewater streams and/or residuals removed from Group 1 wastewater streams.

(a) *General requirements.* This section specifies the performance standards for treating Group 1 wastewater streams. The owner or operator shall comply with the requirements as specified in paragraphs (a)(1) through (a)(6) of this section. Where multiple compliance options are provided, the options may be used in combination for different wastewater streams and/or for different compounds (e.g., Table 8 versus Table 9 compounds) in the same wastewater streams, except where otherwise provided in this section. Once a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream has been treated in accordance with this subpart, it is no longer subject to the requirements of this subpart.

(1) *Existing source.* If the wastewater stream, at an existing source, is Group 1 for Table 9 compounds, comply with § 63.138(b).

(2) *New source.* If the wastewater stream, at a new source, is Group 1 for Table 8 compounds, comply with § 63.138(c). If the wastewater stream, at a new source, is Group 1 for Table 9 compounds, comply with § 63.138(b). If the wastewater stream, at a new source, is Group 1 for Table 8 and Table 9 compounds, comply with both § 63.138(b) and § 63.138(c).

Note to paragraph (a)(2): The requirements for Table 8 and/or Table 9 compounds are similar and often identical.

(3) *Biological treatment processes.* Biological treatment processes in compliance with this section may be either open or closed biological treatment processes as defined in § 63.111. An open biological treatment process in compliance with this section need not be covered and vented to a control device as required in § 63.133 through § 63.137 of this subpart. An open or a closed biological treatment process in compliance with this section and using § 63.145(f) or § 63.145(g) of this subpart to demonstrate compliance is not subject to the requirements of § 63.133 through § 63.137 of this subpart. A closed biological treatment process in compliance with this section and using § 63.145(e) of this subpart to demonstrate compliance shall comply with the requirements of § 63.133 through § 63.137 of this subpart. Waste management units upstream of an open or closed biological treatment process shall meet the requirements of § 63.133 through § 63.137 of this subpart, as applicable.

(4) *Performance tests and design evaluations.* If design steam stripper option (§ 63.138(d)) or Resource Conservation and Recovery Act (RCRA) option (§ 63.138(h)) is selected to comply with this section, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, and for closed biological treatment processes as defined in § 63.111 of this subpart, the owner or operator shall conduct either a design evaluation as specified in § 63.138(j), or a performance test as specified in § 63.145, of this subpart. For each open biological treatment

process as defined in § 63.111 of this subpart, the owner or operator shall conduct a performance test as specified in § 63.145 of this subpart.

Note to paragraph (a)(4): Some open biological treatment processes may not require a performance test. Refer to § 63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(5) *Control device requirements.* When gases are vented from the treatment process, the owner or operator shall comply with the applicable control device requirements specified in § 63.139 and § 63.145 (i) and (j), and the applicable leak inspection provisions specified in § 63.148, of this subpart. This requirement does not apply to any open biological treatment process that meets the mass removal requirements. Vents from anaerobic biological treatment processes may be routed through hard-piping to a fuel gas system.

(6) *Residuals: general.* When residuals result from treating Group 1 wastewater streams, the owner or operator shall comply with the requirements for residuals specified in § 63.138(k) of this subpart.

(7) *Treatment using a series of treatment processes.* In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process or control device to comply with emissions limitations, the owner or operator may use multiple treatment processes or control devices, respectively. For combinations of treatment processes where the wastewater stream is conveyed by hard-piping, the owner or operator shall comply with either the requirements of paragraph (a)(7)(i) or (a)(7)(ii) of this section. For combinations of treatment processes where the wastewater stream is not conveyed by hard-piping, the owner or operator shall comply with the requirements of paragraph (a)(7)(ii) of this section. For combinations of control devices, the owner or operator shall comply with the requirements of paragraph (a)(7)(i) of this section.

(i)(A) For combinations of treatment processes, the wastewater stream shall be conveyed by hard-piping between the treatment processes. For combinations of control devices, the vented gas stream shall be conveyed by hard-piping between the control devices.

(B) For combinations of treatment processes, each treatment process shall meet the applicable requirements of § 63.133 through § 63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(C) The owner or operator shall identify, and keep a record of, the combination of treatment processes or of control devices, including identification of the first and last treatment process or control device. The owner or operator shall include this information as part of the treatment process description reported in the Notification of Compliance Status.

(D) The performance test or design evaluation shall determine compliance across the combination of treatment processes or control devices. If a performance test is conducted, the "inlet" shall be the point at which the wastewater stream or residual enters the first treatment process, or the vented gas stream enters the first control device. The "outlet" shall be the point at which the treated wastewater stream exits the last treatment process, or the vented gas stream exits the last control device.

(ii)(A) For combinations of treatment processes, each treatment process shall meet the applicable requirements of § 63.133 through § 63.137 of this subpart except as provided in paragraph (a)(3) of this section.

(B) The owner or operator shall identify, and keep a record of, the combination of treatment processes, including identification of the first and last treatment process. The owner or operator shall include this information as part of the treatment process description reported in the Notification of Compliance Status.

(C) The owner or operator shall determine the mass removed or destroyed by each treatment process. The performance test or design evaluation shall determine compliance for the combination of treatment processes by adding together the mass removed or destroyed by each treatment process.

(b) *Control options: Group 1 wastewater streams for Table 9 compounds.* The owner or operator shall comply with either paragraph (b)(1) or (b)(2) of this section for the control of Table 9 compounds at new or existing sources.

(1) *50 ppmw concentration option.* The owner or operator shall comply with paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the total concentration of Table 9 compounds to a level less than 50 parts per million by weight as determined by the procedures specified in § 63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in § 63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) *Other compliance options.* Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(c) *Control options: Group 1 wastewater streams for Table 8 compounds.* The owner or operator shall comply with either paragraph (c)(1) or (c)(2) of this section for the control of Table 8 compounds at new sources.

(1) *10 ppmw concentration option.* The owner or operator shall comply with paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) Reduce, by removal or destruction, the concentration of the individual Table 8 compounds to a level less than 10 parts per million by weight as determined in the procedures specified in § 63.145(b) of this subpart.

(ii) This option shall not be used when the treatment process is a biological treatment process. This option shall not be used when the wastewater stream is designated as a Group 1 wastewater stream as specified in § 63.132(e). Dilution shall not be used to achieve compliance with this option.

(2) *Other compliance options.* Comply with the requirements specified in any one of paragraphs (d), (e), (f), (g), (h), or (i) of this section.

(d) *Design steam stripper option.* The owner or operator shall operate and maintain a steam stripper that meets the requirements of paragraphs (d)(1) through (d)(6) 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 within the column,

(4) Minimum wastewater feed temperature to the steam stripper of 95 °C, or minimum column operating temperature of 95 °C,

(5) Maximum liquid loading of 67,100 liters per hour per square meter, and

(6) Operate at nominal atmospheric pressure.

(e) *Percent mass removal/destruction option.* The owner or operator of a new or existing source shall comply with paragraph (e)(1) or (e)(2) of this section for control of Table 8 and/or Table 9 compounds for Group 1 wastewater streams. This option shall not be used for biological treatment processes.

(1) *Reduce mass flow rate of Table 8 and/or Table 9 compounds by 99 percent.* For wastewater streams that are Group 1, the owner or operator shall reduce, by removal or destruction, the

mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more. The removal/destruction efficiency shall be determined by the procedures specified in § 63.145(c), for noncombustion processes, or § 63.145(d), for combustion processes.

(2) *Reduce mass flow rate of Table 8 and/or Table 9 compounds by Fr value.* For wastewater streams that are Group 1 for Table 8 and/or Table 9 compounds, the owner or operator shall reduce, by removal or destruction, the mass flow rate by at least the fraction removal (Fr) values specified in Table 9 of this subpart. (The Fr values for Table 8 compounds are all 0.99.) The removal/destruction efficiency shall be determined by the procedures specified in § 63.145(c), for noncombustion treatment processes, or § 63.145(d), for combustion treatment processes.

(f) *Required mass removal (RMR) option.* The owner or operator shall achieve the required mass removal (RMR) of Table 8 compounds at a new source for a wastewater stream that is Group 1 for Table 8 compounds and/or of Table 9 compounds at a new or existing source for a wastewater stream that is Group 1 for Table 9 compounds. For nonbiological treatment processes compliance shall be determined using the procedures specified in § 63.145(e) of this subpart. For aerobic biological treatment processes compliance shall be determined using the procedures specified in § 63.145 (e) or (f) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in § 63.145(e) of this subpart. For open biological treatment processes compliance shall be determined using the procedures specified in § 63.145(f) of this subpart.

(g) *95-percent RMR option, for biological treatment processes.* The owner or operator of a new or existing source using biological treatment for at least one wastewater stream that is Group 1 for Table 9 compounds shall achieve a RMR of at least 95 percent for all Table 9 compounds. The owner or operator of a new source using biological treatment for at least one wastewater stream that is Group 1 for Table 8 compounds shall achieve a RMR of at least 95 percent for all Table 8 compounds. All Group 1 and Group 2 wastewater streams entering a biological treatment unit that are from chemical manufacturing process units subject to subpart F shall be included in the demonstration of the 95-percent mass removal. The owner or operator shall comply with paragraphs (g)(1) through (g)(4) of this section.

(1) Except as provided in paragraph (g)(4) of this section, the owner or operator shall ensure that all Group 1 and Group 2 wastewater streams from chemical manufacturing process units subject to this rule entering a biological treatment unit are treated to destroy at least 95-percent total mass of all Table 8 and/or Table 9 compounds.

(2) For open biological treatment processes compliance shall be determined using the procedures specified in § 63.145(g) of this subpart. For closed aerobic biological treatment processes compliance shall be determined using the procedures specified in § 63.145 (e) or (g) of this subpart. For closed anaerobic biological treatment processes compliance shall be determined using the procedures specified in § 63.145(e) of this subpart.

(3) For each treatment process or waste management unit that receives, manages, or treats wastewater streams subject to this paragraph, from the point of determination of each Group 1 or Group 2 wastewater stream to the biological treatment unit, the owner or operator shall comply with §§ 63.133 through § 63.137 of this subpart for control of air emissions. When complying with this paragraph, the term Group 1, whether used alone or in combination with other terms, in § 63.133 through § 63.137 of this subpart shall mean both Group 1 and Group 2.

(4) If a wastewater stream is in compliance with the requirements in paragraph (b)(1), (c)(1), (d), (e), (f), or (h) of this section before entering the biological treatment unit, the hazardous air pollutants mass of that wastewater is not required to be included in the total mass flow rate entering the biological treatment unit for the purpose of demonstrating compliance.

(h) *Treatment in a RCRA unit option.* The owner or operator shall treat the wastewater stream or residual in a unit identified in, and complying with, paragraph (h)(1), (h)(2), or (h)(3) of this section. These units are exempt from the design evaluation or performance tests requirements specified in § 63.138(a)(3) and § 63.138(j) of this subpart, and from the monitoring requirements specified in § 63.132(a)(2)(iii) and § 63.132(b)(3)(iii) of this subpart, as well as recordkeeping and reporting requirements associated with monitoring and performance tests.

(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, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O;

(2) The wastewater stream or residual is discharged to a process heater 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. The owner or operator shall comply with all applicable requirements of this subpart prior to the point where the wastewater enters the underground portion of the injection well.

(i) *One megagram total source mass flow rate option.* A wastewater stream is exempt from the requirements of paragraphs (b) and (c) of this section if the owner or operator elects to comply with either paragraph (i)(1) or (i)(2) of this section.

(1) *All Group 1 wastewater streams at the source.* The owner or operator shall demonstrate that the total source mass flow rate for Table 8 and/or Table 9 compounds is less than 1 megagram per year using the procedures in paragraphs (i)(1)(i) and (i)(1)(ii) of this section. The owner or operator shall include all Group 1 wastewater streams at the source in the total source mass flow rate. The total source mass flow rate shall be based on the mass as calculated before the wastewater stream is treated.

(i) Calculate the annual average mass flow rate for each Group 1 wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in § 63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in § 63.144(b) of this subpart. (The mass flow rate of compounds in a wastewater stream that is Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.)

(ii) Calculate the total source mass flow rate from all Group 1 wastewater streams by adding together the annual average mass flow rate calculated for each Group 1 wastewater stream.

(2) *Untreated and partially treated Group 1 wastewater streams.* The owner or operator shall demonstrate that the total source mass flow rate for untreated

Group 1 wastewater streams and Group 1 wastewater streams treated to levels less stringent than required in paragraph (b) or (c) of this section is less than 1 megagram per year using the procedures in paragraphs (i)(2)(i) and (i)(2)(ii) of this section. The owner or operator shall manage these wastewater streams in accordance with paragraph (i)(2)(iii) of this section, and shall comply with paragraph (i)(2)(iv) of this section.

(i) Calculate the annual average mass flow rate in each wastewater stream by multiplying the annual average flow rate of the wastewater stream, as determined by procedures specified in § 63.144(c), times the total annual average concentration of Table 8 and/or Table 9 compounds, as determined by procedures specified in § 63.144(b). (The mass flow rate of compounds in a wastewater stream that are Group 1 for both Table 8 and Table 9 compounds should be included in the annual average mass flow rate only once.)

(A) For each untreated Group 1 wastewater stream, the annual average flow rate and the total annual average concentration shall be determined for that stream's point of determination.

(B) For each Group 1 wastewater stream that is treated to levels less stringent than those required by paragraph (b) or (c) of this section, the annual average flow rate and total annual average concentration shall be determined at the discharge from the treatment process or series of treatment processes.

(C) The annual average mass flow rate for Group 1 wastewater streams treated to the levels required by paragraph (b) or (c) of this section is not included in the calculation of the total source mass flow rate.

(ii) The total source mass flow rate shall be calculated by summing the annual average mass flow rates from all Group 1 wastewater streams, except those excluded by paragraph (i)(2)(i)(C) of this section.

(iii) The owner or operator of each waste management unit that receives, manages, or treats the wastewater stream prior to or during treatment shall comply with the requirements of §§ 63.133 through 63.137 of this subpart, as applicable.

(iv) Wastewater streams included in this option shall be identified in the Notification of Compliance Status required by §63.152(b).

(j) *Design evaluations or performance tests for treatment processes.* Except as provided in paragraph (j)(3) or (h) 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 nonbiological treatment process used to comply with paragraphs (b)(1), (c)(1), (e), and/or (f) of this section achieves the conditions specified for compliance. The owner or operator shall demonstrate by the procedures in either paragraph (j)(1) or (j)(2) of this section that each closed biological treatment process used to comply with paragraphs (f) or (g) of this section achieves the conditions specified for compliance. If an open biological treatment unit is used to comply with paragraph (f) or (g) of this section, the owner or operator shall comply with § 63.145(f) or § 63.145(g), respectively, of this subpart. Some biological treatment processes may not require a performance test. Refer to § 63.145(h) and table 36 of this subpart to determine whether the open biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(1) A design evaluation and supporting documentation that addresses the operating characteristics of the treatment process and that is based on operation at a representative wastewater stream flow rate and a concentration under which it would be most difficult to demonstrate compliance. For closed biological treatment processes, the actual mass removal shall be determined by a mass balance over the unit. The mass flow rate of Table 8 or Table 9 compounds exiting the treatment process shall be the sum of the mass flow rate of Table 8 or Table 9 compounds in the wastewater stream exiting the biological treatment process and the mass flow rate of the vented gas stream exiting the control device. The mass flow rate entering the treatment process minus the mass flow rate exiting the process determines the actual mass removal.

(2) Performance tests conducted using test methods and procedures that meet the applicable requirements specified in § 63.145 of this subpart.

(3) The provisions of paragraphs (j)(1) and (j)(2) of this section do not apply to design stream strippers which meet the requirements of paragraph (d) of this section.

(k) *Residuals.* For each residual removed from a Group 1 wastewater stream, the owner or operator shall control for air emissions by complying with §§ 63.133–137 of this subpart and by complying with one of the provisions in paragraphs (k)(1) through (k)(4) of this section.

(1) Recycle the residual to a production process or sell the residual for the purpose of recycling. Once a residual is returned to a 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 mass flow rate of Table 8 and/or Table 9 compounds by 99 percent or more, as determined by the procedures specified in § 63.145(c) or (d) of this subpart.

(4) Comply with the requirements for RCRA treatment options specified in § 63.138(h) of this subpart.

§ 63.139 Process wastewater provisions—control devices.

(a) For each control device or combination of control devices 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 or combination of control devices in accordance with the requirements of paragraphs (b) through (f) of this section.

(b) Whenever organic hazardous air pollutants 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, alone or in combination with other control devices. 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 hazardous air pollutants 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 hazardous air pollutants 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), alone

or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device of 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of § 63.134 or § 63.135 of this subpart.

(3) A flare shall comply with the requirements of § 63.11(b) of subpart A of this part.

(4) A scrubber, alone or in combination with other control devices, shall reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions in such a manner that 95 weight-percent is either removed, or destroyed by chemical reaction with the scrubbing liquid or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of § 63.134 or § 63.135 of this subpart.

(5) Any other control device used shall, alone or in combination with other control devices, reduce the total organic compound emissions, less methane and ethane, or total organic hazardous air pollutants emissions vented to the control device by 95 percent by weight or greater or achieve an outlet total organic compound concentration, less methane and ethane, or total organic hazardous air pollutants concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to compliance with the provisions of § 63.134 or § 63.135 of this subpart.

(d) Except as provided in paragraph (d)(4) of this section, an owner or operator shall demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in paragraph (c) of this section by using one or more 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(i) of this subpart for control devices other than flares; 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 mass or volumetric 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, mass or volumetric 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 and § 63.145(j) of this subpart.

(4) An owner or operator using any control device specified in paragraphs (d)(4)(i) through (d)(4)(iv) 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.

(iv) 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, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(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 gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect.

§ 63.140 Process wastewater provisions—delay of repair.

(a) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole 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 emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown.

(b) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the equipment is emptied or is no longer used to treat or manage Group 1 wastewater streams or residuals removed from Group 1 wastewater streams.

(c) Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified is also allowed if additional time is necessary due to the unavailability of parts beyond the control of the owner or operator. Repair shall be completed as soon as practical. The owner or operator who uses this provision shall comply with the requirements of § 63.147(c)(7) to document the reasons that the delay of repair was necessary.

§ 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 Item 1 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 § 63.151(f) of this subpart, and shall include a discription of planned reporting and recordkeeping procedures. The owner or operator shall include as part of the submittal the basis for the selected monitoring frequencies and the methods that will be used. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

(d) If the owner or operator elects to comply with Item 3 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 § 63.151(f) 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 permit application or by other appropriate means.

(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 § 63.151(f) 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 permit application or by other appropriate means.

(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 or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

§ 63.144 Process wastewater provisions—test methods and procedures for determining applicability and Group 1/Group 2 determinations (determining which wastewater streams require control).

(a) *Procedures to determine applicability.* An owner or operator shall comply with paragraph (a)(1) or (a)(2) of this section for each wastewater stream to determine which wastewater streams require control for Table 8 and/or Table 9 compounds. The owner or operator may use a combination of the approaches in paragraphs (a)(1) and (a)(2) of this section for different wastewater streams generated at the source.

(1) *Determine Group 1 or Group 2 status.* 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) *Designate as Group 1.* An owner or operator may designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams. The owner or operator is not

required to determine the concentration or flow rate for each designated Group 1 wastewater stream for the purposes of this section.

(b) *Procedures to establish concentrations, when determining Group status under paragraph (a)(1) of this section.* An owner or operator who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the annual average concentration for Table 8 and/or Table 9 compounds according to paragraph (b)(1) of this section for existing sources or paragraph (b)(2) of this section for new sources. The annual average concentration shall be a flow weighted average representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12 month period. For flexible operation units, the owner or operator shall consider the anticipated production over the designated 12 month period and include all wastewater streams generated by the process equipment during this period. The owner/operator is not required to determine the concentration of Table 8 or Table 9 compounds that are not reasonably expected to be in the process.

(1) *Existing sources.* An owner or operator of an existing source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine the flow weighted total annual average concentration for Table 9 compounds. For the purposes of this section, the term concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific fraction measured (Fm) factors listed in table 34 of this subpart unless determined by the methods in § 63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in § 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in § 63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific Fm factors may be used only when concentrations of individual compounds are determined or when only one compound is in the wastewater stream. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The total annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. The procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(2) *New sources.* An owner or operator of a new source who elects to comply with the requirements of paragraph (a)(1) of this section shall determine both the flow weighted total annual average concentration for Table 9 compounds and the flow weighted annual average concentration for each Table 8 compound. For the purposes of this section, the term concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific Fm factors listed in table 34 of this subpart unless determined by the methods in § 63.144(b)(5)(i)(A) and/or (B). When concentration is determined by Method 305 as specified in § 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in table 34 of this subpart. When concentration is determined by Method 25D as specified in § 63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in table 34 of this subpart. Compound-specific fraction measured factors are compound specific and shall be used only when concentration of individual compounds are determined or when only one compound is in the wastewater stream. The flow weighted annual average concentration of each Table 8 compound means the mass of each Table 8 compound occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. Flow weighted total annual average concentration for Table 9 compounds means the total mass of Table 9 compounds occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to paragraph (b)(6) of this section. Procedures specified in paragraphs (b)(3), (b)(4), and (b)(5) of this section are considered acceptable procedures for determining the annual average concentration. They may be used in combination, and no one procedure shall take precedence over another.

(3) *Knowledge of the wastewater.* Where knowledge is used to determine the annual average concentration, the owner or operator shall provide sufficient information to document the annual average concentration for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average concentration is not required for Group 1 streams. Examples of acceptable documentation include material balances, records of chemical purchases, process stoichiometry, or previous test results. If test data are used, the owner or operator shall provide documentation describing the testing protocol and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination.

(4) *Bench-scale or pilot-scale test data.* Where bench-scale or pilot-scale test data are used to determine the annual average concentration, the owner or operator shall provide sufficient information to document that the data are representative of the actual annual average concentration, or are reliably indicative of another relevant characteristic of the wastewater stream that could be used to predict the annual average concentration. For concentration data, the owner or operator shall also provide documentation describing the testing protocol, and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination of annual average concentration.

(5) *Test data from sampling at the point of determination or at a location downstream of the point of determination.* Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the concentration for the relevant Table 8 or Table 9 compounds, the owner or operator shall comply with the requirements of this paragraph. For each wastewater stream, measurements shall be made either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made

according to paragraph (b)(6) of this section. A minimum of three samples from each wastewater stream shall be taken. Samples may be grab samples or composite samples.

(i) *Methods.* The owner or operator shall use any of the methods specified in paragraphs (b)(5)(i)(A) through (b)(5)(i)(F) of this section.

(A) *Method 25D.* Use procedures specified in Method 25D of 40 CFR part 60, appendix A.

(B) *Method 305.* Use procedures specified in Method 305 of 40 CFR part 63, appendix A.

(C) *Methods 624 and 625.* Use procedures specified in Methods 624 and 625 of 40 CFR part 136, appendix A and comply with the sampling protocol requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed. For Method 625, make corrections to the compounds for which the analysis is being conducted based on the accuracy as recovery factors in Table 7 of the method.

(D) *Method 1624 and Method 1625.* Use procedures specified in Method 1624 and Method 1625 of 40 CFR part 136, appendix A and comply with the requirements specified in paragraph (b)(5)(ii) of this section. If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed.

(E) *Other EPA method(s).* Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and either paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section.

(F) *Method(s) other than EPA method.* Use procedures specified in the method and comply with the requirements specified in paragraphs (b)(5)(ii) and (b)(5)(iii)(A) of this section.

(ii) *Sampling plan.* The owner or operator who is expressly referred to this paragraph by provisions of this subpart shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sample plan shall include procedures for determining recovery efficiency of the relevant hazardous air pollutants listed in table 8 or table 9 of this subpart. An example of an acceptable sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR part 60, appendix A. The sampling plan shall be maintained at the facility.

(iii) *Validation of methods.* The owner or operator shall validate EPA methods other than Methods 25D, 305, 624, 625, 1624, and 1625 using the procedures specified in paragraph (b)(5)(iii)(A) or (b)(5)(iii)(B) of this section. The owner or operator shall validate other methods as specified in paragraph (b)(5)(iii)(A) of this section.

(A) *Validation of EPA methods and other methods.* The method used to measure organic hazardous air pollutants concentrations in the wastewater shall be validated according to section 5.1 or 5.3, and the corresponding calculations in section 6.1 or 6.3, of Method 301 of appendix A of this part. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of Method 301 of appendix A of this part. If correction is required under section 6.3.3 of Method 301 of appendix A of this part, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 of appendix A of this part are not required. The concentrations of the individual organic hazardous air pollutants 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 (Fm) factor listed in table 34 of this subpart.

(B) *Validation for EPA methods.* Follow the procedures as specified in "Alternative Validation Procedure for EPA Waste Methods" 40 CFR part 63, appendix D.

(iv) *Calculations of average concentration.* The average concentration for each individually speciated Table 8 compound shall be calculated by adding the individual values determined for the specific compound in each sample and dividing by the number of samples. The total average concentration of Table 9 compounds shall be calculated by first summing the concentration of the individual compounds to obtain a total hazardous air pollutants concentration for the sample; add the sample totals and then divide by the number of samples in the run to obtain the sample average for the run. If the method used does not speciate the compounds, the sample results should be added and this total divided by the number of samples in the run to obtain the sample average for the run.

(6) *Adjustment for concentrations determined downstream of the point of determination.* The owner or operator shall make corrections to the annual average concentration or total annual average concentration when the concentration is determined downstream of the point of determination at a location where: two or more wastewater streams have been mixed; one or more wastewater streams have been treated; or, losses to the atmosphere have occurred. The owner or operator shall make the adjustments either to the individual data points or to the final annual average concentration.

(c) *Procedures to determine flow rate, when evaluating Group status under paragraph (a)(1) of this section.* An owner or operator who elects to comply with paragraph (a)(1) of this section shall determine the annual average flow rate of the wastewater stream either at the point of determination for each wastewater stream, or downstream of the point of determination with adjustment for flow rate changes made according to paragraph (c)(4) of this section. These procedures may be used in combination for different wastewater streams at the source. The annual average flow rate for the wastewater stream shall be representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12-month period. The owner or operator shall consider the total annual wastewater volume generated by the chemical manufacturing process unit. If the chemical manufacturing process unit is a flexible operation unit, the owner or operator shall consider all anticipated production in the process equipment over the designated 12-month period. The procedures specified in paragraphs (c)(1), (c)(2), and (c)(3) of this section are considered acceptable procedures for determining the flow rate. They may be used in combination, and no one procedure shall take precedence over another.

(1) *Knowledge of the wastewater.* The owner or operator may use knowledge of the wastewater stream and/or the process to determine the annual average flow rate. The owner or operator shall use the maximum expected annual average production capacity of the process unit, knowledge of the process, and/or 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. Where knowledge is used to determine the

annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(2) *Historical Records.* The owner or operator may use historical records to determine the annual average flow rate. Derive 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. Where historical records are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(3) *Measurements of flow rate.* Where an owner or operator elects to comply with paragraph (a)(1) of this section by measuring the flow rate, the owner or operator shall comply with the requirements of this paragraph. Measurements shall be made at the point of determination, or at a location downstream of the point of determination with adjustments for flow rate changes made according to paragraph (c)(4) of this section. Where measurement data are used to determine the annual average flow rate, the owner or operator shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(4) *Adjustment for flow rates determined downstream of the point of determination.* The owner or operator shall make corrections to the annual average flow rate of a wastewater stream when it is determined downstream of the point of determination at a location where two or more wastewater streams have been mixed or one or more wastewater streams have been treated. The owner or operator shall make corrections for such changes in the annual average flow rate.

§63.145 Process wastewater provisions—test methods and procedures to determine compliance.

(a) *General.* This section specifies the procedures for performance tests that are conducted to demonstrate compliance of a treatment process or a control device with the control requirements specified in §63.138 of this subpart. Owners or operators conducting a design evaluation shall comply with the requirements of paragraph (a)(1) or (a)(2) of this section. Owners or operators conducting a performance test shall comply with the applicable requirements in paragraphs (a) through (i) of this section.

(1) *Performance tests and design evaluations for treatment processes.* If design steam stripper option (§63.138(d)) or RCRA option (§63.138(h)) is selected to comply with §63.138, neither a design evaluation nor a performance test is required. For any other non-biological treatment process, the owner or operator shall conduct either a design evaluation as specified in §63.138(j), or a performance test as specified in this section. For closed biological treatment processes, the owner or operator shall conduct either a design evaluation as specified in §63.138(j), or a performance test as specified in this section. For each open biological treatment process, the owner or operator shall conduct a performance test as specified in this section.

Note: Some open biological treatment processes may not require a performance test. Refer to §63.145(h) and table 36 of this subpart to determine whether the biological treatment process meets the criteria that exempt the owner or operator from conducting a performance test.

(2) *Performance tests and design evaluations for control devices.* The owner or operator shall conduct either a design evaluation as specified in §63.139(d), or a performance test as specified in paragraph (i) of this section for control devices other than flares and paragraph (j) of this section for flares.

(3) *Representative process unit operating conditions.* Compliance shall be demonstrated for representative operating conditions. Operations during periods of startup, shutdown, or malfunction and periods of nonoperation shall not constitute representative conditions. The owner or operator shall record the process information that is necessary to document operating conditions during the test.

(4) *Representative treatment process or control device operating conditions.* Performance tests shall be conducted when the treatment process or control device is operating at a representative inlet flow rate and concentration. If the treatment process or control device will be operating at several different sets of representative operating conditions, the owner or operator shall comply with paragraphs (a)(4)(i) and (a)(4)(ii) of this section. The owner or operator shall record information that is necessary to document treatment process or control device operating conditions during the test.

(i) *Range of operating conditions.* If the treatment process or control device will be operated at several different sets of representative operating conditions, performance testing over the entire range is not required. In such cases, the performance test results shall be supplemented with modeling and/or engineering assessments to demonstrate performance over the operating range.

(ii) *Consideration of residence time.* If concentration and/or flow rate to the treatment process or control device are not relatively constant (i.e., comparison of inlet and outlet data will not be representative of performance), the owner or operator shall consider residence time, when determining concentration and flow rate.

(5) *Testing equipment.* All testing equipment shall be prepared and installed as specified in the applicable test methods, or as approved by the Administrator.

(6) *Compounds not required to be considered in performance tests or design evaluations.* Compounds that meet the requirements specified in paragraph (a)(6)(i), (a)(6)(ii), or (a)(6)(iii) of this section are not required to be included in the performance test. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in table 34 of this subpart.

(i) Compounds not used or produced by the chemical manufacturing process unit; or

(ii) Compounds with concentrations at the point of determination that are below 1 part per million by weight; or

(iii) Compounds with concentrations at the point of determination that are below the lower detection limit where the lower detection limit is greater than 1 part per million by weight. The method shall be an analytical method for wastewater which has that compound as a target analyte.

(7) *Treatment using a series of treatment processes.* In all cases where the wastewater provisions in this subpart allow or require the use of a treatment process to comply with emissions limitations, the owner or operator may use multiple treatment processes. The owner or operator complying with the requirements of §63.138(a)(7)(i), when wastewater is

conveyed by hard-piping, shall comply with either §63.145(a)(7)(i) or §63.145(a)(7)(ii) of this subpart. The owner or operator complying with the requirements of §63.138(a)(7)(ii) of this subpart shall comply with the requirements of §63.145(a)(7)(ii) of this subpart.

(i) The owner or operator shall conduct the performance test across each series of treatment processes. For each series of treatment processes, inlet concentration and flow rate shall be measured either where the wastewater stream enters the first treatment process in a series of treatment processes, or prior to the first treatment process as specified in § 63.145(a)(9) of this subpart. For each series of treatment processes, outlet concentration and flow rate shall be measured where the wastewater stream exits the last treatment process in the series of treatment processes, except when the last treatment process is an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in § 63.145 (f) or (g) of this subpart. When the last treatment process is either an open or a closed aerobic biological treatment process demonstrating compliance by using the procedures in § 63.145 (f) or (g) of this subpart, inlet and outlet concentrations and flow rates shall be measured as provided in paragraphs (a)(7)(i)(A) and (a)(7)(i)(B) of this section. The mass flow rates removed or destroyed by the series of treatment processes and by the biological treatment process are all used to calculate actual mass removal (AMR) as specified in § 63.145(f)(5)(ii) of this subpart.

(A) The inlet and outlet to the series of treatment processes prior to the biological treatment process are the points at which the wastewater enters the first treatment process and exits the last treatment process in the series, respectively, except as provided in paragraph (a)(9)(ii) of this section.

(B) The inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process or the outlet from the series of treatment processes identified in paragraph (a)(7)(i)(A) of this section, except as provided in paragraph (a)(9)(ii) of this section.

(ii) The owner or operator shall conduct the performance test across each treatment process in the series of treatment processes. The mass flow rate removed or destroyed by each treatment process shall be added together to determine whether compliance has been demonstrated using § 63.145 (c), (d), (e), (f), and (g), as applicable. If a biological treatment process is one of the treatment processes in the series of treatment processes, the inlet to the biological treatment process shall be the point at which the wastewater enters the biological treatment process, or the inlet to the equalization tank if all the criteria of paragraph (a)(9)(ii) of this section are met.

(8) When using a biological treatment process to comply with § 63.138 of this subpart, the owner or operator may elect to calculate the AMR using a subset of Table 8 and/or Table 9 compounds determined at the point of determination or downstream of the point of determination with adjustment for concentration and flowrate changes made according to § 63.144(b)(6) and § 63.144(c)(4) of this subpart, respectively. All Table 8 and/or Table 9 compounds measured to determine the RMR, except as provided by § 63.145(a)(6), shall be included in the RMR calculation.

(9) The owner or operator determining the inlet for purposes of demonstrating compliance with § 63.145 (e), (f), or (g) of this subpart may elect to comply with paragraph (a)(9)(i) or (a)(9)(ii) of this section.

(i) When wastewater is conveyed exclusively by hard-piping from the point of determination to a treatment process that is either the only treatment process or the first in a series of treatment processes (i.e., no treatment processes or other waste management units are used upstream of this treatment process to store, handle, or convey the wastewater), the inlet to the treatment process shall be at any location from the point of determination to where the wastewater stream enters the treatment process. When samples are taken upstream of the treatment process and before wastewater streams have converged, the owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using § 63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using § 63.138(g) to comply, except as provided in § 63.145(a)(6).

(ii) The owner or operator may consider the inlet to the equalization tank as the inlet to the biological treatment process if all the criteria in paragraphs (a)(9)(ii)(A) through (a)(9)(ii)(C) of this section are met. The outlet from the series of treatment processes prior to the biological treatment process is the point at which the wastewater exits the last treatment process in the series prior to the equalization tank, if the equalization tank and biological treatment process are part of a series of treatment processes. The owner or operator shall ensure that the mass flow rate of all Group 1 wastewater streams is accounted for when using § 63.138 (e) or (f) to comply and that the mass flow rate of all Group 1 and Group 2 wastewater streams is accounted for when using § 63.138(g) to comply, except as provided in § 63.145(a)(6).

(A) The wastewater is conveyed by hard-piping from either the last previous treatment process or the point of determination to the equalization tank.

(B) The wastewater is conveyed from the equalization tank exclusively by hard-piping to the biological treatment process and no treatment processes or other waste management units are used to store, handle, or convey the wastewater between the equalization tank and the biological treatment process.

(C) The equalization tank is equipped with a fixed roof and a closed vent system that routes emissions to a control device that meets the requirements of § 63.133(a)(2)(i) and § 63.133 (b)(1) through (b)(4) of this subpart.

(b) *Noncombustion treatment process—concentration limits.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion treatment process with the parts per million by weight wastewater stream concentration limits at the outlet of the treatment process. This compliance option is specified in § 63.138(b)(1) and § 63.138(c)(1). Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per § 63.144(b)(5)(ii). Samples shall be collected and analyzed using the procedures specified in § 63.144 (b)(5)(i), (b)(5)(ii), and (b)(5)(iii) of this subpart. Samples may be grab samples or composite samples. Samples shall be taken at approximately 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. Concentration measurements based on Method 305 may be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 may be adjusted by multiplying each concentration by the compound-specific Fm factor listed in table 34 of this subpart. (For wastewater streams that are Group 1 for both Table 8 and Table 9 compounds, compliance is

demonstrated only if the sum of the concentrations of Table 9 compounds is less than 50 ppmw, and the concentration of each Table 8 compound is less than 10 ppmw.)

(c) *Noncombustion, nonbiological treatment process: Percent mass removal/destruction option.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a noncombustion, nonbiological treatment process with the percent mass removal limits specified in § 63.138(e) (1) and (2) for Table 8 and/or Table 9 compounds. The owner or operator shall comply with the requirements specified in § 63.145 (c)(1) through (c)(6) of this subpart.

(1) *Concentration.* The concentration of Table 8 and/or Table 9 compounds entering and exiting the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per § 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately 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. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in Table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in Table 34 of this subpart.

(2) *Flow rate.* The flow rate of the entering and exiting wastewater streams shall be determined using inlet and outlet flow meters, respectively. Where the outlet flow is not greater than the inlet flow, a flow meter shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of mass flow rate—for noncombustion, nonbiological treatment processes.* The mass flow rates of Table 8 and/or Table 9 compounds entering and exiting the treatment process are calculated as follows.

$$QMW_a = \frac{\rho}{p*10^6}\left(\sum_{k=1}^{p} Q_{a,k} C_{T,a,k}\right) \qquad \text{(Eqn WW1)}$$

$$QMW_b = \frac{\rho}{p*10^6}\left(\sum_{k=1}^{p} Q_{b,k} C_{T,b,k}\right) \qquad \text{(Eqn WW2)}$$

Where:

QMW_a, QMW_b=Mass flow rate of Table 8 or Table 9 compounds, average of all runs, in wastewater entering (QMW_a) or exiting (QMW_b) the treatment process, kilograms per hour.

ρ=Density of the wastewater, kilograms per cubic meter.

$Q_{a,k}$, $Qb_{b,k}$=Volumetric flow rate of wastewater entering ($Q_{a,k}$) or exiting ($Q_{b,k}$) the treatment process during each run k, cubic meters per hour.

$C_{T,a,k}$, $C_{T,b,k}$=Total concentration of Table 8 or Table 9 compounds in wastewater entering ($C_{T,a,k}$) or exiting ($C_{T,b,k}$) the treatment process during each run k, parts per million by weight.

p=Number of runs.

k=Identifier for a run.

10^6=conversion factor, mg/kg

(4) *Percent removal calculation for mass flow rate.* The percent mass removal across the treatment process shall be calculated as follows:

$$E = \frac{QMW_a - QMW_b}{QMW_a} \times 100 \qquad \text{(Eqn WW3)}$$

Where:

E=Removal or destruction efficiency of the treatment process, percent.

QMW_a, QMW_b=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering (QMW_a) and exiting (QMW_b) the treatment process, kilograms per hour (as calculated using Equations WW1 and WW2).

(5) *Calculation of flow-weighted average of Fr values.* If complying with § 63.138(e)(2), use Equation WW8 to calculate the flow-weighted average of the Fr values listed in Table 9 of this subpart. When the term "combustion" is used in Equation WW8, the term "treatment process" shall be used for the purposes of this paragraph.

(6) *Compare mass removal efficiency to required efficiency.* Compare the mass removal efficiency (calculated in Equation WW3) to the required efficiency as specified in § 63.138(e) of this subpart. If complying with § 63.138(e)(1), compliance is demonstrated if the mass removal efficiency is 99 percent or greater. If complying with § 63.138(e)(2), compliance is demonstrated if the mass removal efficiency is greater than or equal to the flow-weighted average of the Fr values calculated in Equation WW8.

(d) *Combustion treatment processes: percent mass removal/destruction option.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a combustion treatment process with the percent mass destruction limits specified in § 63.138(e) (1) and (2) for Table 9 compounds, and/or § 63.138(e)(1) for Table 8 compounds. The owner or operator shall comply with the requirements specified in § 63.145 (d)(1) through (d)(9) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) *Concentration in wastewater stream entering the combustion treatment process.* The concentration of

Table 8 and/or Table 9 compounds entering the treatment process shall be determined as provided in this paragraph. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per § 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately 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. Concentration measurements based on Method 305 of appendix A of this part shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate of wastewater entering the combustion treatment process.* The flow rate of the wastewater stream entering the combustion treatment process shall be determined using an inlet flow meter. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of mass flow rate in wastewater stream entering combustion treatment processes.* The mass flow rate of Table 8 and/or Table 9 compounds entering the treatment process is calculated as follows:

$$QMW_a = \frac{\rho}{p*10^6}\left(\sum_{k=1}^{p} Q_{a,k} * C_{T,a,k}\right) \qquad \text{(Eqn WW4)}$$

Where:

QMW_a=Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.

ρ=Density of the wastewater stream, kilograms per cubic meter.

$Q_{a,k}$=Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.

$C_{T,a,k}$=Total concentration of Table 8 or Table 9 compounds in the wastewater stream entering the combustion unit during run k, parts per million by weight.

p=Number of runs.

k=Identifier for a run.

(4) *Concentration in vented gas stream exiting the combustion treatment process.* The concentration of Table 8 and/or Table 9 compounds exiting the combustion treatment process in any vented gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples. Samples shall be taken at approximately 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. Concentration measurements 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.

(5) *Volumetric flow rate of vented gas stream exiting the combustion treatment process.* The volumetric flow rate of the vented gas stream exiting the combustion treatment process shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(6) *Calculation of mass flow rate of vented gas stream exiting combustion treatment processes.* The mass flow rate of Table 8 and/or Table 9 compounds in a vented gas stream exiting the combustion treatment process shall be calculated as follows:

$$QMG_a = K_2\left(\sum_{i=1}^{n} CG_{a,i} MW_i\right) QG_a \qquad \text{(Eqn WW5)}$$

$$QMG_b = K_2\left(\sum_{i=1}^{n} CG_{b,i} MW_i\right) QG_b \qquad \text{(Eqn WW6)}$$

Where:

$CG_{a,i}$, $CG_{b,i}$=Concentration of total organic compounds (TOC) (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering ($CG_{a,i}$) and exiting ($CG_{b,i}$) the control device, dry basis, parts per million by volume.

QMG_a, QMG_b=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMG_a) and exiting (QMG_b) the control device, dry basis, kilograms per hour.

MW_i=Molecular weight of a component, kilogram/kilogram-mole.

QG_a,QG_b=Flow rate of gas stream entering (QG_a) and exiting (QG_b) the control device, dry standard cubic meters per hour.

K_2=Constant, 41.57×10^{-9} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20° Celsius.

i=Identifier for a compound.

n=Number of components in the sample.

(7) *Destruction efficiency calculation.* The destruction efficiency of the combustion unit for Table 8 and/or Table 9 compounds shall be calculated as follows:

$$E = \frac{QMW_a - QMG_b}{QMW_a} * 100 \quad \text{(Eqn WW7)}$$

Where:

E=Destruction efficiency of Table 8 or Table 9 compounds for the combustion unit, percent.

QMW_a=Mass flow rate of Table 8 or Table 9 compounds entering the combustion unit, kilograms per hour.

QMG_b=Mass flow rate of Table 8 or Table 9 compounds in vented gas stream exiting the combustion treatment process, kilograms per hour..

(8) *Calculation of flow-weighted average of Fr values.* Use Equation WW8 to calculate the flow-weighted average of the Fr values listed in table 9 of this subpart.

$$Fr_{avg} = \left[\frac{\sum_{i=1}^{n} \sum_{k=1}^{p} Fr_i * C_{i,a,k} * Q_{a,k}}{\sum_{k=1}^{p} \sum_{i=1}^{n} C_{i,a,k} * Q_{a,k}} \right] * 100 \quad \text{(Eqn WW8)}$$

Where:

Fr_{avg}=Flow-weighted average of the Fr values.

$C_{i,a,k}$=Concentration of Table 8 and/or Table 9 compounds in wastewater stream entering the combustion unit, during run k, parts per million by weight.

$Q_{a,k}$=Volumetric flow rate of wastewater entering the combustion unit during run k, cubic meters per hour.

Fr_i=Compound-specific Fr value listed in table 9 of this subpart.

(9) *Calculate flow-weighted average of Fr values and compare to mass destruction efficiency.* Compare the mass destruction efficiency (calculated in Equation WW 7) to the required efficiency as specified in § 63.138(e). If complying with § 63.138(e)(1), compliance is demonstrated if the mass destruction efficiency is 99 percent or greater. If complying with § 63.138(e)(2), compliance is demonstrated if the mass destruction efficiency is greater than or equal to the flow-weighted average of the Fr value calculated in Equation WW8.

(e) *Non-combustion treatment processes including closed biological treatment processes: RMR option.* This paragraph applies to performance tests for non-combustion treatment processes other than open biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. Compliance options for noncombustion treatment processes are specified in § 63.138(f) of this subpart. Compliance options for closed aerobic or anaerobic biological treatment processes are specified in § 63.138(f) and § 63.138(g) of this subpart. When complying with § 63.138(f), the owner or operator shall comply with the requirements specified in § 63.145(e)(1) through (e)(6) of this subpart. When complying with § 63.138(g), the owner or operator shall comply with the requirements specified in § 63.145(e)(1) through (e)(6) of this subpart. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) *Concentration in wastewater stream.* The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for concentration change made according to § 63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in § 63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per § 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately 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. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed in table 34 of this subpart. Concentration measurements based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate.* Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to § 63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in § 63.145(a)(7) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of RMR for non-combustion treatment processes including closed biological treatment processes.* When using § 63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated as specified in paragraph (e)(3)(i) of this section. When using § 63.138(g) to comply, the required mass removal shall be calculated as specified in paragraph (e)(3)(ii) of this section.

(i) When using § 63.138(f) to comply, the required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using Equation WW9.

$$RMR = \frac{\rho}{10^9} Q \sum_{i=1}^{n} (C_i * Fr_i) \qquad \text{(Eqn WW9)}$$

Where:
RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.
ρ=Density of the Group 1 wastewater stream, kilograms per cubic meter.
Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.
i=Identifier for a compound.
n=Number of Table 8 or Table 9 compounds in stream.
C_i=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.
Fr_i=Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.
10^9=Conversion factor, mg/kg * l/m³.

(ii) When using § 63.138(g) to comply, the required mass removal is 95 percent of the mass flow rate for all Group 1 and Group 2 wastewater streams combined for treatment. The required mass removal of Table 8 and/or Table 9 compounds for all Group 1 and Group 2 wastewater streams combined for treatment when complying with § 63.138(g) shall be calculated using the following equation:

$$RMR = \frac{0.95\rho}{10^9} Q \sum_{i=1}^{n} (C_i) \qquad \text{(Eqn WW9a)}$$

Where:
RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.
ρ=Density of the Group 1 wastewater stream, kilograms per cubic meter.
Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.
i=Identifier for a compound.
n=Number of Table 8 or Table 9 compounds in stream.
C_i=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.
10^9=Conversion factor, mg/kg * l/m³

(4)(i) The required mass removal is calculated by summing the required mass removal for each Group 1 wastewater stream to be combined for treatment when complying with § 63.138(f).

(ii) The required mass removal is calculated by summing the required mass removal for all Group 1 and Group 2 wastewater streams combined for treatment when complying with § 63.138(g).

(5) *The AMR calculation procedure for non-combustion treatment processes including closed biological treatment processes.* The AMR shall be calculated as follows:

$$AMR = (QMW_a - QMW_b) \qquad \text{(Eqn WW10)}$$

Where:
AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by treatment process or series of treatment processes, kilograms per hour.
QMW_a=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process or first treament process in a series of treatment processes, kilograms per hour.
QMW_b=Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes, kilograms per hour.

(6) *Compare RMR to AMR.* When complying with § 63.138(f), compare the RMR calculated in Equation WW9 to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to the RMR. When complying with § 63.138(g), compare the RMR calculated in Equation WW–9a to the AMR calculated in Equation WW10. Compliance is demonstrated if the AMR is greater than or equal to 95-percent mass removal.

(f) *Open or closed aerobic biological treatment processes: Required mass removal (RMR) option.* This paragraph applies to the use of performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the mass removal provisions for Table 8 and/or Table 9 compounds. These compliance options are specified in § 63.138(f) of this subpart. The owner or operator shall comply with the requirements specified in § 63.145 (f)(1) through (f)(6) of this subpart. Some compounds may not require a performance test. Refer to § 63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph.

(1) *Concentration in wastewater stream.* The concentration of Table 8 and/or Table 9 compounds shall be determined as provided in this paragraph. Concentration measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for concentration change made according to § 63.144(b)(6) of this subpart. Concentration measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in § 63.145(a)(7) for a series of treatment processes. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity per § 63.144(b)(5)(ii). The method shall be an analytical method for wastewater which has that compound as a target analyte. Samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist c a minimum of 3 runs. Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-spe Fm factor listed in table 34 of this subpart. Concentration measurements

based on methods other than Method 305 shall not adjust by the compound-specific Fm factor listed in table 34 of this subpart.

(2) *Flow rate.* Flow rate measurements to determine RMR shall be taken at the point of determination or downstream of the point of determination with adjustment for flow rate change made according to § 63.144(c)(4) of this subpart. Flow rate measurements to determine AMR shall be taken at the inlet and outlet to the treatment process and as provided in § 63.145(a)(7) for a series of treatment processes. Flow rate shall be determined using inlet and outlet flow measurement devices. Where the outlet flow is not greater than the inlet flow, a flow measurement device shall be used, and may be used at either the inlet or outlet. Flow rate measurements shall be taken at the same time as the concentration measurements.

(3) *Calculation of RMR for open or closed aerobic biological treatment processes.* The required mass removal of Table 8 and/or Table 9 compounds for each Group 1 wastewater stream shall be calculated using the following equation:

$$RMR = \frac{\rho}{10^9} Q \sum_{i=1}^{n} (C_i * Fr_i) \qquad \text{(Eqn WW11)}$$

Where:

RMR=Required mass removal for treatment process or series of treatment processes, kilograms per hour.

ρ=Density of the Group 1 wastewater stream, kilograms per cubic meter.

Q=Volumetric flow rate of wastewater stream at the point of determination, liters per hour.

i=Identifier for a compound.

n=Number of Table 8 or Table 9 compounds in stream.

C_i=Concentration of Table 8 or Table 9 compounds at the point of determination, parts per million by weight.

Fr_i=Fraction removal value of a Table 8 or Table 9 compound. Fr values are listed in table 9 of this subpart.

10^9=Conversion factor, mg/kg * l/m^3.

(4) The required mass removal is calculated by adding together the required mass removal for each Group 1 wastewater stream to be combined for treatment.

(5) *Actual mass removal calculation procedure for open or closed aerobic biological treatment processes.* The actual mass removal (AMR) shall be calculated using Equation WW12 as specified in paragraph (f)(5)(i) of this section when the performance test is performed across the open or closed aerobic biological treatment process only. If compliance is being demonstrated in accordance with § 63.145(a)(7)(i), the AMR for the series shall be calculated using Equation WW13 in § 63.145(f)(5)(ii). (This equation is for situations where treatment is performed in a series of treatment processes connected by hard-piping.) If compliance is being demonstrated in accordance with § 63.145(a)(7)(ii), the AMR for the biological treatment process shall be calculated using Equation WW12 in § 63.145(f)(5)(i). The AMR for the biological treatment process used in a series of treatment processes calculated using Equation WW12 shall be added to the AMR determined for each of the other individual treatment processes in the series of treatment processes.

(i) Calculate AMR for the open or closed aerobic biological treatment process as follows:

$$AMR = QMW_a * F_{bio} \qquad \text{(Eqn WW12)}$$

Where:

AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by open or closed biological treatment process, kilograms per hour.

QMW_a=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the treatment process, kilograms per hour.

F_{bio}=Site-specific fraction of Table 8 or Table 9 compounds biodegraded. F_{bio} shall be determined as specified in § 63.145(h) and appendix C of this subpart.

(ii) Calculate AMR across a series of treatment units where the last treatment unit is an open or closed aerobic biological treatment process as follows:

$$AMR = QMW_a - (QMW_b)(1 - F_{bio}) \qquad \text{(Eqn WW13)}$$

Where:

AMR=Actual mass removal of Table 8 or Table 9 compounds achieved by a series of treatment processes, kilograms per hour.

QMW_a=Mass flow rate of Table 8 or Table 9 compounds in wastewater entering the first treatment process in a series of treatment processes, kilograms per hour.

QMW_b=Mass flow rate of Table 8 or Table 9 compounds in wastewater exiting the last treatment process in a series of treatment processes prior to the biological treatment process, kilograms per hour.

F_{bio}=Site-specific fraction of Table 8 or Table 9 compounds biodegraded. F_{bio} shall be determined as specified in § 63.145(h) and appendix C of this subpart.

(6) *Compare RMR to AMR.* Compare the RMR calculated in Equation WW11 to the AMR calculated in either Equation WW12 or WW13, as applicable. Compliance is demonstrated if the AMR is greater than or equal to the RMR.

(g) *Open or closed aerobic biological treatment processes: 95-percent mass removal option.* This paragraph applies to performance tests that are conducted for open or closed aerobic biological treatment processes to demonstrate compliance with the 95-percent mass removal provisions for Table 8 and/or Table 9 compounds. This compliance option is specified in § 63.138(g) of this subpart. The RMR for this option is 95-percent mass removal. The owner or operator shall comply with the requirements specified in § 63.145(g)(1) to determine AMR, § 63.145 (e)(3)(ii) and (e)(4)(ii) to determine RMR, and (g)(2) of this subpart to determine whether compliance has been demonstrated. Some compounds may not require a performance test. Refer to § 63.145(h) and table 36 of this subpart to determine which compounds may be exempt from the requirements of this paragraph. (Wastewater streams that are Group 1 for both Table 8 and Table 9 compounds need only do the compliance demonstration for Table 9 compounds.)

(1) The owner or operator shall comply with the requirements specified in paragraphs (f)(1), (f)(2), and (f)(5) of this section to determine AMR. References to Group 1 wastewater streams shall be deemed Group 1 and Group 2 wastewater streams for the purposes of this paragraph.

(2) *Compare RMR to AMR.* Compliance is demonstrated if the AMR is greater than or equal to RMR.

(h) *Site-specific fraction biodegraded (F_{bio}).* The compounds listed in table 9 of this subpart are divided into three sets for the purpose of determining whether F_{bio} must be determined, and if F_{bio} must be determined, which procedures may be used to determine compound-specific kinetic parameters. These sets are designated as lists 1, 2, and 3 in table 36 of this subpart.

(1) *Performance test exemption.* If a biological treatment process meets the requirements specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this section, the owner or operator is not required to determine F_{bio} and is exempt from the applicable performance test requirements specified in § 63.138 of this subpart.

(i) The biological treatment process meets the definition of "enhanced biological treatment process" in § 63.111 of this subpart.

(ii) At least 99 percent by weight of all compounds on table 36 of this subpart that are present in the aggregate of all wastewater streams using the biological treatment process to comply with § 63.138 of this subpart are compounds on list 1 of table 36 of this subpart.

(2) *F_{bio} determination.* For wastewater streams that include one or more compounds on lists 2 and/or 3 of table 36 of this subpart that do not meet criteria in paragraph (h)(1)(ii) of this section, the owner or operator shall determine F_{bio} for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(i) or (h)(2)(ii) of this section. For biological treatment processes that do not meet the definition for enhanced biological treatment in § 63.111 of this subpart, the owner or operator shall determine the F_{bio} for the biological treatment process using any of the procedures in appendix C to part 63, except the batch tests procedure.

(i) *Wastewater streams without list 3 compounds that are treated in enhanced biological treatment processes.* For wastewater streams that include no compounds on list 3 of table 36 of this subpart and the biological treatment process meets the definition of enhanced biological treatment process in § 63.111 of this subpart, the owner or operator shall determine f_{bio} for the list 2 compounds using any of the procedures specified in appendix C of 40 CFR part 63. (The symbol "f_{bio}" represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.) The owner or operator shall calculate f_{bio} for the list 1 compounds using the defaults for first order biodegradation rate constants (K_1) in table 37 of subpart G and follow the procedure explained in Form III of appendix C, 40 CFR part 63, or any of the procedures specified in appendix C, 40 CFR part 63.

(ii) *Wastewater streams with list 3 compounds that are treated in enhanced biological treatment processes.* For wastewater streams that include one or more compounds on list 3 of table 36 of this subpart, the owner or operator shall determine f_{bio} for the list 3 compounds using any of the procedures specified in appendix C, 40 CFR part 63, except the batch tests procedure. The owner or operator shall determine f_{bio} for the list 2 compounds using any of the procedures specified in appendix C, 40 CFR part 63. The owner or operator shall calculate f_{bio} for the list 1 compounds using the defaults for first order biodegradation rate constants (K_1) in table 37 of subpart G and follow the procedure explained in Form III of appendix C, 40 CFR part 63, or any of the procedures specified in appendix C, of 40 CFR part 63.

(iii) *Performance tests for control devices other than flares.* This paragraph applies to performance tests that are conducted to demonstrate compliance of a control device with the efficiency limits specified in § 63.139(c). If complying with the 95-percent reduction efficiency requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(9) of this section. If complying with the 20 ppm by volume requirement, comply with the requirements specified in paragraphs (i)(1) through (i)(6) and (i)(9) of this section. The 20 ppm by volume limit or 95 percent reduction efficiency requirement shall be measured as either total organic hazardous air pollutants or as TOC minus methane and ethane.

(1) *Sampling sites.* Sampling sites shall be selected using Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate. For determination of compliance with the 95 percent reduction requirement, sampling sites shall be located at the inlet and the outlet of the control device. For determination of compliance with the 20 parts per million by volume limit, the sampling site shall be located at the outlet of the control device.

(2) *Concentration in gas stream entering or exiting the control device.* The concentration of total organic hazardous air pollutants or TOC in a gas stream shall be determined as provided in this paragraph. Samples may be grab samples or composite samples (i.e., integrated samples). Samples shall be taken at approximately 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. Concentration measurements 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.

(3) *Volumetric flow rate of gas stream entering or exiting the control device.* The volumetric flow rate of the gas stream shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. Volumetric flow rate measurements shall be taken at the same time as the concentration measurements.

(4) *Calculation of TOC concentration.* The TOC concentration (CG_T) is the sum of the concentrations of the individual components. If compliance is being determined based on TOC, the owner or operator shall compute TOC for each run using the following equation:

$$CG_T = \frac{1}{m}\sum_{j=1}^{m}\left(\sum_{i=1}^{n} CGS_{i,j}\right) \quad \text{(Eqn WW14)}$$

Where:

CG_T=Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.

CGS_{ij}=Concentration of sample components in vented gas stream for sample j, dry basis, parts per million by volume.

i=Identifier for a compound.

n=Number of components in the sample.

j=Identifier for a sample.

m=Number of samples in the sample run.

(5) *Calculation of total organic hazardous air pollutants concentration.* The owner or operator determining compliance based on total organic hazardous air pollutants concentration (C_{HAP}) shall compute C_{HAP} according to the Equation WW14, except that only Table 9 compounds shall be summed.

(6) *Percent oxygen correction for combustion control devices.* If the control device is a combustion device, comply with the requirements specified in paragraph (i)(6)(i) of this section to determine oxygen concentration, and in paragraph (i)(6)(ii) of this section to calculate the percent oxygen correction.

(i) *Oxygen concentration.* The concentration of TOC or total organic hazardous air pollutants shall be corrected to 3 percent oxygen if the control device is a combustion device. The emission rate correction factor for excess air, composite sampling (i.e., integrated sampling) and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the actual oxygen concentration ($\%O_{2d}$). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic hazardous air pollutants samples are taken.

(ii) *3 percent oxygen calculation.* The concentration corrected to 3 percent oxygen (CG_c), when required, shall be computed using the following equation:

$$CG_C = CG_T\left(\frac{17.9}{20.9 - \%O_{2d}}\right) \qquad \text{(Eqn WW15)}$$

Where:

CG_c=Concentration of TOC or organic hazardous air pollutants corrected to 3 percent oxygen, dry basis, parts per million by volume.

CG_T=Total concentration of TOC (minus methane and ethane) in vented gas stream, average of samples, dry basis, parts per million by volume.

$\%O_{2d}$=Concentration of oxygen measured in vented gas stream, dry basis, percent by volume.

(7) *Mass rate calculation.* The mass rate of either TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated using the following equations. Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by methods specified in paragraph (i)(2) of this section are summed using Equations WW16 and WW17. Where the mass rate of total organic hazardous air pollutants is being calculated, only Table 9 compounds shall be summed using Equations WW16 and WW17.

$$QMG_a = K_2\left(\sum_{i=1}^{n} CG_{a,i}\, MW_i\right)QG_a \qquad \text{(Eqn WW16)}$$

$$QMG_b = K_2\left(\sum_{i=1}^{n} CG_{b,i}\, MW_i\right)QG_b \qquad \text{(Eqn WW17)}$$

Where:

$CG_{a,i}$, $CG_{b,i}$=Concentration of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering ($CG_{a,i}$) and exiting ($CG_{b,i}$) the control device, dry basis, parts per million by volume.

QMG_a, QMG_b=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, entering (QMG_a) and exiting (QMG_b) the control device, dry basis, kilograms per hour.

MW_i=Molecular weight of a component, kilogram/kilogram-mole.

QG_a, QG_b=Flow rate of gas stream entering (QG_a) and exiting (QG_b) the control device, dry standard cubic meters per hour.

K_2=Constant, 41.57×10^{-9} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram), where standard temperature (gram-mole per standard cubic meter) is 20° Celsius.

i=Identifier for a compound.

n=Number of components in the sample.

(8) *Percent reduction calculation.* The percent reduction in TOC (minus methane and ethane) or total organic hazardous air pollutants shall be calculated as follows:

$$E = \frac{QMG_a - QMG_b}{QMG_a}(100\%) \qquad \text{(Eqn WW18)}$$

Where:

E=Destruction efficiency of control device, percent.

QMG_a, QMG_b=Mass rate of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream entering and exiting (QMG_b) the control device, dry basis, kilograms per hour.

(9) *Compare mass destruction efficiency to required efficiency.* If complying with the 95 percent reduction efficiency requirement, compliance is demonstrated if the mass destruction efficiency (calculated in Equation WW18) is 95 percent or greater. If complying with the 20 parts per million by volume limit in § 63.139 (c)(1)(ii) of this subpart, compliance is demonstrated if the outlet total organic compound concentration, less methane and ethane, or total organic hazardous

air pollutants concentration is 20 parts per million by volume, or less. For combustion control devices, the concentration shall be calculated on a dry basis, corrected to 3 percent oxygen.

(j) *Compliance demonstration for flares.* When a flare is used to comply with § 63.139 (c) 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 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 hazardous air pollutants or TOC concentration when a flare is used.

§ 63.146 Process wastewater provisions—reporting.

(a) For each waste management unit, treatment process, or control device used to comply with §§ 63.138 (b)(1), (c)(1), (d), (e), (f), or (g) 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(f) or (g) 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) [Reserved]

(2) For each new and existing source, the owner or operator shall submit the information specified in table 15 of this subpart for Table 8 and/or Table 9 compounds.

(3) [Reserved]

(4) For each treatment process identified in table 15 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 15 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 report 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 report 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 of each parameter 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)(i)(A) and (b)(8)(i)(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), (f), (g), 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 of each parameter 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(h) 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), 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), (d)(2), and (d)(3) of this section for the monitoring required by § 63.143(b) of this subpart.

(1) For Item 1 in table 12, the owner or operator shall submit the results of measurements that indicate that the biological treatment unit is outside the range established in the Notification of Compliance Status or operating permit.

(2) For Item 2 in table 12, the owner or operator shall submit the monitoring results for each operating day during which the daily average value of a continuously monitored parameter is outside the range established in the Notification of Compliance Status or operating permit.

(3) 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 approved in accordance with § 63.151 (f) 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 an extension is utilized in accordance with § 63.133(e)(2) or § 63.133(h) of this subpart, the owner or operator shall include in the next periodic report the information specified in § 63.133 (e)(2) or § 63.133(h).

§ 63.147 Process wastewater provisions—recordkeeping.

(a) The owner or operator transferring a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream in accordance with § 63.132(g) of this subpart shall keep a record of the notice sent to the treatment operator stating that the wastewater stream or residual contains organic hazardous air pollutants which are required to be managed and treated in accordance with the provisions of this subpart.

(b) The owner or operator shall keep in a readily accessible location the records specified in paragraphs (b)(1) through (b)(7) 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 practical.

(7) Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in § 63.140(c), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept on site and when the manufacturer promised delivery), and the date when repair was completed.

(c) 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.

(d) The owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day as specified in § 63.152(f), except as provided in paragraphs (d)(1) and (d)(2) of this section.

(1) 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.

(2) For carbon adsorbers, the owner or operator shall keep the records specified in paragraphs (d)(2)(i) and (d)(2)(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.

(e) 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.

(f) If the owner or operator uses process knowledge to determine the annual average concentration of a wastewater stream as specified in § 63.144(b)(3) of this subpart and/or uses process knowledge to determine the annual average flow rate as specified in § 63.144(c)(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 annual average concentration and/or the annual average flow rate of the wastewater stream.

27. Section 63.148 is amended by revising paragraphs (c)(2), (c)(4)(ii), (c)(5), (i)(3)(i), (i)(3)(ii), and (j)(2) to read as follows:

§ 63.148 Leak inspection provisions.

* * * * *

(c) * * *

(2)(i) Except as provided in paragraph (c)(2)(ii) of this section, 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 volatile organic compound in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic hazardous air pollutants or volatile organic compounds, the average stream response factor shall be calculated on an inert-free basis.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (c)(2)(i) of this section, the

instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (c)(2)(i) of this section.

* * * * *

(4) * * *

(ii) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(5) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects to not adjust readings for background, all such instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in §§ 63.180(b) and (c) of subpart H of this part. The owner or operator shall subtract background reading from the maximum concentration indicated by the instrument.

* * * * *

(i) * * *

(3) * * *

(i) Hourly records of whether the flow indicator specified under paragraph (f)(1) of this section was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator 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 whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence 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 configuration has been checked out, and records of any car-seal that has broken.

* * * * *

(j) * * *

(2) Reports of the times 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

* * * * *

28. Section 63.149 is added to read as follows:

§ 63.149 Control requirements for certain liquid streams in open systems within a chemical manufacturing process unit.

(a) The owner or operator shall comply with the provisions of table 35 of this subpart, for each item of equipment meeting all the criteria specified in paragraphs (b) through (d) and either paragraph (e)(1) or (e)(2) of this section.

(b) The item of equipment is of a type identified in table 35 of this subpart;

(c) The item of equipment is part of a chemical manufacturing process unit that meets the criteria of § 63.100(b) of subpart F of this part;

(d) The item of equipment is controlled less stringently than in table 35 and is not listed in § 63.100(f) of subpart F of this part, and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, or H of this part; and

(e) The item of equipment:

(1) is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute. At a chemical manufacturing process unit subject to the new source requirements of 40 CFR 63.100(l)(1) or 40 CFR 63.100(l)(2), the criteria of this paragraph are also met if the item of equipment conveys water with an annual average concentration greater than or equal to 10 parts per million by weight of any Table 8 compound at an annual average flow rate greater than or equal to 0.02 liter per minute, or

(2) Is a tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute. At a chemical manufacturing process unit subject to the new source requirements of 40 CFR 63.100(l)(1) or 40 CFR 63.100 (l)(2), the criteria of this paragraph are also met if the tank receives one or more streams that contain water with an annual average concentration greater than or equal to 10 parts per million by weight of any Table 8 compound at an annual average flow rate greater than or equal to 0.02 liter per minute. The owner or operator of the source shall determine the characteristics of the stream as specified in paragraphs (e)(2) (i) and (ii) of this section.

(i) The characteristics of the stream being received shall be determined at the inlet to the tank.

(ii) The characteristics shall be determined according to the procedures in § 63.144 (b) and (c).

29. Section 63.152 is amended by revising the introductory text of paragraph (b)(1); revising paragraph (b)(2) introductory text and paragraphs (b)(2)(ii)(A) and (b)(2)(ii)(B); adding paragraph (b)(5); revising the introductory text of paragraphs (c)(2), (c)(2)(ii), and (c)(2)(ii)(A); revising paragraphs (c)(2)(ii)(A)(2) and (c)(2)(ii)(A)(3); revising the introductory text of paragraph (c)(2)(ii)(B); revising paragraphs (c)(2)(ii)(C) and (c)(2)(ii)(E); adding paragraph (c)(2)(iv); revising the introductory text of paragraph (c)(4); revising paragraph (c)(4)(iii) and adding paragraph (c)(4)(iv); adding a sentence to the end of paragraphs (c)(5)(iii) and (c)(6)(v); revising the introductory text of paragraph (f), revising paragraph (f)(2)(ii), revising the introductory text of paragraph (f)(5), revising paragraph (f)(7); and adding paragraph (g) to read as follows:

§ 63.152 General reporting and continuous records.

* * * * *

(b) * * *

(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 § 63.110 (h) for regulatory overlaps, 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.

* * * * *

(2) For each monitored parameter for which a range is required to be established under § 63.114 for process vents, § 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), 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. The recordkeeping and reporting requirements applicable to storage vessels are located in §§ 63.122 and 63.123.

* * * * *

(ii) * *

(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 and may be supplemented by engineering assessments and/or 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/or manufacturer's recommendations.

* * * * *

(5) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to § 63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility.

(c) * * *

(2) Except as provided in paragraph (c)(2)(iv) of this section, for an owner or operator of a source complying with the provisions of §§ 63.113 through 63.147 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.

* * * * *

(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 or recovery 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 paragraph (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*) of this section. For a control device or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraph (c)(2)(ii)(A)(*1*), (c)(2)(ii)(A)(*2*), or (c)(2)(ii)(A)(*3*) of this section, this is considered a single excursion for the control device or recovery device.

* * * * *

(*2*) When the period of control device or recovery 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 or recovery 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.

* * * * *

(B) The number of excused excursions for each control device or recovery 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.

* * * * *

(C) If a monitored parameter is outside its established range or monitoring data are not collected during periods of 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 of this part) or during periods of nonoperation of the chemical manufacturing process unit or portion thereof (resulting in cessation of the emissions to which the monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count toward the number of excused excursions for determining compliance.

* * * * *

(E) Paragraph (c)(2)(ii) of this section, except paragraph (c)(2)(ii)(C) of this section, shall apply only to emission points and control devices or recovery devices for which continuous monitoring is required by §§ 63.113 through 63.150.

* * * * *

(iv) The provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section do not apply to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under § 63.120(d)(2), to keep continuous records. If continuous records are required, the owner or operator shall specify, in the monitoring plan, whether the provisions of paragraphs (c)(2), (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section apply.

* * * * *

(4) Periodic Reports shall include the information in paragraphs (c)(4)(i) through (c)(4)(iv) of this section, as applicable:

* * * * *

(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 of this part, and

(iv) For process wastewater streams sent for treatment pursuant to § 63.132 (g), reports of changes in the identity of the treatment facility or transferee.

* * * * *

(5) * * *

(iii) * * * For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

* * * * *

(6) * * *

(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. For storage vessels to which the provisions of paragraphs (c)(2)(i) through (c)(2)(iii) of this section do not apply (as specified in paragraph (c)(2)(iv) of this section), the owner or operator is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

* * * * *

(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) or under § 63.8(f) of subpart A of this part, and except as provided in paragraph (c)(2)(ii)(C) of this section or in paragraph (g) of this section. If a monitoring plan for storage vessels pursuant to § 63.120(d)(2)(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of

paragraphs (f)(1) through (f)(7) of this section apply.

* * * * *

(2) * * *

(ii) Block average values for 15-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

* * * * *

(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 paragraphs (f)(6) and (f)(7) of this section.

* * * * *

(7) Monitoring data recorded during periods identified in paragraphs (f)(7)(i) through (f)(7)(v) of this section 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.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions;

(v) Periods of non-operation of the chemical manufacturing process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(g) For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (g)(1) or (g)(2) of this section as 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, §§ 63.143, 63.146, and 63.147 for wastewater, and/or § 63.152(f), except that § 63.152(f)(7) shall apply. The owner or operator shall retain each record required by paragraph (g)(1) or (g)(2) of this section as provided in § 63.103(c) of subpart F of this part, except as provided otherwise in paragraph (g)(1) or (g)(2) of this section.

(1) The owner or operator may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (g)(1)(i) through (g)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (g)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the periodic report immediately preceding implementation of the requirements of paragraph (g)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns, or malfunctions (e.g., a temperature reading of −200° C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (g)(1)(ii)(A) through (g)(1)(iii)(C) of this section. All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits;

(B) The running average is based on at least 6 1-hour average values; and

(C) The running average reflects a period of operation other than a startup, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm or other means, if the running average parameter value calculated under paragraph (g)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (g)(1) of this section, at the times specified in paragraphs (g)(1)(v)(A) through (g)(1)(v)(C) of this section. The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (g)(1)(vi) (A) through (C) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (g) of this section.

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraph (g)(1)(i) through (g)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in § 63.103(c) of subpart F of this part, except as provided in paragraph (g)(1)(vi)(D) of this section.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (g)(1) of this section.

(D) Owners and operators subject to paragraph (g)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after its creation. Thereafter, the superseded description may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (g)(1) of this section, and a period of 6 consecutive months has passed without an excursion as defined

in paragraph (g)(2)(iv) of this section, the owner or operator is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the daily average value is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next periodic report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily averages as provided in paragraph (g)(2) of this section, there is an excursion as defined in paragraph (g)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average value for each day, and shall notify the Administrator in the next periodic report. The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (g)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (g)(1) (i), (ii), (iii), (iv), (v), and (vi) of this section. For any calendar week, if compliance with paragraphs (g)(1) (i), (ii), (iii), and (iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a startup, shutdown, or malfunction.

(iv) For purposes of paragraph (g) of this section, an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (g)(2)(iv)(A) and (g)(2)(iv)(B) of this section.

(A) The daily average value during any start-up, shutdown, or malfunction shall not be considered an excursion fo purposes of this paragraph (g)(2), if the owner or operator follows the applicable provisions of the startup, shutdown, and malfunction plan required by § 63.6(e)(3) of subpart A of this part.

(B) An excused excursion, as described in § 63.152(c)(2)(ii) (B) and (C), shall not be considered an excursion for purposes of this paragraph (g)(2).

30. The tables in the appendix to subpart G are amended by revising tables 3, 4, 7, 11, 12, and 13; removing and reserving tables 14a and 14b; removing tables 15a and 15b, and adding table 15; removing and reserving table 16; revising tables 17, 18, and 20; table 34 is amended by revising the F_m entry for chlorobenzene from "0.96" to "1.00", the F_m entry for isophorone from "0.47" to "0.51," the F_m entry for trichloroethane (1,1,2-) (Vinyl trichloride) from "0.98" to "1.00," and the F_m entry for trichlorophenol (2,4, 5-) from "1.00" to "0.11"; and adding tables 35, 36, and 37 and by revising figure 1 and removing figures 2 through 10 to read as follows:

TABLE 3.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS 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 the 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. 5. Report all daily average temperature differences across the catalyst bec 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 perioc of the performance test—NCS. 3. Record the daily average firebox temperature for each operating day.[e] 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 an 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 fu period of the compliance determination—NCS. 3. Record the times and durations of all periods when all pilot flames ar absent or the monitor is not operating. 4. Report the times and durations of all periods when all pilot flames of flare are absent—PR.

TABLE 3.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS 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
Recapture devices	The appropriate monitoring device identified in table 4 when, in the table, the term "recapture" is substituted for "recovery." [63.114(a)(5)].	1. The recordkeeping and reporting requirements for monitored parameters identified for the appropriate monitoring device in table 4 of this subpart.
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.[e] 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 of scrubber liquid flow rate. 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.
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 diversion 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 moved to the diverting position 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[a]	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.

TABLE 4.—PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR MAINTAINING A TRE INDEX VALUE >1.0 AND <4.0—Continued

Final recovery device	Parameters to be monitored[a]	Recordkeeping and reporting requirements for monitored parameters
Carbon adsorber.[d]	Total regeneration stream mass or volumetric 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 [63.114 (b)].	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 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS 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.[e] 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.[g]
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.[e] 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.[e] 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.

TABLE 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS 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
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 all pilot flames are 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.[e] 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 liquid and gas flow rates [63.127(a)(4)(ii)].	1. Continuous records during loading of scrubber liquid flow rate. 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[b]	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] 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[b]	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[b]	Total regeneration stream mass or volumetric 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.
	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.

TABLE 7.—TRANSFER OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT-PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS 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 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.[d] 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 a diversion 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.
	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 moved to the diverting position 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 11.—WASTEWATER—INSPECTION AND MONITORING REQUIREMENTS FOR WASTE MANAGEMENT UNITS

To comply with	Inspection or monitoring requirement	Frequency of inspection or monitoring	Method
Tanks:			
63.133(b)(1)	Inspect fixed roof and all openings for leaks.	Initially Semi-annually	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 Initially Annually.	
	—Secondary seal gaps		
63.133(f) 63.133(g)	Inspect wastewater tank for control equipment failures and improper work practices.	Initially Semi-annually	Visual.
Surface impoundments:			
63.134(b)(1)	Inspect cover and all openings for leaks	Initially Semi-annually	Visual.
63.134(c)	Inspect surface impoundment for control equipment failures and improper work practices.	Initially Semi-annually	Visual.
Containers:			
63.135(b)(1), 63.135(b)(2)(ii).	Inspect cover and all openings for leaks	Initially Semi-annually	Visual.
63.135(d)(1)	Inspect enclosure and all openings for leaks.	Initially Semi-annually	Visual.
63.135(e)	Inspect container for control equipment failures and improper work practices.	Initially Semi-annually	Visual.
Individual Drain Systems[a]:			
63.136(b)(1)	Inspect cover and all openings to ensure there are no gaps, cracks, or holes.	Initially Semi-annually	Visual.
63.136(c)	Inspect individual drain system for control equipment failures and improper work practices.	Initially Semi-annually	Visual.
63.136(e)(1)	Verify that sufficient water is present to properly maintain integrity of water seals.	Initially Semi-annually	Visual.

TABLE 11.—WASTEWATER—INSPECTION AND MONITORING REQUIREMENTS FOR WASTE MANAGEMENT UNITS—Continued

To comply with	Inspection or monitoring requirement	Frequency of inspection or monitoring	Method
63.136(e)(2), 63.136(f)(1) ...	Inspect all drains using tightly-fitted caps or plugs to ensure caps and plugs are in place and properly installed.	Initially Semi-annually	Visual.
63.136(f)(2)	Inspect all junction boxes to ensure covers are in place and have no visible gaps, cracks, or holes.	Initially Semi-annually	Visual or smoke test or other means as specified.
63.136(f)(3)	Inspect unburied portion of all sewer lines for cracks and gaps.	Initially Semi-annually	Visual.
Oil-water separators:			
63.137(b)(1)	Inspect fixed roof and all openings for leaks.	Initially Semi-annually	Visual.
63.137(c)	Measure floating roof seal gaps in accordance with 40 CFR 60.696(d)(1).	Initially[b]	See 40 CFR 60.696(d)(1).
	—Primary seal gaps	Once every 5 years.	
63.137(c)	—Secondary seal gaps	Initially[b] Annually.	
63.137(d)	Inspect oil-water separator for control equipment failures and improper work practices.	Initially Semi-annually	Visual.

[a] As specified in §63.136(a), the owner or operator shall comply with either the requirements of §63.136 (b) and (c) or §63.136 (e) and (f).
[b] Within 60 days of installation as specified in §63.137(c).

TABLE 12.—MONITORING REQUIREMENTS FOR TREATMENT PROCESSES

To comply with	Parameters to be monitored	Frequency	Methods
1. Required mass removal of Table 8 and/or Table 9 compound(s) from wastewater treated in a properly operated biological treatment unit 63.138(f), 63.138(g).	Appropriate parameters as specified in §63.143(c) and approved by permitting authority.	Appropriate frequency as specified in §63.143 and as approved by permitting authority.	Appropriate methods as specified in §63.143 and as approved by permitting authority.
2. Design steam stripper 63.138(d).	Steam flow rate	Continuously	Integrating steam flow monitoring device equipped with a continuous recorder.
	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.
3. Alternative monitoring parameters.	Other parameters may be monitored upon approval from the Administrator in accordance with the requirements specified in §63.151(f).		

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 a diversion 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*. 2. Temperature difference across catalyst bed.	Continuous.

TABLE 13.—WASTEWATER—MONITORING REQUIREMENTS FOR CONTROL DEVICES—Continued

Control Device	Monitoring equipment required	Parameters to be monitored	Frequency
Flare	Heat sensing device installed at the pilot light and equipped with a continuous recorder[a].	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 or volumetric flow during carbon bed regeneration cycle(s).	For each regeneration cycle, record the total regeneration stream mass or volumetric 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 [Reserved]

Table 14b [Reserved]

TABLE 15.—WASTEWATER—INFORMATION ON TABLE 8 AND/OR TABLE 9 COMPOUNDS TO BE SUBMITTED WITH NOTIFICATION OF COMPLIANCE STATUS FOR PROCESS UNITS AT NEW AND/OR EXISTING SOURCES[a,b]

Process unit identification code[c]	Stream identification code	Concentration of table 8 and/or table 9 compound(s) (ppmw)[d,e]	Flow rate (lpm)[e,f]	Group 1 or Group 2[g]	Compliance approach[h]	Treatment process(es) identification[i]	Waste management unit(s) identification	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 NCS are specified in §63.152(b) of this subpart.
[c] Also include a description of the process unit (e.g., benzene process unit).
[d] Except when §63.132(e) is used, annual average concentration as specified in §63.132 (c) or (d) and §63.144.
[e] When §63.132(e) is used, indicate the wastewater stream is a designated Group 1 wastewater stream.
[f] Except when §63.132(e) is used, annual average flow rate as specified in §63.132 (c) or (d) and in §63.144.
[g] Indicate whether stream is Group 1 or Group 2. If Group 1, indicate whether it is Group 1 for Table 8 or Table 9 compounds or for both Table 8 and Table 9 compounds.
[h] Cite §63.138 compliance option used.

Table 16 [Reserved]

TABLE 17.—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]

[c] Identification codes should correspond to those listed in Table 15.

[e] Stream identification code for each wastewater stream treated by each treatment unit. Identification codes should correspond to entries listed in Table 15.

[f] Parameter(s) to be monitored or measured in accordance with Table 12 and §63.143 of this Subpart.

TABLE 18.—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]

[c] Identification codes should correspond to those listed in Table 15.

[e] Stream identification code for each wastewater stream received or managed by each waste management unit. Identification codes should correspond to entries listed in Table 15.

TABLE 20.—WASTEWATER—PERIODIC REPORTING REQUIREMENTS FOR CONTROL DEVICES USED TO COMPLY WITH §§ 63.133–63.138

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 all pilot flames are 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 or volumetric 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 moved to the diverting position 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(d) 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 35.—CONTROL REQUIREMENTS FOR ITEMS OF EQUIPMENT THAT MEET THE CRITERIA OF §63.149 OF SUBPART G

Item of equipment	Control requirement [a]
Drain or drain hub	(a) Tightly fitting solid cover (TFSC); or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of §63.139(c); or (c) Water seal with submerged discharge or barrier to protect discharge from wind.

TABLE 35.—CONTROL REQUIREMENTS FOR ITEMS OF EQUIPMENT THAT MEET THE CRITERIA OF § 63.149 OF SUBPART G—Continued

Item of equipment	Control requirement [a]
Manhole [b]	(a) TFSC; or (b) TSFC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of § 63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Lift station	(a) TFSC; or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of § 63.139(c); or (c) If the lift station is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter. The lift station shall be level controlled to minimize changes in the liquid level.
Trench	(a) TFSC; or (b) TFSC with a vent to either a process, or to a fuel gas system, or to a control device meeting the requirements of § 63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
Pipe	Each pipe shall have no visible gaps in joints, seals, or other emission interfaces.
Oil/Water separator	(a) Equip with a fixed roof and route vapors to a process or to a fuel gas system, or equip with a closed vent system that routes vapors to a control device meeting the requirements of § 63.139(c); or (b) Equip with a floating roof that meets the equipment specifications of § 60.693 (a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4).
Tank [c]	Maintain a fixed roof.[d] If the tank is sparged [e] or used for heating or treating by means of an exothermic reaction, a fixed roof and a system shall be maintained that routes the organic hazardous air pollutants vapors to other process equipment or a fuel gas system, or a closed vent system that routes vapors to a control device that meets the requirements of 40 CFR § 63.119 (e)(1) or (e)(2).

[a] Where a tightly fitting solid cover is required, it shall be maintained with no visible gaps or openings, except during periods of sampling, inspection, or maintenance.
[b] Manhole includes sumps and other points of access to a conveyance system.
[c] Applies to tanks with capacities of 38 m^3 or greater.
[d] A fixed roof may have openings necessary for proper venting of the tank, such as pressure/vacuum vent, j-pipe vent.
[e] The liquid in the tank is agitated by injecting compressed air or gas.

TABLE 36.—COMPOUND LISTS USED FOR COMPLIANCE DEMONSTRATIONS FOR ENHANCED BIOLOGICAL TREATMENT PROCESSES (SEE § 63.145(b))

List 1	List 2	List 3
Acetonitrile	Acetaldehyde	Allyl Chloride.
Acetophenone	Acrolein	Bromomethane.
Acrylonitrile	Benzene	Butadiene 1,3.
Biphenyl	Benzyl Chloride	Carbon Disulfide.
Chlorobenzene	Bromoform	Carbon Tetrachloride.
Dichloroethyl Ether	Cumene (isopropylbenzene)	Chloroethane (ethyl chloride).
Diethyl Sulfate	Dichlorobenzene 1,4	Chloroform.
Dimethyl Sulfate	Dichloroethane 1,2	Chloroprene.
Dimethyl Hydrazine 1,1	Dichloroethane 1,1 (ethylidenedichloride)	Dibromoethane 1,2.
Dinitrophenol 2,4	Dichloropropane 1,2	Dichloroethene 1,1 (vinylidene chloride).
Dinitrotoluene 2,4	Dimethylaniline N,N	Dichloropropene 1,3.
Dioxane 1,4	Epichlorohydrin	Hexane-n.
Ethylene Glycol Monobutyl Ether Acetate	Ethyl Acrylate	Methyl Chloride.
Ethylene Glycol Monomethyl Ether Acetate	Ethylbenzene	Methylene Chloride (dichloromethane).
Ethylene Glycol Dimethyl Ether	Ethylene Dibromide	Phosgene.
Hexachlorobenzene	Ethylene Oxide	Propylene Oxide.
Isophorone	Hexachlorobutadiene	Trichloroethane 1,12.
Methanol	Hexachloroethane	Trichloroethylene.
Methyl Methacrylate	Methyl Ethyl Ketone, (2 butanone)	Trimethylpentane 2,2,4.
Nitrobenzene	Methyl Isobutyl Ketone	Vinyl Chloride.
Toluidine	Methyl Tertiary Butyl Ether	
Trichlorobenzene 1,2,4	Naphathalene	
Trichlorophenol 2,4,6	Nitropropane 2	
Triethylamine	Propionaldehyde	
	Styrene.	
	Tetrachloroethane 1,1,2,2.	
	Toluene.	
	Trichloroethane 1,1,1 (methyl chloroform).	
	Vinyl Acetate	
	Xylene-m	
	Xylene-o	

TABLE 36.—COMPOUND LISTS USED FOR COMPLIANCE DEMONSTRATIONS FOR ENHANCED BIOLOGICAL TREATMENT PROCESSES (SEE § 63.145(b))—Continued

List 1	List 2	List 3
	Xylene-p	

TABLE 37.—DEFAULT BIORATES FOR LIST 1 COMPOUNDS

Compound name	Biorate, K1 L/g MLVSS-hr
ACETONITRILE	0.100
ACETOPHENONE	0.538
ACRYLONITRILE	0.750
BIPHENYL	5.643
CHLOROBENZENE	10.000
DICHLOROETHYL ETHER	0.246
DIETHYL SULFATE	0.105
DIMETHYL HYDRAZINE(1,1)	0.227
DIMETHYL SULFATE	0.178
DINITROPHENOL 2,4	0.020
DINITROTOLUENE(2,4)	0.784
DIOXANE(1,4)	0.393
ETHYLENE GLYCOL DIMETHYL ETHER	0.364
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	0.159
ETHYLENE GLYCOL MONOBUTYL ETHER ACETATE	0.496
HEXACHLOROBENZENE	16.179
ISOPHORONE	0.598
METHANOL	0.200
METHYL METHACRYLATE	4.300
NITROBENZENE	2.300
TOLUIDINE (-0)	0.859
TRICHLOROBENZENE 1,2,4	4.393
TRICHLOROPHENOL 2,4,5	4.477
TRIETHYLAMINE	1.064

Figure 1.—Definitions of Terms Used in Wastewater Equations

Main Terms

AMR=Actual mass removal of Table 8 and/or Table 9 compounds achieved by treatment process or a series of treatment processes, kg/hr.

C=Concentration of Table 8 and/or Table 9 compounds in wastewater, ppmw.

CG=Concentration of TOC (minus methane and ethane) or total organic hazardous air pollutants, in vented gas stream, dry basis, ppmv.

CG_c=Concentration of TOC or organic hazardous air pollutants corrected to 3-percent oxygen, in vented gas stream, dry basis, ppmv.

CGS=Concentration of sample compounds in vented gas stream, dry basis, ppmv.

E=Removal or destruction efficiency, percent.

F_{bio}=Site-specific fraction of Table 8 and/or Table 9 compounds biodegraded, unitless.

f^{bio}=Site-specific fraction of an individual Table 8 or Table 9 compound biodegraded, unitless.

Fm=Compound-specific fraction measured factor, unitless (listed in table 34).

Fr=Fraction removal value for Table 8 and/or Table 9 compounds, unitless (listed in Table 9).

Fr_{avg}=Flow-weighted average of the Fr values.

i=Identifier for a compound.

j=Identifier for a sample.

k=Identifier for a run.

K_2=Constant, $41.57 * 10^{-9}$, $(ppm)^{-1}$ (gram-mole per standard m^3) (kg/g), where standard temperature (gram-mole per standard m^3) is 20 °C.

m=Number of samples.

M=Mass, kg.

MW=Molecular weight, kg/kg-mole.

n=Number of compounds.

p=Number of runs.

$\%O_{2d}$=Concentration of oxygen, dry basis, percent by volume.

Q=Volumetric flowrate of wastewater, m^3/hr.

QG=Volumetric flow rate of vented gas stream, dry standard, m^3/min.

QMG=Mass flowrate of TOC (minus methane and ethane) or organic hazardous air pollutants, in vented gas stream, kg/hr.

QMW=Mass flowrate of Table 8 and/or Table 9 compounds in wastewater, kg/hr.

ρ=Density, kg/m^3.

RMR=Required mass removal achieved by treatment process or a series of treatment processes, kg/hr.

t_T=Total time of all runs, hr.

Subscripts

a=Entering.

b=Exiting.

i=Identifier for a compound.

j=Identifier for a sample.

k=Identifier for a run.

m=Number of samples.

n=Number of compounds.

p=Number of runs.

T=Total; sum of individual.

Subpart H—National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

31. Section 63.161 is amended by revising the definitions of "control device", "first attempt at repair", and "repaired"; and by adding the definitions for "combustion device," "fuel gas," fuel gas system," "on-site or on site," "recapture device," and "recovery device", and "routed to a process or route to a process" to read as follows:

§ 63.161 Definitions.

* * * * *

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 emissions.

* * * * *

Control device means any equipment used for recovering, recapturing, or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, flares, boilers, and process heaters.

* * * * *

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §63.180(b) and (c), as appropriate, to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

* * * * *

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

* * * * *

On-site or *On site* means, with respect to records required to be maintained by this subpart, that the records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the chemical manufacturing process unit to which the records pertain, or storage in central files elsewhere at the major source.

* * * * *

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. Recapture devices include, but are not limited to, absorbers, carbon absorbers, and condensers.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use or reuse. Recovery devices include, but are not limited to, absorbers, carbon absorbers, and condensers. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

Repaired means that equipment:

(1) is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart, and

(2) unless otherwise specified in applicable provisions of this subpart, is monitored as specified in § 63.180 (b) and (c), as appropriate, to verify that emissions from the equipment are below the applicable leak definition.

Routed to a process or route to a process means the emissions are conveyed by hard-piping or a closed vent system to any enclosed portion of a process unit where the emissions are predominately recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not organic hazardous air pollutants; and/or incorporated into a product; and/or recovered.

* * * * *

32. Section 63.162 is amended by revising paragraphs (f)(2) and (f)(3); adding paragraphs (g) and (h) to read as follows:

§ 63.162 Standards: General.

* * * * *

(f) * * *

(2) The identification on a valve may be removed after it has been monitored as specified in §§ 63.168(f)(3), and 63.175(e)(7)(i)(D) of this subpart, and no leak has been detected during the follow-up monitoring. If the owner or operator elects to comply using the provisions of § 63.174(c)(1)(i) of this subpart, the identification on a connector may be removed after it is monitored as specified in § 63.174(c)(1)(i) and no leak is detected during that monitoring.

(3) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of § 63.174(c)(1)(i), may be removed after it is repaired.

(g) Except as provided in paragraph (g)(1) of this section, all terms in this subpart that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), refer to the standard calendar periods unless specified otherwise in the section or subsection that imposes the requirement.

(1) If the initial compliance date does not coincide with the beginning of the standard calendar period, an owner or operator may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of paragraphs (g)(2) or (g)(3) of this section.

(2) Time periods specified in this subpart for completion of required tasks may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part. For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(3) Except as provided in paragraph (g)(1) or (g)(2) of this section, where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in paragraphs (g)(3)(i) or (g)(3)(ii) of this section, as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(4) In all instances where a provision of this subpart requires completion of a task during each of multiple successive periods, an owner or operator may perform the required task at any time during each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period.

(h) In all cases where the provisions of this subpart require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of this subpart to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of this subpart. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of this subpart.

33. Section 63.163 is amended by revising paragraphs (e)(1)(ii) and (g) to read as follows:

§ 63.163 Standards: Pumps in light liquid service.

* * * * *

(e) * * *
(1) * * *
(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or
* * * * *
(g) Any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system 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.
* * * * *

34. Section 63.164 is amended by revising paragraphs (b)(2) and (h) to read as follows:

§ 63.164 Compressors.

* * * * *
(b) * * *
(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or
* * * * *
(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 to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of § 63.172 of this subpart.
* * * * *

35. Section 63.165 is amended by revising paragraph (c) to read as follows:

§ 63.165 Standards: Pressure relief devices in gas/vapor service.

* * * * *
(c) Any pressure relief device that is routed to a process or fuel gas system or 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.
* * * * *

36. Section 63.168 is amended by revising the meaning of $\%V_L$ in paragraph (e)(1) and revising paragraph (f)(3) to read as follows:

§ 63.168 Standards: Valves in gas/vapor service and in light liquid service.

* * * * *
(e)(1) * * *
$\%V_L$=Percent leaking valves as determined through periodic monitoring required in paragraphs (b) through (d) of this section.
* * * * *
(f) * * *
(3) When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair.
(i) The monitoring shall be conducted as specified in § 63.180 (b) and (c), as appropriate, to determine whether the valve has resumed leaking.
(ii) Periodic monitoring required by paragraphs (b) through (d) of this section may be used to satisfy the requirements of this paragraph (f)(3), if the timing of the monitoring period coincides with the time specified in this paragraph (f)(3). Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph (f)(3), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph (f)(3).
(iii) If a leak is detected by monitoring that is conducted pursuant to paragraph (f)(3) of this section, the owner or operator shall follow the provisions of paragraphs (f)(3)(iii)(A) and (f)(3)(iii)(B) of this section, to determine whether that valve must be counted as a leaking valve for purposes of § 63.168(e) of this subpart.
(A) If the owner or operator elected to use periodic monitoring required by paragraphs (b) through (d) of this section to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve.
(B) If the owner or operator elected to use other monitoring, prior to the periodic monitoring required by paragraphs (b) through (d) of this section, to satisfy the requirements of paragraph (f)(3) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.
* * * * *

37. Section 63.169 is amended by revising paragraph (c)(3) to read as follows:

§ 63.169 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

* * * * *
(c) * * *
(3) For equipment identified in paragraph (a) of this section that is not monitored by the method specified in § 63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere 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.
* * * * *

38. Section 63.172 is amended by revising paragraphs (b), (c), (h)(2), and (j)(2), and adding paragraph (n) to read as follows:

§ 63.172 Standards: Closed-vent systems and control devices.

* * * * *
(b) Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts par million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to the provisions of § 63.179.
(c) Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, 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, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 °C.
* * * * *
(h) * * *
(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (i) of this section.
* * * * *
(j) * * *
(2) Secure the bypass line valve in the non-diverting 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 non-diverting position and the vent stream is not diverted through the bypass line.
* * * * *
(n) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of any control device subject to this subpart that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart BB, may elect to

comply either with the monitoring, recordkeeping, and reporting requirements of this subpart, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping and reporting requirements of this subpart. The owner or operator shall identify which option has been chosen, in the next periodic report required by § 63.182(d).

39. Section 63.173 is amended by revising paragraphs (d)(1)(ii), (f), and (g) to read as follows:

§ 63.173 Standards: Agitators in gas/vapor service and in light liquid service.

* * * * *

(d) * * *

(1) * * *

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or

* * * * *

(f) Any agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system 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 the 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 practical and at least monthly.

* * * * *

40. Section 63.174 is amended by revising paragraphs (c)(1)(i), (c)(1)(ii), the introductory text of paragraph (c)(2), revising paragraph (c)(2)(ii); adding paragraphs (c)(2)(iii) and (c)(2)(iv); removing and reserving paragraph (e); revising paragraph (h)(2); and revising paragraphs (i)(1) and (i)(2) to read as follows:

§ 63.174 Standards: Connectors in gas/vapor service and in light liquid service.

* * * * *

(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 when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the 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 connector 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 not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the owner or operator may not count nonrepairable connectors for the purposes of paragraph (i)(2) of this section. The owner or operator shall calculate the 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.

* * * * *

(2) As an alternative to the requirements of paragraph (b)(3) of this section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in paragraph (c)(2)(iii) or (c)(2)(iv) of this section may:

* * * * *

(ii) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section.

(iii) For sources subject to subparts F and I of this part, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before December 31, 1992.

(iv) For sources not identified in paragraph (c)(2)(iii) of this section, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before the date of proposal of the applicable subpart of this part that references this subpart.

* * * * *

(e) [Reserved]

* * * * *

(h) * * *

(2) If any inaccessible or ceramic or ceramic-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.

* * * * *

(i) * * *

(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 as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

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 hazardous air pollutants 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 as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

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 hazardous air pollutants 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 $C_C = 0$.

* * * * *

41. Section 63.180 is amended by revising paragraphs (b)(4)(ii), the introductory text of paragraph (c), and paragraph (c)(2) to read as follows:

§ 63.180 Test methods and procedures.

* * * * *

(b) * * *

(4) * * *

(ii) Mixtures of methane in air at the concentrations specified in paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of this section. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(A) For Phase I, a mixture of methane or other compounds, as applicable, in air at a concentration of approximately, but less than, 10,000 parts per million.

(B) For Phase II, a mixture of methane or other compounds, as applicable, 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 or other compounds, as applicable, 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.

* * * * *

(c) When equipment is monitored for compliance as required in §§ 63.164(i), 63.165(a), and 63.172(f) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the owner or operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects to not adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (b)(1) through (b)(4) of this section. In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (c)(1) through (c)(4) of this section.

* * * * *

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking.

* * * * *

42. Section 63.181 is amended by revising paragraphs (d)(7)(i) and (d)(7)(ii), revising the introductory text of paragraphs (g)(2) and (g)(3), and revising paragraph (i) to read as follows:

§ 63.181 Recordkeeping requirements.

* * * * *

(d) * * *

(7)(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in § 63.174(b) of this subpart, as described in § 63.174(c)(1) of this subpart, unless the owner or operator elects to comply with the provisions of § 63.174(c)(1)(ii) of this subpart.

(ii) The date and results of monitoring as required in § 63.174(c) of this subpart. If identification of connectors that have been opened or otherwise had the seal broken is made by location under paragraph (d)(7)(i) of this section, then all connectors within the designated location shall be monitored.

* * * * *

(g) * * *

(2) Records of operation of closed-vent systems and control devices, as specified in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

* * * * *

(3) Records of inspections of closed-vent systems subject to the provisions of § 63.172, as specified in paragraphs (g)(2)(i) through (g)(2)(iii) of this section.

* * * * *

(i) The owner or operator of equipment in heavy liquid service shall comply with the requirements of either paragraph (i)(1) or (i)(2) of this section, as provided in paragraph (i)(3) of this section.

(1) Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by the Administrator, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid 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.

* * * * *

43. Section 63.182 is amended by adding paragraph (d)(2)(xvii) to read as follows:

§ 63.182 Reporting requirements.

* * * * *

(d) * * *

(2) * * *

(xvii) If applicable, the compliance option that has been selected under § 63.172(n).

* * * * *

Subpart I—National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks

44. Section 63.190 is amended by adding a sentence to the end of paragraph (d) and revising the last sentence in paragraphs (e)(5)(i) and (e)(5)(ii) to read as follows:

§ 63.190 Applicability and designation of source.

* * * * *

(d) * * * If specific items of equipment, comprising part of a process unit subject to this subpart, are managed by different administrative organizations (e.g., different companies, affiliates, departments, divisions, etc.) those items of equipment may be aggregated with any process unit within the source for all purposes under subpart H of this part, providing there is no delay in the applicable compliance date in paragraph (e) of this section.

(e) * * *

(5)(i) * * * The owner or operator who elects to use this provision shall also comply with the requirements of § 63.192(m) of this subpart.

(ii) * * * The owner or operator who elects to use this provision shall also comply with the requirements of § 63.192(m) of this subpart.

* * * * *

45. Section 63.191 is amending by adding the definition for "on-site or on site" to read as follows:

§ 63.191 Definitions.

* * * * *

On-site or *On site* means, with respect to records required to be maintained by this subpart, that the records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the process unit to which the records pertain, or storage in central files elsewhere at the major source.

* * * * *

46. Section 63.192 is amended by adding two sentences to the end of the introductory text of paragraph (f); revising paragraph (f)(1); adding a sentence to the end of paragraph (f)(2)(iii) and paragraph (g)(1); removing paragraphs (g)(1(i) and (g)(1)(ii); and revising paragraph (k) to read as follows:

§ 63.192 Standard.

* * * * *

(f) * * * If an owner or operator submits copies of reports to the applicable EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request.

(2) * * *

(iii) * * * These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event.

(g) * * *

(1) * * * Submittals shall be sent on or before the specified date.

* * * * *

(k) The owner or operator of a process unit which meets the criteria of § 63.190 (c), shall comply with the requirements of either paragraph (k)(1) or (k)(2) of this section.

(1) Retain information, data, and analysis used to determine that the process unit does not have the designated organic hazardous air pollutant present in the process. 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.

(2) When requested by the Administrator, demonstrate that the chemical manufacturing process unit does not have the designated organic hazardous air pollutant present in the process.

* * * * *

47. Section 63.193 is revised to read as follows:

§ 63.193 Delegation of authority.

In delegating implementation and enforcement authority to a State under section 112(l) of the Clean Air Act, the authority for § 63.177 of subpart H of this part shall be retained by the Administrator and not transferred to a State.

48. Appendix A of part 63 is amended by revising Methods 304A and 304B 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.

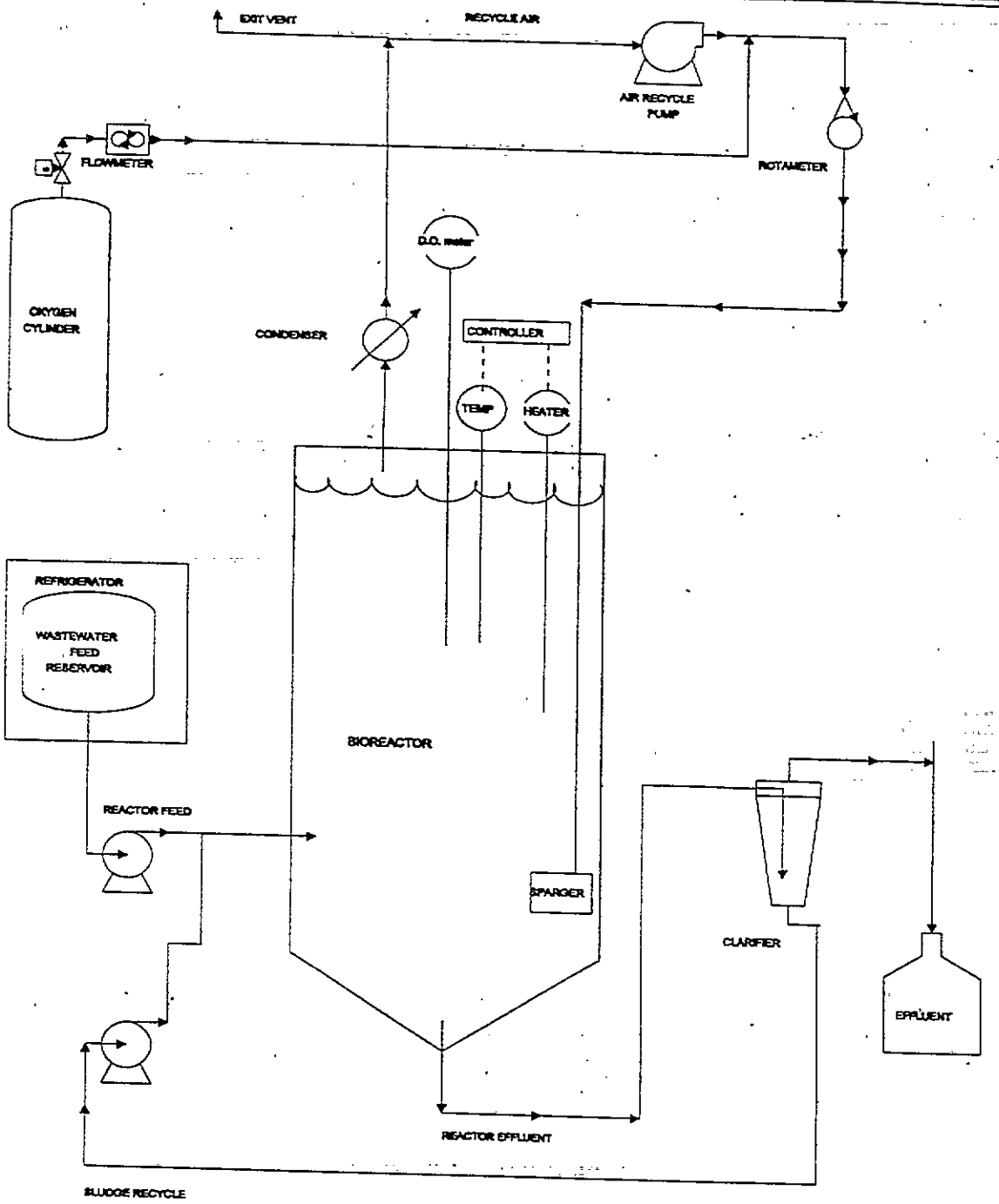
1.2 *Principle.* A self-contained benchtop bioreactor system is assembled in the laboratory. A sample of mixed liquor is added and the waste stream is then fed continuously. The benchtop bioreactor is operated under conditions nearly identical to the target full-scale activated sludge process. Bioreactor 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 benchtop bioreactor. Biomass shall be removed from the target full-scale activated sludge unit and held for no more than 4 hours prior to use in the benchtop bioreactor. If antifoaming agents are used in the full-scale system, they shall also be used in the benchtop bioreactor. The feed flowing into and the effluent exiting the benchtop bioreactor 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 benchtop bioreactor are left to the discretion of the source, except where validated methods are available.

2. Apparatus

Figure 1 illustrates a typical laboratory apparatus used to measure biodegradation rates. While the following description refers to Figure 1, the EPA recognizes that alternative reactor configurations, such as alternative reactor shapes and locations of probes and the feed inlet, will also meet the intent of this method. Ensure that the benchtop 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 *Benchtop Bioreactor.* The biological reaction is conducted in a biological oxidation reactor of at least 6 liters capacity. The benchtop bioreactor is sealed and equipped with internal probes for controlling and monitoring dissolved oxygen and internal temperature. The top of the reactor is equipped for aerators, gas flow ports, and instrumentation (while ensuring that no leaks to the atmosphere exist around the fittings).



EPA METHOD 304A VENT BIOREACTOR SYSTEM

2.1.2 *Aeration gas.* Aeration gas is added to the benchtop bioreactor through three diffusers, which are glass tubes 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 (e.g., Diaphragm Type, 15 SCFH capacity) to blow the aeration gas into the reactor diffusers. Measure the aeration gas flow rate with a rotameter (e.g., 0–15 SCFH recommended). The aeration gas will rise through the benchtop bioreactor, 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 benchtop bioreactor through a water-cooled (e.g., Allihn-type) vertical condenser. Install the condenser through a gas-tight fitting in the benchtop bioreactor 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 benchtop bioreactor. 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 benchtop bioreactor in a collapsible low-density polyethylene container or collapsible liner in a container (e.g., 20 L) equipped with a spigot cap (collapsible containers or liners 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 equalization tank, 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 benchtop bioreactor through a fitting on the top flange. Determine the rate of feed addition to provide a retention time in the benchtop 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 benchtop bioreactor 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 separate closed clarifier that allows separation of biomass and effluent (e.g., 2-liter pear-shaped glass separatory funnel, modified by removing the stopcock and adding a 25-mm OD glass tube at the bottom). Benchtop bioreactor 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. 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 benchtop bioreactor. An additional port is provided near the bottom of the benchtop bioreactor for sampling the reactor contents. The mixed liquor from the benchtop bioreactor 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.

2.1.5 *Temperature Control Apparatus.* Capable of maintaining the system at a temperature equal to the temperature of the full-scale system. The average temperature should be maintained within ±2 °C of the set point.

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 or better.

2.1.5.2 *Benchtop Bioreactor 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. Target full-scale activated sludge systems with dissolved oxygen concentration below2 mg/L are required to maintain the dissolved oxygen concentration in the benchtop bioreactor within 0.5 mg/L of the target dissolved oxygen level. Target full-scale activated sludge systems with dissolved oxygen concentration above 2 mg/L are required to maintain the dissolved oxygen concentration in the benchtop bioreactor within 1.5 mg/L of the target dissolved oxygen concentration; however, for target full-scale activated sludge systems with dissolved oxygen concentrations above 2 mg/L, the dissolved oxygen concentration in the benchtop bioreactor may not drop below 1.5 mg/L. If the benchtop bioreactor is outside the control range, the dissolved oxygen is noted and the reactor operation is adjusted.

2.1.6.1 *Dissolved Oxygen Monitor.* Dissolved oxygen is monitored with a polarographic probe (gas permeable membrane) connected to a dissolved oxygen meter (e.g., 0 to 15 mg/L, 0 to 50 °C).

2.1.6.2 *Benchtop bioreactor Pressure Monitor.* The benchtop bioreactor 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 or better. 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. Note: Mention of trade names or products does not constitute endorsement by the U.S. Environmental Protection Agency.

2.2 *Analysis.* If the identity of the compounds of interest in the wastewater is not known, 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 and/or use one or more analytical techniques capable of measuring each 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 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, the operation of the Method 304 unit may be altered to attempt to increase the effluent concentration above the limit of quantitation. Modifications to the method shall be approved prior to the test. The request should be addressed to Method 304 contact, Emissions Measurement Center, Mail Drop 19, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

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.

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 determination 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 (e.g., biomass 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 no more than 4 hours of collection. Maintain the biomass concentration in the benchtop bioreactor 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 and could realistically pose a hazard, closely monitor headspace concentration of these gases to ensure laboratory safety. Placement of the benchtop bioreactor system inside a laboratory hood is recommended regardless of byproducts produced.

4.1 *Benchtop Bioreactor Operation.* Charge the mixed liquor to the benchtop bioreactor, minimizing headspace over the liquid surface to minimize entrainment of mixed liquor in the circulating gas. Fasten the benchtop bioreactor headplate to the reactor over the liquid surface. Maintain the temperature of the contents of the benchtop bioreactor system at the temperature of the target full-scale system, +2 °C, throughout the testing period. Monitor and record the temperature of the benchtop bioreactor contents at least 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 benchtop bioreactor 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 shall be pumped to the benchtop bioreactor at the required flow rate to achieve the calculated hydraulic residence time of wastewater in the aeration tank.

$$Q_{test} = Q_{fs}\frac{L}{V_{fs}} \qquad \text{Eqn 304A} - 1$$

Where:

Q_{test}=wastewater flow rate (L/min)

Qf_{fs}=average flow rate of full-scale process (L/min)

V_{fs}=volume of full-scale aeration tank (L)

The target flow rate in the test apparatus is the same as the flow rate in the target full-scale process multiplied by the ratio of benchtop bioreactor volume (e.g., 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 benchtop bioreactor 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 *Benchtop Bioreactor Operation and Maintenance.* Temperature, dissolved oxygen concentration, exit vent flow rate, benchtop bioreactor effluent flow rate, and air circulation rate shall be measured and recorded three times throughout each day of benchtop bioreactor operation. If other parameters (such as pH) are measured and maintained in the target full-scale unit, these parameters, where appropriate, shall be monitored and maintained to target full-scale specifications in the benchtop bioreactor. At the beginning of each sampling period (section 4.2), sample the benchtop bioreactor 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 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 benchtop bioreactor, 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 benchtop bioreactor to increase the suspended solids concentration to the desired level. Pump this mixed liquor to the benchtop bioreactor 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 or check the flow measuring device and measure flow rate again until target flow rate is achieved.

4.2 *Test Sampling.* At least 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 benchtop bioreactor 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 the amount removed (i.e., effluent concentration—wastewater feed concentration). The 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 benchtop 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 benchtop bioreactor 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, slow or 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 benchtop bioreactor. The required volume of mixed liquor to remove is determined as follows:

$$V_W = V_r\left(\frac{S_m - S_s}{S_m}\right) \qquad \text{Eqn 304A} - 2$$

Where:
V_w is the wasted volume (Liters),
V_r is the volume of the benchtop bioreactor (Liters),
S_m is the measured solids (g/L), and
S_s is the specified solids (g/L).

Remove the mixed liquor from the benchtop bioreactor 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 benchtop 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 benchtop bioreactor. Determine the amount of sludge added by the following equation:

$$V_w = V_r\left(\frac{S_s - S_m}{S_w}\right) \qquad \text{Eqn 304A} - 3$$

Where:
V_w is the volume of sludge to add (Liters),
V_r is the volume of the benchtop bioreactor (Liters),
S_w 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 benchtop bioreactor (hours)
V=Volume of the benchtop bioreactor (L)
Q=Flow rate of wastewater into the benchtop bioreactor, average (L/hour)

6.2 *Residence Time.* The hydraulic residence time of the benchtop bioreactor is equal to the ratio of the volume of the benchtop bioreactor (L) to the flow rate (L/h)

$$t = \frac{V}{Q} \qquad \text{Eqn 304A} - 4$$

6.3 *Rate of Biodegradation.* Calculate the rate of biodegradation for each component with the following equation:

$$\text{Rate}\left(\frac{mg}{L-h}\right) = \frac{C_i - C_o}{t} \qquad \text{Eqn 304A} - 5$$

6.4 *First-Order Biorate Constant.* Calculate the first-order biorate constant (K1) for each component with the following equation:

$$K1\left(\frac{L}{g-h}\right) = \frac{C_i - C_o}{t\,C_o X} \qquad \text{Eqn 304A} - 6$$

6.5 *Relative Standard Deviation (RSD).* Determine the standard deviation of both the influent and effluent sample concentrations (S) using the following equation:

$$RSD = \frac{100}{\bar{S}}\left(\sum_{i=1}^{n}\frac{(S_i - \bar{S})^2}{(n-1)}\right)^{1/2} \qquad \text{Eqn 304A} - 7$$

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

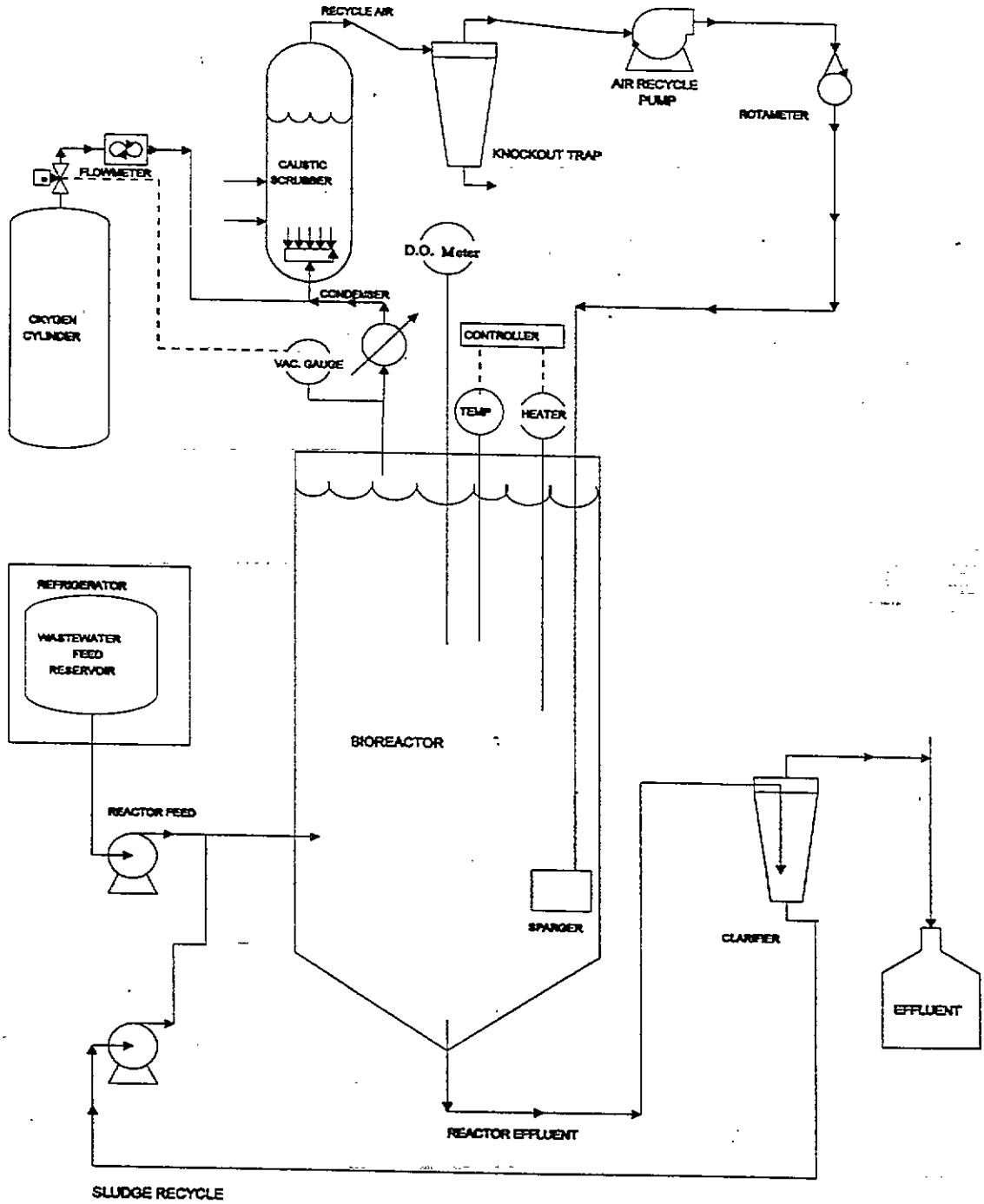
1.1 *Applicability.* This method is applicable for the determination of biodegradation rates of organic compounds in an activated sludge process. The test method is designed to evaluate the ability of an aerobic biological reaction system to degrade or destroy specific components in waste streams. The 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 benchtop bioreactor is operated under conditions nearly identical to the target full-scale activated sludge process, except that air emissions are not a factor. The benchtop bioreactor temperature, dissolved oxygen concentration, average residence time in the reactor, waste composition, biomass concentration, and biomass composition of the target full-scale process are the parameters which are duplicated in the laboratory system. Biomass shall be removed from the target full-scale activated sludge unit and held for no more than 4 hours prior to use in the benchtop bioreactor. If antifoaming agents are used in the full-scale system, they shall also be used in the benchtop bioreactor. The feed flowing into and the effluent exiting the benchtop bioreactor 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 benchtop bioreactor

are left to the discretion of the source, except where validated methods are available.

2. Apparatus

Figure 1 illustrates a typical laboratory apparatus used to measure biodegradation rates. While the following description refers to Figure 1, the EPA recognizes that alternative reactor configurations, such as alternative reactor shapes and locations of probes and the feed inlet, will also meet the intent of this method. Ensure that the benchtop bioreactor system is self-contained and isolated from the atmosphere by leak-checking fittings, tubing, etc.



EPA METHOD 304B BIOREACTOR SYSTEM

2.1 *Laboratory apparatus.*

2.1.1 *Benchtop Bioreactor.* The biological reaction is conducted in a biological oxidation reactor of at least 6-liters capacity. The benchtop bioreactor is sealed and equipped with internal probes for controlling and monitoring dissolved oxygen and internal temperature. The top of the benchtop bioreactor is equipped 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 benchtop bioreactor through three diffusers, which are glass tubes 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 (e.g., Diaphragm Type, 15 SCFH capacity) to blow the aeration gas into the benchtop bioreactor diffusers. Measure the aeration gas flow rate with a rotameter (e.g., 0–15 SCFH recommended). The aeration gas will rise through the benchtop bioreactor, 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 benchtop bioreactor through a water-cooled (e.g., Allihn-type) vertical condenser. Install the condenser through a gas-tight fitting in the benchtop bioreactor 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 benchtop bioreactor.

2.1.3 *Wastewater Feed.* Supply the wastewater feed to the benchtop bioreactor in a collapsible low-density polyethylene container or collapsible liner in a container (e.g., 20 L) equipped with a spigot cap (collapsible containers or liners 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 equalization tank, 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 benchtop bioreactor through a fitting on the top flange. Determine the rate of feed addition to provide a retention time in the benchtop bioreactor that is numerically equivalent to the retention time in the target full-scale system. The wastewater shall be fed at a rate sufficient to achieve 90 to 100 percent of the target full-scale system residence time.

2.1.3.3 *Treated wastewater feed.* The benchtop bioreactor 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 separate closed clarifier that allows separation of biomass and effluent (e.g., 2-liter pear-shaped glass separatory funnel, modified by removing the stopcock and adding a 25-mm OD glass tube at the bottom). Benchtop bioreactor 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. 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 benchtop bioreactor. An additional port is provided near the bottom of the benchtop bioreactor for sampling the reactor contents. The mixed liquor from the benchtop bioreactor 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.

2.1.5 *Temperature Control Apparatus.* Capable of maintaining the system at a temperature equal to the temperature of the full-scale system. The average temperature should be maintained within ±2°C of the set point.

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 or better.

2.1.5.2 *Benchtop Bioreactor 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. Target full-scale activated sludge systems with dissolved oxygen concentration below 2 mg/L are required to maintain the dissolved oxygen concentration in the benchtop bioreactor within 0.5 mg/L of the target dissolved oxygen level. Target full-scale activated sludge systems with dissolved oxygen concentration above 2 mg/L are required to maintain the dissolved oxygen concentration in the benchtop bioreactor within 1.5 mg/L of the target dissolved oxygen concentration; however, for target full-scale activated sludge systems with dissolved oxygen concentrations above 2 mg/L, the dissolved oxygen concentration in the benchtop bioreactor may not drop below 1.5 mg/L. If the benchtop bioreactor is outside the control range, the dissolved oxygen is noted and the reactor operation is adjusted.

2.1.6.1 *Dissolved Oxygen Monitor.* Dissolved oxygen is monitored with a polarographic probe (gas permeable membrane) connected to a dissolved oxygen meter (e.g., 0 to 15 mg/L, 0 to 50°C).

2.1.6.2 *Benchtop Bioreactor Pressure Monitor.* The benchtop bioreactor 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 or better. 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. Note: Mention of trade names or products does not constitute endorsement by the U.S. Environmental Protection Agency.

2.2 *Analysis.* If the identity of the compounds of interest in the wastewater is not known, 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 and/or use one or more analytical technique capable of measuring each of those compounds (more than one analytical technique may be required, depending on the characteristics of the wastewater). 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 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, the operation of the Method 304 unit may be altered to attempt to increase the effluent concentration above the limit of quantitation. Modifications to the method shall be approved prior to the test. The request should be addressed to Method 304 contact, Emissions Measurement Center, Mail Drop 19, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

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.

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 determination 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 (e.g., biomass 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 no more than 4 hours of collection. Maintain the biomass concentration in the benchtop bioreactor at the level of the target 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 and could realistically pose a hazard, closely monitor headspace concentration of these gases to ensure laboratory safety. Placement of the benchtop bioreactor system inside a laboratory hood is recommended regardless of byproducts produced.

4.1 *Benchtop Bioreactor Operation.* Charge the mixed liquor to the benchtop bioreactor, minimizing headspace over the liquid surface to minimize entrainment of mixed liquor in the circulating gas. Fasten the benchtop bioreactor headplate to the reactor over the liquid surface. Maintain the temperature of the contents of the benchtop bioreactor system at the temperature of the target full-scale system, +2 °C, throughout the testing period. Monitor and record the temperature of the reactor contents at least 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 benchtop bioreactor 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 shall be pumped to the benchtop bioreactor at the required flow rate to achieve the calculated hydraulic residence time of wastewater in the aeration tank.

$$Q_{test} = Q_{fs}\frac{L}{V_{fs}} \qquad \text{Eqn 304B–1}$$

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 target flow rate in the test apparatus is the same as the flow rate in the target full-scale process multiplied by the ratio of benchtop bioreactor volume (e.g., 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 target 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 benchtop bioreactor 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 *Benchtop 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 target full-scale unit, these parameters shall, where appropriate, be monitored and maintained to full-scale specifications in the benchtop bioreactor. At the beginning of each sampling period (section 4.2), sample the benchtop bioreactor 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 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 benchtop bioreactor, and the volume that is wasted shall be replaced with an equal volume of the benchtop bioreactor effluent. Add thickened activated sludge mixed liquor as necessary to the benchtop bioreactor to increase the suspended solids concentration to the desired level. Pump this mixed liquor to the benchtop bioreactor 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 or check the flow measuring device and measure flow rate again until target flow rate is achieved.

4.2 *Test Sampling.* At least 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 benchtop bioreactor 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 RSD of the amount removed (i.e., effluent concentration—wastewater feed concentration). The 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 benchtop 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 benchtop bioreactor 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, slow or 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 benchtop bioreactor. The required volume of mixed liquor to remove is determined as follows:

$$V_w = V_r\left(\frac{S_m - S_s}{S_m}\right) \qquad \text{Eqn 304B} - 2$$

Where:
V_w is the wasted volume (Liters),
V_r is the volume of the benchtop bioreactor (Liters),
S_m is the measured solids (g/L), and
S_s is the specified solids (g/L).

Remove the mixed liquor from the benchtop bioreactor 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 benchtop 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 benchtop bioreactor. Determine the amount of sludge added by the following equation:

$$V_w = V_r\left(\frac{S_s - S_m}{S_w}\right) \qquad \text{Eqn 304B} - 3$$

Where:
V_w is the volume of sludge to add (Liters),
V_r is the volume of the benchtop bioreactor (Liters),
S_w 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 benchtop bioreactor (hours)
V=Volume of the benchtop bioreactor (L)
Q=Flow rate of wastewater into the benchtop bioreactor, average (L/hour)

6.2 *Residence Time.* The hydraulic residence time of the benchtop bioreactor is equal to the ratio of the volume of the benchtop bioreactor (L) to the flow rate (L/h)

$$t = \frac{V}{Q} \qquad \text{Eqn 304B} - 4$$

6.3 *Rate of Biodegradation.* Calculate the rate of biodegradation for each component with the following equation:

$$\text{Rate}\left(\frac{mg}{L-h}\right) = \frac{C_i - C_o}{t} \qquad \text{Eqn 304B} - 5$$

6.4 *First-Order Biorate Constant.* Calculate the first-order biorate constant (K1) for each component with the following equation:

$$K1\left(\frac{L}{g-h}\right) = \frac{C_i - C_o}{t\,C_o X} \qquad \text{Eqn 304B} - 6$$

6.5 *Relative Standard Deviation (RSD).* Determine the standard deviation of both the influent and effluent sample concentrations (S) using the following equation:

$$RSD = \frac{100}{\bar{S}}\left(\sum_{i=1}^{n}\frac{(S_i - \bar{S})^2}{(n-1)}\right)^{1/2} \qquad \text{Eqn 304B} - 7$$

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

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.

52. Appendix C of part 63 is revised 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.

The forms presented in this appendix are designed to address uniform well-mixed or completely mixed systems. Uniform well-mixed or completely mixed systems are biological treatment activated sludge systems where measurements of parameters that indicate performance, e.g., MLVSS, organic compound concentration, and dissolved oxygen, are consistent throughout the system.

Systems that are not uniform well-mixed systems should be subdivided into a series of zones that have uniform characteristics within each zone.

The number of zones required to characterize a biological treatment system will depend on the design and operation of the treatment system. The number of zones could vary from one in a well-mixed conventional activated sludge tank to numerous zones in a large surface-aerated impoundment system. Each zone should then be modeled as a separate unit. The amount of air emissions and biodegradation from the modeling of these separate zones can then be added to reflect the entire system.

II. Definitions

Biological treatment unit = wastewater treatment unit designed and operated to promote the growth of bacteria 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.

K1 = First order biodegradation rate constant, L/g MLVSS-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 four procedures may be used to determine f_{bio}:

(1) EPA Test Method 304A or 304B (appendix A, 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,

(4) Batch Tests.

All procedures must be executed so that the resulting F_{bio} is 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 test, any of the four 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, 304B, or the Batch Test shall be chosen. If Method 304A, 304B, or the Batch Test is used, any anticipated changes to the influent of the full-scale biological treatment unit that will occur after the facility has enclosed the collection system must be represented in the influent feed to the benchtop bioreactor unit, or test unit.

Select one or more appropriate procedures from the four listed above based on the availability of site specific data. If the facility does not have site-specific data on the removal efficiency of its biological treatment unit, then Procedure 1 or Procedure 4 may be used. Procedure 1 allows the use of a benchtop bioreactor to determine the first-order biodegradation rate constant. For compounds that represent a small proportion of the mass of the regulated compounds in the wastewater, an owner or operator may elect to assume the first order biodegradation constant is zero. Procedure 4 explains two types of batch tests which may be used to estimate the first order biodegradation rate constant. For compounds that represent a small proportion of the mass of the regulated compounds in the wastewater, an owner or operator may elect to assume the first order biodegradation constant is zero. 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 3 may only be used on a uniform well-mixed or completely mixed system. Procedure 2 is used if a facility has or obtains 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 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 A 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 the full-scale biological treatment unit is run establish the operating parameters of Method 304A or 304B. If the biological treatment unit is operated under abnormal operating conditions (conditions outside the range of critical parameters examined and confirmed in the laboratory), the EPA believes this will adversely affect the biodegradation rate and is an unacceptable treatment option. The facility would be making multiple runs of the test method to simulate the 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 ranges 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. Form 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. 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. In addition, the Bay Area Sewage Toxics Emission (BASTE) model version 3.0 or equivalent upgrade and the TOXCHEM (Environment Canada's Wastewater Technology Centre and Environmega, Ltd.) model version 1.10 or equivalent upgrade may also be used to determine KL for the biological treatment unit 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. This procedure may only be used on a uniform well-mixed or completely mixed system. 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. 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 for the biological treatment unit, 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.

D. Batch Tests (Procedure 4)

Two types of batch tests which may be used to determine kinetic parameters are: (1) The aerated reactor test and (2) the sealed reactor test. The aerated reactor test is also known as the BOX test (batch test with oxygen addition). The sealed reactor test is also known as the serum bottle test. These batch tests should be conducted only by persons familiar with procedures for determining biodegradation kinetics. Detailed discussions of batch procedures for determining biodegradation kinetic parameters can be found in references 1–4.

For both batch test approaches, a biomass sample from the activated sludge unit of interest is collected, aerated, and stored for no more than 4 hours prior to testing. To collect sufficient data when biodegradation is rapid, it may be necessary to dilute the biomass sample. If the sample is to be diluted, the biomass sample shall be diluted using treated effluent from the activated sludge unit of interest to a concentration such that the biodegradation test will last long enough to make at least six concentration measurements. It is recommended that the tests not be terminated until the compound concentration falls below the limit of quantitation (LOQ). Measurements that are below the LOQ should not be used in the data analysis. Biomass concentrations shall be determined using standard methods for measurement of mixed liquor volatile suspended solids (MLVSS) (reference 5).

The change in concentration of a test compound may be monitored by either measuring the concentration in the liquid or in the reactor headspace. The analytical technique chosen for the test should be as sensitive as possible. For the batch test procedures described in this section, equilibrium conditions must exist between the liquid and gas phases of the experiments because the data analysis procedures are based on this premise. To use the headspace sampling approach, the reactor headspace must be in equilibrium with the liquid so that the headspace concentrations can be correlated with the liquid concentrations. Before the biodegradation testing is conducted, the equilibrium assumption must be verified. A discussion of the equilibrium assumption verification is given below in sections D.1 and D.2 since different approaches are required for the two types of batch tests.

To determine biodegradation kinetic parameters in a batch test, it is important to choose an appropriate initial substrate (compound(s) of interest) concentration for the test. The outcome of the batch experiment may be influenced by the initial substrate (S_O) to biomass (X_O) ratio (see references 3, 4, and 6). This ratio is typically measured in chemical oxygen demand (COD) units. When the S_O/X_O ratio is low, cell multiplication and growth in the batch test is negligible and the kinetics measured by the test are representative of the kinetics in the activated sludge unit of interest. The S_O/X_O ratio for a batch test is determined with the following equation:

$$\frac{S_0}{X_0} = \frac{S_i}{1.42\,X} \quad \text{(Eqn App. C–1)}$$

Where:

S_O/X_O=initial substrate to biomass ratio on a COD basis

S_i=initial substrate concentration in COD units (g COD/L)

X=biomass concentration in the batch test (g MLVSS/L)

1.42 = Conversion factor to convert to COD units

For the batch tests described in this section, the S_O/X_O ratio (on a COD basis) must be initially less than 0.5.

1. *Aerated Reactor Test.* An aerated draft tube reactor may be used for the biokinetics testing (as an example see Figure 2 of appendix C). Other aerated reactor configurations may also be used. Air is bubbled through a porous frit at a rate sufficient to aerate and keep the reactor uniformly mixed. Aeration rates typically vary from 50 to 200 ml/min for a 1 liter system. A mass flow rate controller is used to carefully control the air flow rate because it is important to have an accurate measure of this rate. The dissolved oxygen (DO) concentration in the system must not fall below 2 mg/liter so that the biodegradation observed will not be DO-limited. Once the air flow rate is established, the test mixture (or compound) of interest is then injected into the reactor and the concentration of the compound(s) is monitored over time. Concentrations may be monitored in the liquid or in the headspace. A minimum of six samples shall be taken over the period of the test. However, it is necessary to collect samples until the compound concentration falls below the LOQ. If liquid samples are collected, they must be small enough such that the liquid volume in the batch reactor does not change by more than 10%.

Before conducting experiments with biomass, it is necessary to verify the equilibrium assumption. The equilibrium assumption can be verified by conducting a stripping experiment using the effluent (no biomass) from the activated sludge unit of interest. Effluent is filtered with a 0.45 um or smaller filter and placed in the draft tube reactor. Air is sparged into the system and the compound concentration in the liquid or headspace is monitored over time. This test with no biomass may provide an estimate of the Henry's law constant. If the system is at equilibrium, the Henry's law constant may be estimated with the following equation:

$$-\ln\left(C/C_0\right) = \left(GK_{eq}/V\right)t \quad \text{(Eqn App. C–2)}$$

26Where:

C=cencentration at time, t (min)

C_O=concentration at t=0

G=volumetric gas flow rate (ml/min)

V=liquid volume in the batch reactor (ml)

K_{eq}=Henry's law constant (mg/L-gas)/(mg/L-liquid)

t=time (min)

A plot of—ln(C/C_o) as a function of t will have a slope equal to GK_{eq}/V. The equilibrium assumption can be verified by comparing the experimentally determined K_{eq} for the system to literature values of the Henry's Law constant (including those listed in this appendix). If K_{eq} does not match the Henry's law constant, K_{eq} shall be determined from analysis of the headspace and liquid concentration in a batch system.

The concentration of a compound decreases in the bioreactor due to both biodegradation and stripping. Biodegradation processes are typically described with a Monod model. This model and a stripping expression are combined to give a mass balance for the aerated draft tube reactor):

$$-\frac{ds}{dt}=\left(\frac{GK_{eq}}{V}\right)s+\left(\frac{Q_mX}{K_s+s}\right)s \qquad \text{(Eqn App. C-3)}$$

Where:

s=test compound concentration, mg/liter
G=volumetric gas flow rate, liters/hr
K_{eq}=Henry's Law constant measured in the system, (mg/liter gas)/(mg/liter liquid)
V=volume of liquid in the reactor, liters
X=biomass concentration (g MLVSS/liter)
Q_m=maximum rate of substrate removal, mg/g MLVSS/hr
K_S=Monod biorate constant at half the maximum rate, mg/liter

Equation App.C-3 has the analytical solution:

$$-t=\frac{VK_s}{A}\ln\left(\frac{s}{s_0}\right)+\frac{Q_mXV^2}{AB}\ln\left(\frac{A+Bs}{A+Bs_0}\right) \qquad \text{(Eqn App. C-4)}$$

Where:

$A=GK_{eq}K_S+Q_mVX$
$B=GK_{eq}$
S_O=test compound concentration at t=0

This equation is used along with the substrate concentration versus time data to determine the best fit parameters (Q_m and K_S) to describe the biodegradation process in the aerated reactor. If the aerated reactor test is used, the following procedure is used to analyze the data. Evaluate K_{eq} for the compound of interest with Form XI. The concentration in the vented headspace or liquid is measured as a function of time and the data is entered on Form XI. A plot is made from the data and attached to the Form XI. K_{eq} is calculated on Form XI and the results are contrasted with the expected value of Henry's law obtained from Form IX. If the comparison is satisfactory, the stripping constant is calculated from K_{eq}, completing Form XI. The values of K_{eq} may differ because the theoretical value of K_{eq} may not be applicable to the system of interest. If the comparison of the calculated K_{eq} from the form and the expected value of Henry's law is unsatisfactory, Form X can alternatively be used to validate K_{eq}. If the aerated reactor is demonstrated to not be at equilibrium, either modify the reactor design and/or operation, or use another type of batch test.

The compound-specific biorate constants are then measured using Form XII. The stripping constant that was determined from Form XI and a headspace correction factor of 1 are entered on Form XII. The aerated reactor biotest may then be run, measuring concentrations of each compound of interest as a function of time. If headspace concentrations are measured instead of liquid concentrations, then the corresponding liquid concentrations are calculated from the headspace measurements using the K_{eq} determined on Form XI and entered on Form XII.

The concentration data on Form XII may contain scatter that can adversely influence the data interpretation. It is possible to curve fit the concentration data and enter the concentrations on the fitted curve instead of the actual data. If curve fitting is used, the curve-fitting procedure must be based upon the Equation App. C-4. When curve fitting is used, it is necessary to attach a plot of the actual data and the fitted curve to Form XII.

If the stripping rate constant is relatively large when compared to the biorate at low concentrations, it may be difficult to obtain accurate evaluations of the first-order biorate constant. In these cases, either reducing the stripping rate constant by lowering the aeration rate, or increasing the biomass concentrations should be considered.

The final result of the batch testing is the measurement of a biorate that can be used to estimate the fraction biodegraded, f_{bio}. The number transferred to Form III is obtained from Form XII, line 9.

2. *Sealed Reactor Test.* This test uses a closed system to prevent losses of the test compound by volatilization. This test may be conducted using a serum bottle or a sealed draft tube reactor (for an example see Figure 3 of appendix C). Since no air is supplied, it is necessary to ensure that sufficient oxygen is present in the system. The DO concentration in the system must not fall below 2 mg/liter so that the biodegradation observed will not be DO-limited. As an alternative, oxygen may be supplied by electrolysis as needed to maintain the DO concentration above 2 mg/liter. The reactor contents must be uniformly mixed, by stirring or agitation using a shaker or similar apparatus. The test mixture (or compound) of interest is injected into the reactor and the concentration is monitored over time. A minimum of six samples shall be taken over the period of the test. However, it is necessary to monitor the concentration until it falls below the LOQ.

The equilibrium assumption must be verified for the batch reactor system. In this case, K_{eq} may be determined by simultaneously measuring gas and liquid phase concentrations at different times within a given experiment. A constant ratio of gas/liquid concentrations indicates that equilibrium conditions are present and K_{eq} is not a function of concentration. This ratio is then taken as the K_{eq} for the specific compound in the test. It is not necessary to measure K_{eq} for each experiment. If the ratio is not constant, the equilibrium assumption is not valid and it is necessary to (1) increase mixing energy for the system and retest for the equilibrium assumption, or (2) use a different type of test (for example, a collapsible volume reactor).

The concentration of a compound decreases in the bioreactor due to biodegradation according to Equation App. C-5:

$$\frac{ds}{dt}=\left[\frac{-V_l}{V_gK_{eq}+V_l}\right]\left[\left(\frac{Q_mX}{K_s+s}\right)s\right] \qquad \text{(Eqn App. C-5)}$$

Where:

s=test compound concentration (mg/liters)
V_l=the average liquid volume in the reactor (liters)
V_g=the average gas volume in the reactor (liters)
Q_m=maximum rate of substrate removal (mg/g *MLVSS*/hr)
K_{eq}=Henry's Law constant determined for the test, (mg/liter gas)/(mg/liter liquid)
K_s=Monod biorate constant at one-half the maximum rate (mg/liter)
t=time (hours)
X=biomass concentration (g *MLVSS*/liter)
s_o=test compound concentration at time t=0

Equation App. C-5 can be solved analytically to give:

$$t = \frac{-\left(V_s K_{eg} + V_l\right)}{V_l Q_m X}\left[\left(s - s_0\right) + K_s \ln\left(\frac{s}{s_0}\right)\right] \qquad \text{(Eqn App. C-6)}$$

This equation is used along with the substrate concentration versus time data to determine the best fit parameters (Q_m and K_s) to describe the biodegradation process in the sealed reactor.

If the sealed reactor test is used, Form X is used to determine the headspace correction factor. The disappearance of a compound in the sealed reactor test is slowed because a fraction of the compound is not available for biodegradation because it is present in the headspace. If the compound is almost entirely in the liquid phase, the headspace correction factor is approximately one. If the headspace correction factor is substantially less than one, improved mass transfer or reduced headspace may improve the accuracy of the sealed reactor test. A preliminary sealed reactor test must be conducted to test the equilibrium assumption. As the compound of interest is degraded, simultaneous headspace and liquid samples should be collected and Form X should be used to evaluate K_{eq}. The ratio of headspace to liquid concentrations must be constant in order to confirm that equilibrium conditions exist. If equilibrium conditions are not present, additional mixing or an alternate reactor configuration may be required.

The compound-specific biorate constants are then calculated using Form XII. For the sealed reactor test, a stripping rate constant of zero and the headspace correction factor that was determined from Form X are entered on Form XII. The sealed reactor test may then be run, measuring the concentrations of each compound of interest as a function of time. If headspace concentrations are measured instead of liquid concentrations, then the corresponding liquid concentrations are calculated from the headspace measurements using K_{eq} from Form X and entered on Form XII.

The concentration data on Form XII may contain scatter that can adversely influence the data interpretation. It is possible to curve fit the concentration data and enter the concentrations on the fitted curve instead of the actual data. If curve fitting is used, the curve-fitting procedure must be based upon Equation App. C–6. When curve fitting is used, it is necessary to attach a plot of the actual data and the fitted curve to Form XII.

If a sealed collapsible reactor is used that has no headspace, the headspace correction factor will equal 1, but the stripping rate constant may not equal 0 due to diffusion losses through the reactor wall. The ratio of the rate of loss of compound to the concentration of the compound in the reactor (units of per hour) must be evaluated. This loss ratio has the same units as the stripping rate constant and may be entered as the stripping rate constant on line 1 of Form XII.

If the loss due to diffusion through the walls of the collapsible reactor is relatively large when compared to the biorate at low concentrations, it may be difficult to obtain accurate evaluations of the first-order biorate constant. In these cases, either replacing the materials used to construct the reactor with materials of low permeability or increasing the biomass concentration should be considered.

The final result of the batch testing is the measurement of a biorate that can be used to estimate the fraction biodegraded, f_{bio}. The number transferred to Form III is obtained from Form XII, line 9.

The number on Form XII line 9 will equal the Monod first-order biorate constant if the full-scale system is operated in the first-order range. If the full-scale system is operated at concentrations above that of the Monod first-order range, the value of the number on line 9 will be somewhat lower than the Monod first-order biorate constant. With supporting biorate data, the Monod model used in Form XII may be used to estimate the effective biorate constant K1 for use in Form III.

If a reactor with headspace is used, analysis of the data using equation App. C–6 is valid only if V_l and V_g do not change more than 10% (i.e., they can be approximated as constant for the duration of the test). Since biodegradation is occurring only in the liquid, as the liquid concentration decreases it is necessary for mass to transfer from the gas to the liquid phase. This may require vigorous mixing and/or reducing the volume in the headspace of the reactor.

If there is no headspace (e.g., a collapsible reactor), equation App. C–6 is independent of V_l and there are no restrictions on the liquid volume. If a membrane or bag is used as the collapsible-volume reactor, it may be important to monitor for diffusion losses in the system. To determine if there are losses, the bag should be used without biomass and spiked with the compound(s) of interest. The concentration of the compound(s) in the reactor should be monitored over time. The data are analyzed as described above for the sealed reactor test.

3. *Quality Control/Quality Assurance (QA/QC).* A QA/QC plan outlining the procedures used to determine the biodegradation rate constants shall be prepared and a copy maintained at the source. The plan should include, but may not be limited to:

1. A description of the apparatus used (e.g., size, volume, method of supplying air or oxygen, mixing, and sampling procedures) including a simplified schematic drawing.
2. A description of how biomass was sampled from the activated sludge unit.
3. A description of how biomass was held prior to testing (age, etc.).
4. A description of what conditions (DO, gas-liquid equilibrium, temperature, etc.) are important, what the target values are, how the factors were controlled, and how well they were controlled.
5. A description of how the experiment was conducted, including preparation of solutions, dilution procedures, sampling procedures, monitoring of conditions, etc.
6. A description of the analytical instrumentation used, how the instruments were calibrated, and a summary of the precision for that equipment.
7. A description of the analytical procedures used. If appropriate, reference to an ASTM, EPA or other procedure may be used. Otherwise, describe how the procedure is done, what is done to measure precision, accuracy, recovery, etc., as appropriate.
8. A description of how data are captured, recorded, and stored.
9. A description of the equations used and their solutions, including a reference to any software used for calculations and/or curve-fitting.

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.

$$F_{bio} = \frac{\sum_{i=1}^{N}\left(f_{bio}i \times M_i\right)}{\sum_{i=1}^{n} M_i} \qquad \text{(Eqn App. C-7)}$$

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_{mo} 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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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	1.78e+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
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
78	Isophorone	3.68e−01	1.58e+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

TABLE I—Continued

	Compound	H_L @ 25°C (atm/mole frac)	H_L @ 100°C (atm/mole frac)
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
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

BILLING CODE 6560-50-P

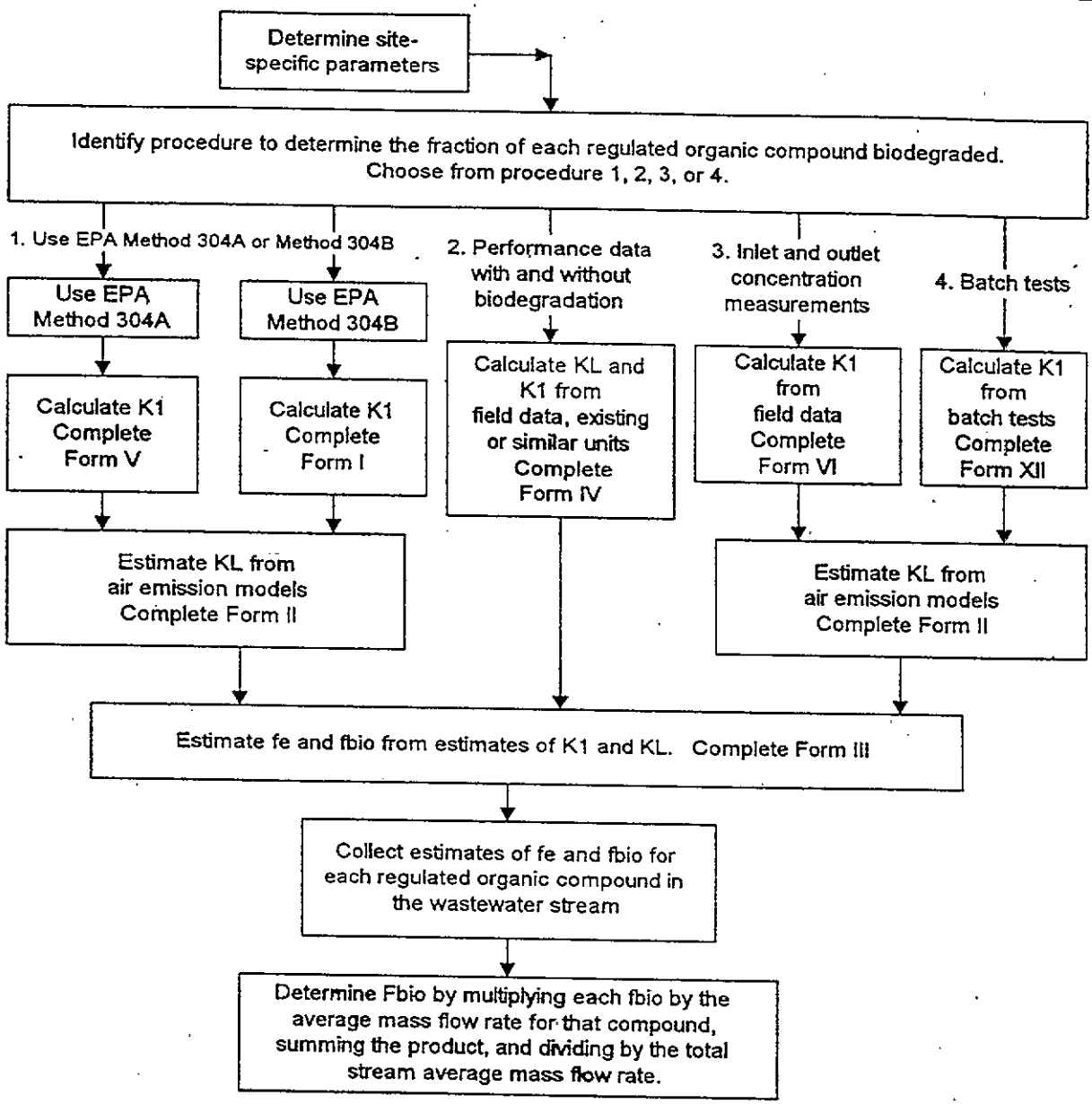


Figure 1. ALTERNATIVE EXPERIMENTAL METHODS FOR DETERMINING THE FRACTION OF ORGANIC COMPOUND BIODEGRADED (Fbio) IN A BIOLOGICAL TREATMENT UNIT

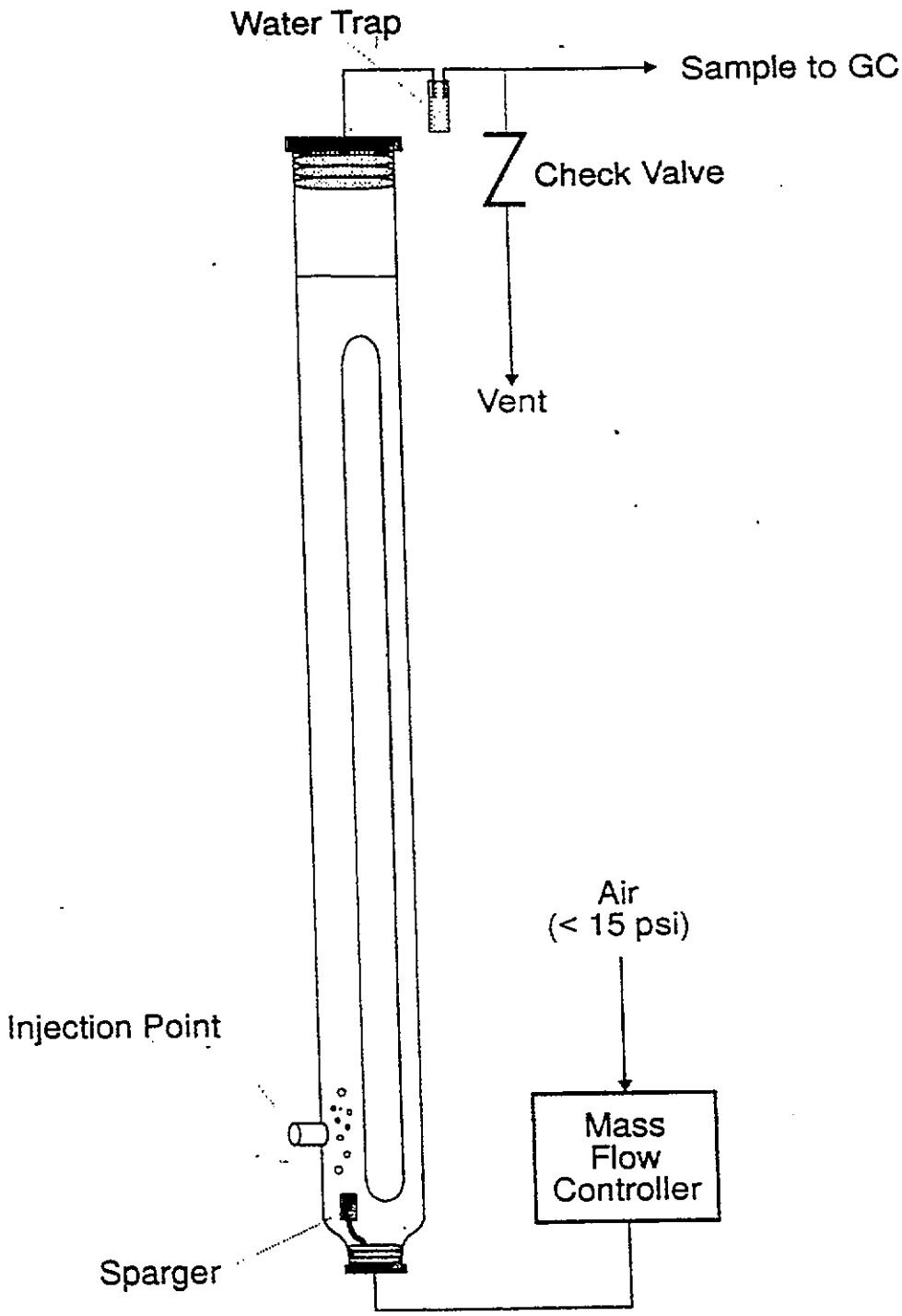


Figure 2. Example Aerated Draft Tube Reactor

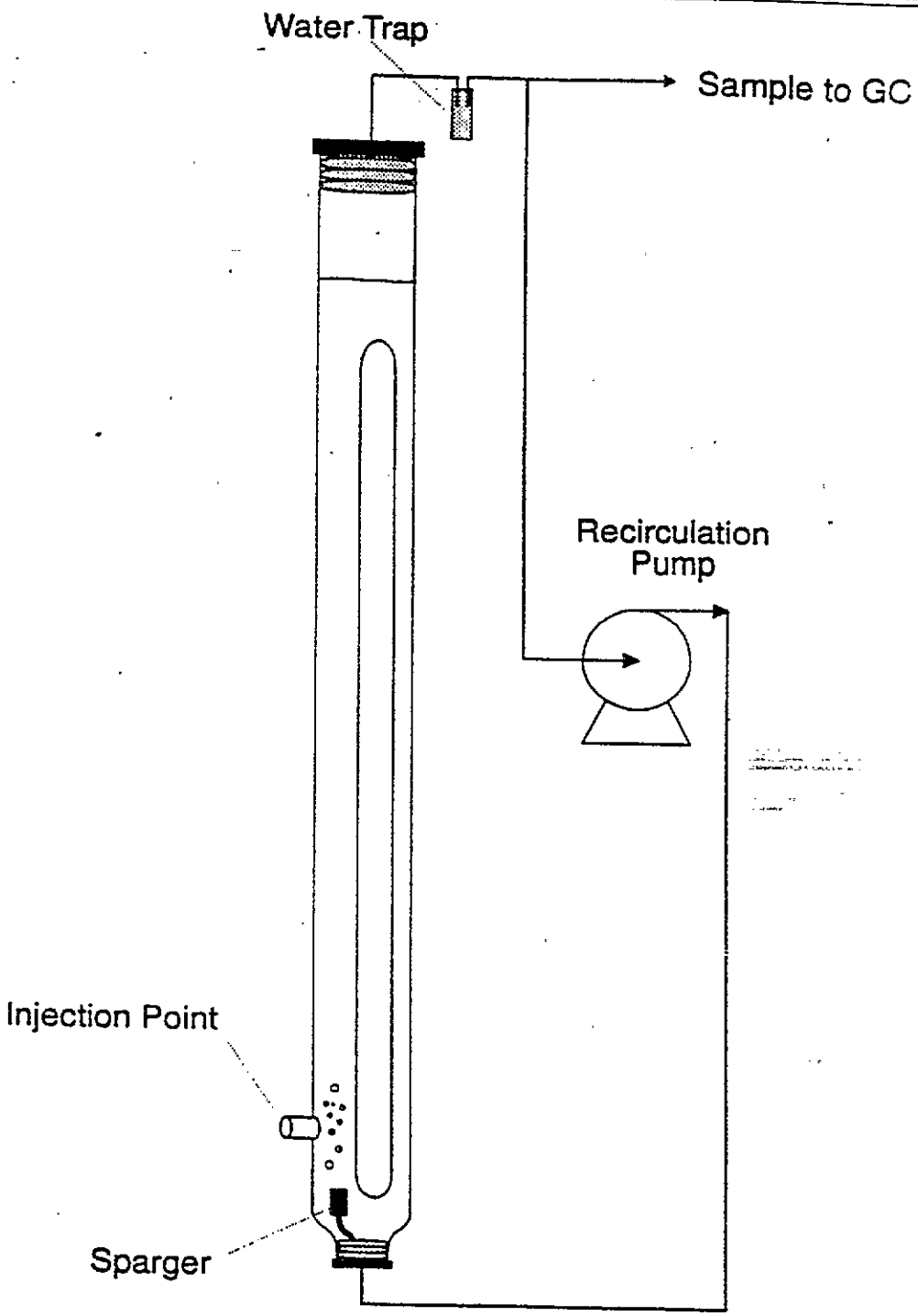


Figure 3. Example Sealed Draft Tube Reactor

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 MLVSS-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 5.6.1 in AIR EMISSIONS MODELS FOR WASTE AND WASTEWATER (EPA-453/R-94-080A). 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 5.6.1 in AIR EMISSIONS MODELS FOR WASTE AND WASTEWATER (EPA-453/R-94-080A).
5	KL for the surface is assumed to 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, Form VI line 13, or Form XII line 9. (L/g MLVSS-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, II-A, IV, V, V-A, or V-B (m/s)	5		0.0000036
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		7.0020000
AIR STRIPPING (m^3/s). Multiply the numbers on lines 4 and 5 together. Enter the results here.	8		0.0054000
EFFLUENT DISCHARGE (m^3/s). Enter the number on line 6 here.	9		0.1565000
TOTAL of the three loss mechanisms. Add the numbers on lines 7, 8, and 9. Enter the results here.	10		7.1639000
Fraction biodegraded: Divide the number on line 7 by the number on line 10 and enter the results here.	11		0.9774006.
Fraction air emissions: Divide the number on line 8 by the number on line 10 and enter the results here.	12		0.0007538
Fraction remaining in unit effluent: Divide the number on line 9 by the number on line 10 and enter the results here.	13		0.0218456
Total: add the numbers on lines 11, 12, and 13. The sum should equal 1.0	14		1.0000000

Form IV	DATA FORM FOR THE ESTIMATION OF K1 AND KL FROM FULL SCALE UNIT DATA WITH AND WITHOUT BIODEGRADATION		
For a general discussion of this approach, see Air Emissions Models for Waste and Wastewater, EPA-453/R-94-080A, Chapter 5, November 1994.			
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		19.238545
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		0.078250
KL A ESTIMATE (m^3/s) Divide the number on line 9 by the number on line 6. Enter the results here.	10		0.000588
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		1.820108
K1 B V ESTIMATE (m^3/s) Subtract the number on line 10 from the number on line 11. Enter the results here.	12		1.819520
Product of B and V. Multiply the number on line 1 by the number on line 2 and enter the results here.	13		6480
K1 ESTIMATE (L/gMLVSS-hr) Divide the number on line 12 by the number on line 13 and multiply by 3600 s/hr. Enter the results here.	14		1.010844
KL ESTIMATE (m/s) Divide the number on line 10 by the number on line 3. Enter the results here.	15		0.0000004

Form V	DATA FORM FOR THE ESTIMATION OF K1 FOR EPA METHOD 304A OR FROM A COVERED, VENTED BIODEGRADATION UNIT.		
For a general discussion of this approach, see Air Emissions Models for Waste and Wastewater, EPA-453/R-94-080A, Chapter 5, November 1994			
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		13.870000
[H G] ESTIMATE (m^3/s) Multiply the number on line 2 by the number on line 6. Enter the results here.	11		0.000021
[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		2.774000
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 11 from the number on line 12. Enter the results here.	13		2.773979
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/g MLVSS-hr) Divide the number on line 13 by the number on line 14 and multiply by 3600 s/hr. Enter the results here.	15		13.315099
EQUIVALENT KL. Divide the number on line 11 by the number on line 7. Enter the results on line 16.	16		6.18e-09

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 CALCULATION OF K1 FROM A COVERED, VENTED BIODEGRADATIN UNIT. THE VENT CONCENTRATION IS MEASURED.			
For a general discussion of this approach, see Air Emissions Models for Waste and Wastewater, EPA-453/R-94-080A, Chapter 5, November 1994.			
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		13.87
[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		2.77
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 11 from the number on line 12. Enter the results here.	13		2.77
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		750.00
K1 ESTIMATE (L/g MLVSS-hr) Divide the number on line 13 by the number on line 14 and multiply by 3600 s/hr. Enter the results here.	15		13.30
EQUIVALENT KL. Divide the number on line 11 by the number on line 7. Enter the results here.	16		5.9e-09

This form may be used to calculate the Equivalent KL with input data for lines 2, 5, 6, and 7.

Form V-B DATA FORM FOR THE CALCULATION OF EQUIVALENT KL FROM A VENTED BIODEGRADATIN UNIT WITH AN AIR SUPPORTED COVER. THE VENT CONCENTRATION IS MEASURED.			
NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
Vent rate of total gas entering the cover (m^3/s)	1		120
Vent rate of total gas leaving the cover transferred to a control device (m^3/s)	2		100
TEMPERATURE of the liquid in the unit (deg. C)	3		25
Area of air supported cover (m^2)	4		1950
Permeability through the cover (cm/s)	5		5E-6
VENT CONCENTRATION of compound (g/m^3)	6		0.0022
EXIT CONCENTRATION of compound (g/m^3 or ppmw)	7		10.57
AREA OF REACTOR SURFACE (m^2)	8		1500
Performance of vent control device (% control)	9		95
CALCULATION OF THE ESTIMATE OF EQUIVALENT KL			
Loss of forced air in the cover due to leakage. (m^3/s) Subtract the number on line 2 from the number on line 1. Enter the results here.	10		20
Loss of compound in forced air (g/s) Multiply the number on line 10 by the number on line 6. Enter the results here.	11		0.044
Loss of compound by permeation through cover (g/s). Line 4 times line 5, line 6, and divide by 100. Enter the results here.	12		0
Loss of compound by permeation through vent (g/s). Line 2 times line 6. Enter the results here.	13		0.22
Treatment of compound in control device (g/s). Line 13 times line 9, divided by 100. Enter the results here.	14		0.209
Total removal from air phase (g/s). Sum of 11, 12, and 13.	15		0.264
Total treatment effectiveness (%) Line 14 divided by 15 times 100.	16		79.1666
[G Cv/Ce] ESTIMATE (m^3/s) Divide line 15 by line 7.	17		0.025
EQUIVALENT KL. Divide the number on line 17 by line 8.	18		1.67e-05

The permeability is the ratio of the flux (g/cm^2) to the gas concentration (g/cm^3).
If the gas is generated by the unit, the gas entering the cover may be estimated from an estimate of the cover leak rate and the total gas transferred to the control device.

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		13.87
[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		2.774
[K1 B V] ESTIMATE (m^3/s) Subtract the number on line 9 from the number on line 10. Enter the results here.	11		2.674
Product of B and V. Multiply the number on line 1 by the number on line 2 and enter the results here.	12		7500
K1 ESTIMATE (L/g MLVSS-hr) Divide the number on line 11 by the number on line 12 and multiply by 3600 s/hr. Enter the results here.	13		1.28352

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_G - Viscosity of air, (g/cm-s) _____
ρ_G - 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:

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:
$k_L = (1.0 \times 10^{-6}) + (144 \times 10^{-4})(U^*)^{2.2} \times Sc_L^{-0.5}$ _____

2. For all other values of F/D and U_{10}, calculate k_L using the following procedure from Springer:[1]

[1]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.

Where U_{10} is < 3.25 m/s, calculate k_L as follows:
$k_L = 2.78 \times 10^{-6}(D_w/D_{ether})^{2/3}$ _____

Where U_{10} is > 3.25 and 14 < F/D < 51.2, Calculate k_L as follows:
$k_L = [2.605 \times 10^{-9}(F/D) + 1.277 \times 10^{-7}] U_{10}^2 (D_w/D_{ether})^{2/3}$ _____

Where U_{10} > 3.25 m/s and F/D > 51.2, calculate k_L as follows:
$k_L = (2.611 \times 10^{-7})U_{10}^2 (D_w/D_{ether})^{2/3}$ _____

B. Calculate the gas phase mass transfer coefficient, k_G, using the following procedure from MacKay and Matsasugu, (m/s):[2]

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.

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[2]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:[3],[4]

$$k_L = [8.22 \times 10^{-9}\ J\ (POWR)(1.024)^{T-20}\ O_t\ 10^6\ MW_L/(Va,\rho_L)]\ (D_w/\ D_{O_2,w}\ )^{0.5},\ (m/s)$$

_____

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[3]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.

[4]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:[5,6]

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/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:

$$KL = \frac{K_q(A-A_c) + K_t A_c}{A}$$ _____

[5]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.

[6]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[a]

ω, Motor horsepower, hp	A_r, Turbulent area,		Effective depth, ft	V, Agitated volume, ft^3	a_v, Area per volume ft^2/ft^3
	ft^2	m^2			
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

[a]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. (Table 1, 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		0.000213
Henry's Law value (atm m3 per mol) Divide the number on line 3 by 55555 and enter the results here.	8		0.000005

Form X **DATA FORM FOR THE CALCULATION OF THE HENRY'S LAW CONSTANT FOR A COMPOUND IN A SEALED BATCH TEST**

NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
REACTOR HEADSPACE VOLUME, (L)	1		1
REACTOR LIQUID VOLUME (L)	2		10
TEMPERATURE of the liquid in the unit (deg.C)	3		25

Wastewater compounds are biodegraded by biomass in a sealed batch test. For the compound listed above, a data set of liquid and gas concentrations is measured at four different times during the sealed batch test. The data are entered below, and the ratio of the concentrations for each data set is entered in column E.

A	B	C	D	E	
Data set	Time (hr)	Liquid Conc. (mg/L)	Gas Conc. (mg/L)	K_{eq} D/C	.0002108
1					
2					
3					
4					

Temperature in degrees Kelvin. Add 273.16 to the number on line 3. Enter the results here	4		298.16
Molar ratio. Multiply the number on line 4 by 4.555. Enter the results on line 5.	5		1,358.12
Henry's law value (mg/L gas per mg/L liquid). Enter the average value in column E above on line 6.	6		0.000211
Henry's law value (mole fraction gas per mole fraction liquid) Multiply the number on line 6 by the number on line 5. Enter the results on line 7.	7		0.286563
Expected Henry's law value. Enter the number from Form IX line 3.	8		0.288500

Precision: Discuss any variability of the numbers in column E.
Accuracy: Discuss any difference between the numbers on line 7 and line 8. Identify which value will be used for evaluating the biodegradation rate data. Divide the Henry's law value by the number on line 5 and enter the results on line 9.

K_{eq} value (mg/L gas per mg/L liquid)	9		0.000211
HEADSPACE CORRECTION FACTOR. Divide the number on line 2 by the sum of the number on line 2 and the product of the numbers on line 9 and line 1. Enter the result on line 10.	10		0.999979

The headspace correction factor should equal approximately 1 if the headspace is relatively small. Reducing the headspace volume may improve the test data quality if the headspace correction factor is substantially less than one.

Form XI **DATA FORM FOR THE CALCULATION OF THE HENRY'S LAW CONSTANT AND THE STRIPPING CONSTANT FOR A COMPOUND IN AN AERATED BATCH TEST**

NAME OF THE FACILITY for site specific biorate determination			example
COMPOUND for site specific biorate determination			*methanol*
Concentration basis (liquid or gas)			gas
TEMPERATURE of the liquid in the unit (deg.C)	1		25
GAS FLOW RATE (L/hr)	2		1
LIQUID VOLUME (L)	3		10
Co concentration measurement at time=0 (mg/L)	4		

A	B	C	D	E
data point	time (hr)	Concentration, C (mg/L)	C/Co	-ln(C/Co)
1				
2				
3				
4				
5				

CALCULATIONS. Use additional lines as needed in an expansion of the above table. Plot the values in column E (y axis) vs the data in column B (x axis). Reject outliers. Curve fit with a straight line. Calculate the slope and enter the slope on line 7. Attach the plot and table to this form.

Temperature in degrees Kelvin. Add 273.16 to the number on line 1. Enter the results here	5		298.16
MOLAR RATIO. Multiply the number on line 5 by 4.555. Enter the results on line 6.	6		1,358.12
Slope of the plot of -ln(C/Co) vs time (per hour)	7		2.10e-05
Calculated K_{eq} value (mg/L gas per mg/L liquid). Divide the number on line 7 by the number on line 2 and multiply the results by the number on line 3. Enter the results on line 8.	8		0.000210
Expected K_{eq} value. Divide the number from Form IX line 3 by the number on line 6 and enter the results on line 9.	9		0.000212

Discuss any differences between the numbers on line 8 and line 9. Identify which value will be used for the evaluation of the stripping constant (line 10). Problems can sometimes be resolved by system redesign, changing the bubble size, or confirming the experimental value of K_{eq} by using Form X.

K_{eq} value (mg/L gas per mg/L liquid)	10		0.000210
STRIPPING CONSTANT(per hour). Divide the number on line 10 by number on line 3 and multiply by the number on line 2. Enter the final result on line 11.	11		0.000021

The headspace correction factor equals one for an aerated batch test.

Form XII — DATA FORM FOR THE CALCULATION OF BATCH RATES AND THE DETERMINATION OF THE MONOD CONSTANTS

Complete this table with measured liquid concentrations from the batch test. If headspace concentrations were measured and equilibrium has been verified, convert them to liquid concentrations by using K_{aw}. If the data are scattered, plot the concentration vs. time data, and fit the data with a curve based on Equation Appendix C-4 for the Aerated Batch test or Equation Appendix C-6 for the Sealed Batch test. Complete this form with concentrations obtained from that fitted curve. If the curve fitting approach is used, attach a plot of the data and the associated fitted curve to this form. Note: If the initial results appear to be anomalous, do not use the initial results.

COMPOUND for site specific biorate determination			Methanol
Stripping rate constant (/hr) Form XI, line 11	1		2.1e-5
Enter the batch test Biomass concentration (g/L) on line 2.	2		.258
Headspace correction factor. For a Sealed Batch test use Form X line 10 or 1.00 for an Aerated Batch test.	3		0.999979

A	B	C	D	E	F	G
concentration S (mg/L)	time (hr)	Rate for interval (mg/L-hr) $(a_i-a_{i-1})/(b_{i-1}-b_i)$	Log Mean S for interval (mg/L) $(a_i-a_{i-1})/\ln(a_i/a_{i-1})$	Ratio of rate to S (/hr) (C/D)	Adjusted rate (/hr) (E-line 1)	Reciprocal of adj. rate (hr) (1/F)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

Continue table on attached sheet as needed. Plot values in column G on y axis, values in column D on x axis. Extrapolate the trend of data points to the y intercept (S=0). Attach the plot to the form.

Slope of line near intercept (hr-L/mg)	4		.4845
Y intercept from plot (hr)	5		1.938
First order rate constant K1 (or Qm/Ks, L/g-hr). The number 1.00 divided by the products of the values on line 5, line 2, and line 3.	6		2.000026
Zero order rate constant (Qm, /hr). The number 1.00 divided by the products of the values on line 4, line 2, and line 3.	7		8.000104
Concentration applicable to full-scale unit. Enter on line 8.	8		.5
Effective biorate K1 ESTIMATE (L/g MLVSS-hr)*	9		0.9606

*Match the concentration on line 8 to the values in Column D and look up the equivalent rate in Column F. Divide the result with both the biomass concentration (line 2) and the headspace correction factor (line 3). Enter this value on line 9. Do not use this method to estimate K1 for line 9 if the data quality is poor in Column F. The number on line 9 is multiplied by the biomass and the system concentration to estimate the full scale biorate. Alternatively, the Monod model parameters may be used.

[FR Doc. 97-143 Filed 1-16-97; 8:45 am]
BILLING CODE 6560-50-P

40 CFR Part 63

[AD–FRL–5676–6]

RIN 2060–AD–56 and RIN 2060–AE–37

National Emission Standards for Hazardous Air Pollutants Emissions: Group I Polymers and Resins and Group IV Polymers and Resins

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: On September 5, 1996, the EPA issued the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Group I Polymers and Resins (61 FR 46906), and on September 12, 1996, the EPA issued the Group IV Polymers and Resins NESHAP (61 FR 48208). This action corrects an error in the final Group I Polymers and Resins NESHAP, by extending the compliance date for heat exchange systems. In addition, this action extends the compliance date for equipment leaks for both the Group I and Group IV Polymers and Resins NESHAP, to allow time necessary for affected sources to respond to the amendments to the hazardous organic NESHAP (HON) equipment leak provisions promulgated on December 26, 1996, which are directly referenced in both subparts U and JJJ.

DATES: The direct final rule will be effective March 5, 1997. However, if significant adverse comments on any amendment to these rules are received by February 13, 1997, then the effective date of that amendment will be delayed, the EPA will publish a timely withdrawal of that amendment, and all public comments received will be addressed in a subsequent final rule. For additional information concerning comments, see the parallel proposal notice found in the Proposed Rules Section of this **Federal Register.**

ADDRESSES: Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–92–44 (Group I Polymers and Resins) and/or Docket Number A–92–45 (Group IV Polymers and Resins), Room M–1500, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460. Comments may also be submitted electronically by sending electronic mail (e-mail) to: a-and-r-docket@epamail.epa.gov.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Rosensteel, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5608.

SUPPLEMENTARY INFORMATION: This document is available in Docket No. A–92–44 and Docket No. A–92–45, or by request from the EPA's Air and Radiation Docket and Information Center (see **ADDRESSES**), and is available for downloading from the Technology Transfer Network (TTN), the EPA's electronic bulletin board system. The TTN provides information and technology exchange in various areas of emissions control. The service is free, except for the cost of a telephone call. Dial (919) 541–5742 for up to a 14,000 baud per second modem. For further information, contact the TTN HELP line at (919) 541–5348, from 1:00 p.m. to 5:00 p.m., Monday through Friday, or access the TTN web site at: http://ttnwww.rtpnc.epa.gov.

Regulated entities. Regulated categories and entities include:

Category	Examples of regulated entities
Industry	Producers of elastomers and thermoplastics.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the amendments discussed in this direct final rule. If you have questions regarding the applicability of this direct final rule to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

The information presented in this preamble is organized as follows:

I. Background
II. Summary of and Rationale for Proposed Revisions
III. Impacts
IV. Administrative
A. Paperwork Reduction Act
B. Executive Order 12866
C. Regulatory Flexibility Act
D. Unfunded Mandates
E. Submission to Congress and the General Accounting Office

I. Background

The HON, which was promulgated on April 22, 1994 (59 FR 19402), regulates emissions of certain organic hazardous air pollutants (HAP) from synthetic organic chemical manufacturing industry (SOCMI) production processes. On September 5, 1996 (61 FR 46906), and September 12, 1996 (61 FR 48208), the EPA published the Group I Polymers and Resins NESHAP and the Group IV Polymers and Resins NESHAP, respectively. These regulations were promulgated as subparts U and JJJ in 40 CFR part 63. Due to the similarities in HAP emissions and emission controls at SOCMI facilities and elastomer (Group I Polymers and Resins) and thermoplastic (Group IV Polymers and Resins) production facilities, the HON provisions were used in the development of regulations for elastomer and thermoplastic production facilities. In fact, both the Polymers and Resins I and IV NESHAP directly reference sections of the HON. These sections include the HON equipment leak provisions (40 CFR 63, subpart H) and heat exchange provisions (§ 63.104).

The HON equipment leak provisions are referenced in §63.502 of subpart U and §63.1331 of subpart JJJ. Since the HON heat exchange provisions require the monitoring of cooling water to detect leaks in heat exchange equipment, these provisions were also referenced in the equipment leaks section, § 63.502, of subpart U. Subpart JJJ contains § 63.1328, which specifically addresses heat exchange systems and references the HON (§ 63.104).

The final rules require existing sources to comply with the equipment leaks provisions by March 5, 1997 for Group I Polymers and Resins, and by March 12, 1997 for Group IV Polymers and Resins. These dates represent six months from the promulgation of the final rules. Both regulations also allow longer periods (up to 3 years from the respective promulgation dates) for compliance with the surge control vessel, bottom receiver, and compressor provisions under certain circumstances.

The final rule for Group I Polymers and Resins also requires the owner or operator to comply with the heat exchange system requirements by March 5, 1997. The Group IV Polymers and Resins rule requires compliance with the heat exchange system requirements by September 12, 1999, which is three years from the promulgation date of subpart JJJ.

The final HON rule provided that existing sources must be in compliance with the provisions of subparts F and G by April 22, 1997, which represents a date three years from the promulgation date. Subpart F contains the heat exchange system requirements referenced by subpart U, meaning that the HON allowed 3 years for SOCMI facilities to comply with these provisions. The HON contained a tiered compliance schedule for subpart H (equipment leaks), and the first group of sources were required to be in compliance by October 24, 1993 (six months after the promulgation date).

On December 26, 1996, in conformance with a settlement

agreement reached with the Chemical Manufacturers Association (CMA) and the Dow Chemical Company, the EPA promulgated amendments to the HON rule. This action promulgated significant changes to § 63.104 (heat exchange systems) and some amendments to subpart H (equipment leaks), as well as substantial revisions to other provisions. For those HON provisions directly referenced in subparts U and JJJ, the promulgated amendments apply to affected Polymers and Resins I and IV sources.

On November 25, 1996 the EPA published an Advanced Notice of Proposed Rulemaking (ANPR) (61 FR 59849) informing the public of the intent to propose amendments to the recently promulgated Group I Polymers and Resins NESHAP and Group IV Polymers and Resins NESHAP that are necessary due to the HON amendments. However, it is anticipated that proposal of these subpart U and JJJ amendments will occur in mid-1997, which will be after the compliance dates for the equipment leaks provisions for both Polymers and Resins NESHAP and the heat exchange system provisions for the Polymers and Resins I NESHAP.

II. Summary of and Rationale for Proposed Revisions

A. Summary of Revisions

The NESHAP for Group I Polymers and Resins provided that existing sources must be in compliance with the requirements of § 63.502, which references the HON equipment leaks provisions and the HON heat exchange system provisions, no later than March 5, 1997, unless a compliance extension was granted. Similarly, the Group IV Polymers and Resins NESHAP provided that existing sources must be in compliance with the requirements of § 63.1331, which references the HON equipment leak provisions, no later than March 12, 1997, unless a compliance extension was granted.

This direct final rule changes the subpart U and subpart JJJ compliance date provisions in two significant respects. For Polymer and Resins I (subpart U), the compliance date for heat exchange systems is being extended from March 5, 1997, to September 5, 1999. This change is contained in § 63.481(d)(6) of this direct final rule.

In addition, this direct final rule extends the compliance date for Group I Polymers and Resins equipment leaks until July 31, 1997, and extends the compliance date for Group IV Polymers and Resins equipment leaks until July 31, 1997. These changes are included in § 63.481(d) and in § 63.1311(d) of this direct final rule.

B. Rationale

1. Heat Exchange Systems

The EPA never intended that owners and operators of affected subpart U sources would have to be in compliance with the heat exchange system provisions by 6 months after promulgation of the rule. As discussed above, the equipment leak section of subpart U (§ 63.502) references both the HON equipment leaks section (subpart H) and the HON heat exchange system (§ 63.104) provisions. Section 63.481 of subpart U, specifies that affected existing sources must be in compliance with the provisions of § 63.502 by March 5, 1997 (i.e., 6 months after promulgation). This compliance date was selected to be consistent with the HON compliance date for the first tier of sources. However, this compliance date also applies to heat exchange systems, since § 63.502(f) contains the reference to the HON heat exchange provisions. This was not intended by the EPA. The intention was to make the compliance date for heat exchange systems consistent with the HON (i.e., 3 years from the promulgation date). The EPA's intention is evident in the Polymers and Resins IV regulation (subpart JJJ). Section 63.1311 of subpart JJJ requires compliance with the heat exchange system provisions of § 63.1328 no later than September 12, 1999 (3 years after the promulgation date for that rule). While this was also the EPA's intention in subpart U, the structure of subpart U caused the inadvertent establishment of a 6-month heat exchange system compliance date. In the HON and in subpart JJJ, the 3 year compliance deadline was selected because the EPA considered that amount of time to be necessary for owners and operators of affected sources to complete the planning, design, and engineering needed to develop the technology to comply with the requirements, as well as to perform the installation and start-up of new equipment. Therefore, the rationale for the revision to the heat exchange system compliance date in subpart U is that the compliance date in the promulgated rule was never intended to be March 5, 1997. Rather, the EPA meant to be consistent with the HON compliance date for the same provisions.

2. Equipment Leaks

In this direct final rule, the EPA is extending the compliance date for equipment leaks (subparts U and JJJ) due to the fact that the amendments to the HON (on which the equipment leaks provisions are based) were promulgated on December 26, 1996. This may cause confusion for owners and operators of affected sources, regarding which HON equipment leak provisions (subpart H) they must be in compliance with by March 5 and March 12, 1997. For this reason, the EPA is extending the compliance date for equipment leaks until 6 months after the publication of the equipment leak provision amendments to subpart H. Since the subpart H amendments were signed by the Administrator on December 26, 1996 and will be published in January 1997, this rule extends the compliance dates in both § 63.1311(d) of subpart JJJ and § 63.481(d) of subpart U to July 31, 1997.

Section 112(i)(3) of the Act provides that existing sources are to be in compliance with applicable emission standards "as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard." The September 5, 1996 and September 12, 1996 final rules specified a compliance date applicable to equipment leaks that was six months from the issuance of those rules. This direct final rule extends those compliance dates to approximately 6 months after finalization of the amendments to the equipment leak provisions in subpart H. The EPA believes this compliance date is reasonable due to the fact that no changes to the equipment leak provisions in subparts U and JJJ are anticipated, except for the addition of a paragraph parallel to the proposed amendment to § 63.100(e)(3) of subpart F, which provides greater flexibility by allowing specific items of equipment that are managed by different administrative organizations to be aggregated with any process unit within the affected source.

The EPA believes that the revised compliance dates will provide sufficient time for all sources to come into compliance with the equipment leak provisions as amended in the HON on December 26, 1996. However, should any source be unable to meet that compliance date because of the need to install controls that cannot be installed by that date, such source may request an extension of up to one year in accordance with section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6) of subpart H.

III. Impacts

The extension on the compliance dates for heat exchange systems at subpart U affected sources and for equipment leaks at either subpart U or

subpart JJJ affected sources will not affect the estimated emissions reduction or the control cost for the rule.

IV. Administrative

A. Paperwork Reduction Act

For both the Group I and Group IV Polymers and Resins NESHAP, the information collection requirements were submitted to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, [44 U.S.C. 3501 et seq.]. The OMB approved the information collection requirements for the Group IV Polymers and Resins NESHAP and assigned those standards the OMB control number 2060–0351. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15. The EPA has amended 40 CFR Part 9, Section 9.1, to indicate the information collection requirements contained in the Group IV Polymers and Resins NESHAP.

An Information Collection Request (ICR) document for the Group I Polymers and Resins I NESHAP was prepared by the EPA (ICR No. 1746.01) but has not yet been approved by the OMB. A copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, or by calling (202) 260–2740.

The amendments to the NESHAP contained in this direct final rule should have no impact on the information collection burden estimates made previously. Therefore, the ICRs have not been revised.

B. Executive Order 12866

Under Executive Order (E.O.) 12866, the EPA 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 affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in 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 obligations of recipients thereof; or

(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 the Executive Order, the OMB notified the EPA that it considered both the Group I Polymers and Resins NESHAP and the Group IV Polymers and Resins NESHAP "significant regulatory actions" within the meaning of the Executive Order. The EPA submitted those actions to the OMB for review. Changes made in response to suggestions or recommendations from the OMB were documented and included in the public record.

These amendments to those NESHAP provide affected sources more time in which to comply with the equipment leaks provisions of those rules, and provide Group I Polymers and Resins more time in which to comply with the heat exchange systems provisions. The amendments contained in this direct final rule do not add any additional control requirements. Therefore, this direct final rule was classified "non-significant" under Executive Order 12866 and was not required to be reviewed by OMB.

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this direct final rule. The EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities. See the September 5, 1996 Federal Register (61 FR 46906) and the September 12, 1996 Federal Register (61 FR 48208) for the basis for this determination. The compliance date changes to the two rules do not impose any economic burden for any regulated entity.

D. Unfunded Mandates

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

The EPA has determined that this direct final rule does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

E. Submission to Congress and the General Accounting Office

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

List of Subjects in 40 CFR Part 63

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

Dated: January 9, 1997.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, part 63 of Chapter I of title 40 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: 42 U.S.C. 7401 et seq.

Subpart U—National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

2. Section 63.481 is amended by revising paragraphs (d) introductory text, (d)(2) introductory text and (d)(2)(iv); and by adding paragraph (d)(6) to read as follows:

§ 63.481 Compliance schedule and relationship to existing applicable rules.

* * * * *

(d) Except as provided for in paragraphs (d)(1) through (d)(6) of this section, existing affected sources shall be in compliance with § 63.502 no later than July 31, 1997, unless an extension has been granted pursuant to section

112(i)(3)(B) of the Act, as discussed in paragraph § 63.182(a)(6) of subpart H.

* * * * *

(2) Compliance with the compressor provisions of § 63.164 of subpart H shall occur no later than March 5, 1998, for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(iv) of this section.

* * * * *

(iv) The owner or operator submits the request for a compliance extension to the U.S. Environmental Protection Agency (EPA) Regional Office at the addresses listed in § 63.13 of subpart A no later than June 16, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i)(A), (B), and (D) of subpart A. Unless the EPA Regional Office objects to the request for a compliance extension within 30 calendar days after receipt of the request, the request shall be deemed approved.

* * * * *

(6) Compliance with the heat exchange system provisions of § 63.104 of subpart F, as required in § 63.502(f), shall occur no later than September 5, 1999.

* * * * *

Subpart JJJ—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

3. Section 63.1311 is amended by revising paragraphs (d) introductory text, (d)(2) introductory text, and (d)(2)(ii) to read as follows:

§ 63.1311 Compliance schedule and relationship to existing applicable rules.

* * * * *

(d) Except as provided for in paragraphs (d)(1) through (d)(5) of this section, existing affected sources shall be in compliance with § 63.1331 no later than July 31, 1997, unless an extension has been granted pursuant to section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6).

* * * * *

(2) Compliance with the compressor provisions of § 63.164 shall occur no later than March 12, 1998, for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(ii) of this section.

* * * * *

(ii) The owner or operator submits the request for a compliance extension to the U.S. Environmental Protection Agency (EPA) Regional Office at the addresses listed in § 63.13 no later than June 16, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i) (A), (B), and (D). Unless the EPA Regional Office objects to the request for a compliance extension within 30 calendar days after receipt of the request, the request shall be deemed approved.

* * * * *

[FR Doc. 97–988 Filed 1–13–97; 8:45 am]
BILLING CODE 6560–50–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 36

RIN 1018–AC02

Visitor Service Authorizations on Alaska National Wildlife Refuges

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Fish and Wildlife Service (Service) adopts regulations to implement Section 1307 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). This action is necessary to establish the procedures for granting historical use, Native Corporation, and local preferences in the selection of commercial operators who provide visitor services other than hunting and fishing guiding on National Wildlife Refuge System lands in Alaska. This rulemaking provides guidance in the solicitation, award and renewal of competitively offered visitor service authorizations on National Wildlife Refuges in Alaska.

DATES: This rule is effective February 13, 1997.

ADDRESSES: Regional Director, Alaska Region, U.S. Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage, Alaska 99503.

FOR FURTHER INFORMATION CONTACT: David G. Patterson, Regional Public Use Specialist, U.S. Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage, Alaska 99503; Telephone (907) 786–3389.

SUPPLEMENTARY INFORMATION:

Background

The ANILCA (16 U.S.C. 3101 *et seq.*) was signed into law on December 2, 1980. Its broad purpose is to provide for the disposition and use of a variety of federally owned lands in Alaska. Section 1307 of ANILCA (16 U.S.C. 3197) contains two provisions concerning persons and entities who are to be given special rights and preferences with respect to providing "visitor services" in certain lands under the administration of the Secretary of the Interior, in this context, units of the National Wildlife Refuge System. The term "visitor service" is defined in section 1307 as "* * * any service made available for a fee or charge to persons who visit a conservation system unit, including such services as providing food, accommodations, transportation, tours, and guides excepting the guiding of sport hunting and fishing."

Subsection (a) of Section 1307 states as follows: Notwithstanding any other provision of law, the Secretary [of the Interior], under such terms and conditions as he determines are reasonable, shall permit any persons who, on or before January 1, 1979, were engaged in adequately providing any type of visitor service [as defined in subsection (c)] within any area established as or added to a conservation system unit to continue providing such type of service and similar types of visitor services within such area if such service or services are consistent with the purposes for which such unit is established or expanded (16 U.S.C. 3197).

Subsection (b) of Section 1307 states as follows: Notwithstanding provisions of law other than those contained in subsection (a), in selecting persons to provide (and in the contracting of) any type of visitor service for any conservation system unit, except sport fishing and hunting guiding activities, the Secretary [of the Interior]—

(1) shall give preference to the Native Corporation which the Secretary determines is most directly affected by the establishment or expansion of such unit by or under the provisions of this Act; and

(2) shall give preference to persons whom he determines, by rule, are local residents * * * (16 U.S.C. 3197).

Subsection (b) also provides to Cook Inlet Region, Incorporated (CIRI), in cooperation with Village Corporations within the Cook Inlet Region when appropriate, the right of first refusal to provide new visitor services within the Kenai National Moose Range, (Kenai National Wildlife Refuge), within the Cook Inlet Region.

The Alaska National Wildlife Refuge System is managed by the U.S. Fish and Wildlife Service under the National Wildlife Refuge System Administration Act (16 U.S.C. 668dd–668ee), Refuge Recreation Act (16 U.S.C. 460k–4), and the Alaska National Interest Lands Conservation Act (ANILCA) (84 Stat. 2371 et seq.; codified as amended in scattered sections of 16 U.S.C., 43 U.S.C., 48 U.S.C.).

Friday
December 27, 1996

Federal Register

Part III

Environmental Protection Agency

40 CFR Part 63

Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources; Final Rule

HAP

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–5667–8]

RIN 2060–AD06

Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is promulgating regulations implementing certain provisions in section 112(g) of the Clean Air Act as amended in 1990 (1990 Amendments). Section 112(g) applies to the owner or operator of a constructed, reconstructed, or modified major source of hazardous air pollutants (HAP). After the effective date of this rule, all owners or operators of major sources that are constructed or reconstructed will be required to install maximum achievable control technology (MACT) (unless specifically exempted), provided they are located in a State with an approved title V permit program. This rule establishes requirements and procedures for the owners or operators to follow to comply with section 112(g). This rule also contains guidance for permitting authorities in implementing section 112(g). When no applicable Federal emission limitation has been promulgated, the Clean Air Act (Act) requires the permitting authority (generally a State or local agency responsible for the program) to determine a MACT emission limitation on a case-by-case basis. This rule assures that effective pollution controls will be required for new major sources of air toxics during the period before EPA can establish a national MACT standard for a particular industry. This rule establishes procedures for making such determinations. This rule does not require new source MACT for modifications to existing sources.

EFFECTIVE DATE: The rule announced herein takes effect on January 27, 1997.

ADDRESSES: Supporting information used in developing the proposed and final rules are contained in Docket No. A–91–64. The docket is available for public inspection and copying from 8:00 to 4:00 p.m., Monday through Friday, except legal holidays, at the EPA's Air Docket Section, Waterside Mall, Room M1500, U.S. Environmental Protection Agency, 401 M Street, South West, Washington, DC 20460. A reasonable fee may be charged for copying. This rule is also available on the Office of Air Quality Planning and Standards (OAQPS) electronic bulletin board, the Technology Transfer Network (TTN), under Clean Air Act, Title III, Recently Signed Rules. For information on how to access the TTN, please call (919) 541–5384 between the hours of 1:00 and 5:00 p.m. eastern standard time. This rule is also listed on the EPA web site address, "http:// www.epa.gov/oar".

FOR FURTHER INFORMATION CONTACT: Dr. Gerri Pomerantz, telephone (919) 541–2317, Mr. Andy Smith, telephone (919) 541–5393, or Ms. Kathy Kaufman, telephone (919) 541–0102, Information Transfer and Program Integration Division (MD–12), OAQPS, US EPA, Research Triangle Park, NC, 27711.

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

I. Purpose and Summary of Final Rule
  A. Purpose of this Rule
  B. Summary of this Rule
II. Background
  A. The 1990 Amendments: Section 112
  B. The 1990 Amendments: Provisions for Constructed and Reconstructed Major Sources of HAP
  C. Streamlined Nature of this Rule
III. Summary and Rationale for §§ 63.40 Through 63.44 of this Rule
  A. Section 63.40 Applicability
  B. Section 63.41 Definitions
  C. Section 63.42 Program Requirements Governing Construction or Reconstruction of Major Sources
  D. Section 63.43 MACT Determinations for Constructed and Reconstructed Major Sources
  E. Section 63.44 Requirements for Process or Production Units Subject to a Subsequently Promulgated MACT Standard or MACT Requirement
IV. Discussion of the Relationship of the Requirements of this Rule to Other Requirements of the Act.
  A. Relationship of Section 112(g) Implementation to Title V Program Approval
  B. Relationship to Section 112(l) Delegation Process
  C. Section 112(i)(5) Early Reductions Program
  D. Subpart A "General Provisions"
V. Administrative Requirements
  A. Executive Order 12866
  B. Regulatory Flexibility Act
  C. Paperwork Reduction Act
  D. Unfunded Mandates Reform Act
  E. Submission to Congress and the General Accounting Office

This preamble provides an overview of the requirements of the regulation being promulgated and a detailed discussion of the changes made from both the proposed and draft final regulations.

Section I of the preamble provides an overview of the requirements of the regulations being promulgated.

Section II provides background on section 112(g) in the context of the 1990 Amendments.

Section III provides a detailed discussion of the requirements of this rule, including significant comments as well as significant changes made since the proposal and/or draft final rule.

Section IV of the preamble discusses the relationship between the requirements of this rule and other important Act implementation activities.

Section V demonstrates that this rule 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 would be the permitting authority implementing title V of the Act (i.e., 40 CFR Part 70) and the section 112(g) program. The reader should assume that use of the term "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. 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, where the EPA is responsible for the program.

I. Purpose and Summary of Final Rule

A. Purpose of This Rule

The 1990 Amendments require the EPA to issue emissions standards for all major sources of 188 listed HAP (also known as air toxics). These pollutants are known or suspected of causing cancer, nervous system damage, birth defects or other serious health effects. On July 16, 1992, the EPA published an initial list of source categories for which air toxics emission standards are to be promulgated. By November 2000, EPA must develop for all these categories rules that require the maximum achievable reduction in emissions, considering cost and other factors. These rules are generally known as "maximum achievable control technology" (MACT) standards.

In developing the 1990 Amendments, Congress recognized that the EPA could not immediately issue MACT standards for all industries, and that as a result there was a potential for significant new sources of toxic air emissions to remain uncontrolled for some time. Congress also recognized that, in general, it is most cost-effective to design and add new air pollution controls at the time

when facilities are being built or significantly rebuilt.

As a result, section 112(g) of the Act requires MACT-level control of air toxics when a new major source of HAP is constructed or reconstructed. The permitting authority must determine MACT for the facility on a case-by-case basis when EPA has not yet issued a relevant MACT standard. This gap-filling program assures Americans in every State that effective pollution controls will be required for new major sources of air toxics during the period before EPA can establish a national MACT standard for a particular industry.

Section 112(g) also requires MACT-level control when major sources are modified. For reasons explained later in this preamble, this rule does not implement the modifications provision of section 112(g).

B. Summary of This Rule

1. What Sources Must Comply With 112(g)?

This rule implements section 112(g)(2)(B) of the Act by adding new regulatory sections to 40 CFR Part 63, subpart B. The new sections appear as §§ 63.40 through 63.44 of subpart B. These sections impose new control requirements on "constructed" and "reconstructed" major sources of HAP. (The definition of "major source" can be found in section 112(a) of the Act and 40 CFR Part 63 subpart A).

This rule does not apply to any source already covered by a MACT standard under section 112(d) of the Act. Therefore, sources already covered by a MACT standard under section 112(d) will not be required to undergo a review process under section 112(g). (Any section 112(g) review process already underway when a section 112(d) MACT standard is promulgated should be terminated.) This change was made to the final rule in response to comments that indicated that section 112(g) review would be inappropriate once a MACT standard was promulgated. For those sources not yet subject to section 112(d), section 112(g) applies to either (i) a major source constructed on a greenfield site, or to (ii) a new or reconstructed "process or production unit" at an existing plant site, provided that the "process or production unit" emits hazardous air pollutants in amounts that exceed the major source threshold. A new process or production unit at an existing major source must itself be inherently major-emitting; the EPA does not intend that a new process or production unit causing increased emissions at another unit downstream be covered by this rule. The definitions of "construct a major source," "reconstruct a major source," and "process or production unit" are set forth in section 63.41 of this rule and discussed in detail in section III.B. below.

2. What Must a Source Do To Comply With Section 112(g)?

If equipment additions or overhauls meet the definition of "construct a major source" or "reconstruct a major source," then the owner or operator must demonstrate to the permitting authority that emissions will be controlled to a level consistent with the "new source MACT" definition in section 112(d)(3) of the Act. A MACT determination under section 112(g) is referred to as "case-by-case" MACT. The requirements and procedures for case-by-case MACT determinations are contained in section 63.43 of this rule.

If an owner or operator wishes to construct or reconstruct a major source, then prior to construction or reconstruction, the owner or operator must apply to the state or local title V permitting authority for a case-by-case MACT determination under section 112(g). The application can take different administrative forms, at the permitting authority's discretion, but must contain basic information about the source and its potential emissions. The application must also specify the emission controls that will ensure that new source MACT will be met. The permitting authority must review and approve (or disapprove) the application, and provide an opportunity for public comment on the determination.

3. When Will Section 112(g) Be Effective?

Section 112(g) will be effective in a State or local jurisdiction on the date that the permitting authority, under title V of the Act, places its implementing program for section 112(g) into effect. Permitting authorities have up to 18 months from the date of publication of this rule in the Federal Register to initiate implementing programs. After the 18-month transition period, if a State or local permitting authority is unable to initiate a section 112(g) program to implement this rule, there are two options for obtaining a MACT approval: either (1) the EPA will issue section 112(g) determinations for up to 1 year; or (2) the permitting authority will make section 112(g) determinations according to procedures specified in section 63.43 of this rule, and issue a Notice of MACT Approval that will become final and legally enforceable after the EPA concurs in writing with the permitting authority's determination. Requirements for permitting authorities are contained in section 63.42 of this rule.

To place its implementing program into effect, the chief executive officer of the State or local jurisdiction must certify to the EPA that its program meets all the requirements set forth in this rule, and publish a notice stating that the program has been adopted and specifying its effective date. The program need not be officially reviewed or approved by the EPA.

4. Do Section 112(g)-regulated Sources Have To Comply With Subsequent MACT Standards?

Once a section 112(d) MACT standard is issued for a source category, the source must comply with it by the designated deadline. A major source regulated under section 112(g) may be granted up to 8 years extra time to comply with a subsequently-promulgated MACT standard under section 112(d). The EPA may specify, in the MACT standard, the length of the extension. If the EPA does not so specify, then the permitting authority may grant such extensions on a case-by-case basis. The EPA believes that in many cases the section 112(g) determination will be equivalent to MACT under section 112(d) or section 112(j), but that this determination should be made on a case-by-case basis under section 112(d) or section (j).

Regulated entities. Entities potentially regulated by this action are those which are major sources of HAP under section 112 of the 1990 Amendments. Regulated categories and entities include:

Category	Examples of regulated entities
Industry	Industries that use or manufacture chemicals listed under section 112.
Federal Government	Federal agencies which handle chemicals listed under section 112.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria of this rule. If you have questions regarding the applicability of this action to a

particular entity, contact your State or local air permitting authority.

II. Background

A. The 1990 Amendments: Section 112 and Section 307

The 1990 Amendments [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 of major sources emitting these HAP, and of area sources that warrant regulation. Section 112(d) requires promulgation of emission standards for each listed source category according to a schedule set forth in section 112(e).

Under section 307(b)(1) of the Clean Air Act, judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of publication of this rule in the Federal Register. Under section 307(b)(2) of the Act, the provisions which are the subject of today's rule will not be subject to judicial review in any civil or criminal proceedings for enforcement.

B. The 1990 Amendments. Provisions for Constructed, Reconstructed and Modified Major Sources of HAP

The amendments to section 112 include a new section 112(g). This section is entitled "Modifications," but it contains control technology requirements for constructed and reconstructed major sources as well as major source modifications. For reasons discussed below, this rule addresses only requirements for constructed and reconstructed major sources.

1. Statutory Requirements for Constructed and Reconstructed Major Sources

Section 112(g)(2)(B) contains requirements for constructed and reconstructed major sources, as follows:

> After the effective date of a permit program under title V in any State, no person may construct or reconstruct any major source of hazardous air pollutants, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for new sources will be met. Such determination shall be made on a case-by-case basis where no applicable emission limitations have been established by the Administrator.

This section mandates a more stringent minimum level of control for "constructed" and "reconstructed" major sources than for "modified" sources. In addition, this section mandates the setting of a case-by-case emission limitation based on a technology determination for major sources that are constructed or reconstructed after the effective date of a title V permit program.

C. Streamlined Nature of This Rule

Section 112(g) is primarily a transitional program designed to operate until MACT standards issued under section 112(d) are in effect for all categories of major sources of HAP. To date, the EPA has issued 21 MACT standards covering 46 categories of major sources of HAP emissions, and has proposed five additional MACT standards covering five source categories. The EPA is currently developing all of the MACT standards that are due to be completed in 1997, as well as several of the standards due to be completed in 2000.

Because of the transitional nature of section 112(g), the EPA has concluded that the greatest benefits to be derived from section 112(g) would be from the control of major source construction and reconstruction in the period before MACT standards go into effect. Therefore, the EPA has determined that this rule will implement only that portion of section 112(g) which requires new source MACT determinations for constructed and reconstructed major sources, and will not implement that portion which requires existing source MACT determinations for modifications of existing sources.

The EPA's decision to implement only the construction and reconstruction provisions of section 112(g) is premised in part on the Agency's ability to issue the remaining MACT standards under section 112(d) in a timely way, and also in part on the assumption that where there are existing State air toxics programs that address modifications, they will continue to operate as they do currently. If there were substantial delays in issuance of MACT standards, or radical changes to existing State programs, increased exposure to emissions from unregulated sources of HAP could occur and threaten public health and the environment. If such delays were to occur, the EPA would reconsider whether to issue a regulation to cover modifications under section 112(g).

III. Summary and Rationale for Subsection 63.40 Through 63.44 of This Rule

This section of the preamble provides a detailed discussion of the provisions of this rule. It is organized by each topic area in subsection 63.40 through 63.44 of 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 63.40 Applicability

Section 63.40 describes the timing of the requirements of this rule and the sources to which section 112(g) applies.

1. Section 63.40(a) Subpart B Applicability

Section 63.40(a) of this rule indicates that the intent of the rule is to implement section 112(g)(2)(B) of the Act.

2. Section 63.40(b) Overall Requirements

Section 63.40(b) of this rule indicates the overall applicability of section 112(g) to the owner or operator who constructs or reconstructs a major source of HAP after the "effective date of section 112(g)(2)(b) and the effective date of a title V program" in each State. This rule contains an exemption for sources specifically exempted by promulgated standards in other subparts of 40 CFR 63. The EPA believes that this exemption is consistent with "MACT" because a MACT evaluation was made in establishing the exemption.

In addition, there will be instances in which a "presumptive MACT" determination has been made for a source category. A presumptive MACT determination is a preliminary MACT determination made by the EPA, in consultation with States and other stakeholders, after data on a source category's emissions and controls have been collected and analyzed, but before a final MACT standard has been promulgated. The "presumptive MACT" determination is intended as preliminary guidance for States and sources. The EPA believes that the presumptive MACT determination would thus serve as the best information available on the eventual MACT standard. Therefore the EPA recommends to sources and States that applications for section 112(g) determinations use as guidance any presumptive MACT determinations. Presumptive MACT determinations can be found on the TTN (referenced above) under Clean Air Act, Title III, Policy and Guidance or at the EPA web site address "http://www.epa.gov/oar".

It should be noted that there may be source categories which have not yet been listed on the source category list for standards. The language of section 112(g)(2)(B) of the Act reads: "no person

may construct or reconstruct any major source of hazardous air pollutants" without a case-by-case MACT determination, and makes no mention of whether or not the source is in a listed category. (In fact, the EPA is required to list these categories as it becomes aware of them.) Therefore, the EPA believes that section 112(g) does apply to any major source which is not yet in a listed category.

(a) Effective date. Many commenters noted inconsistencies in the provisions of the draft final rule pertaining to the effective date of section 112(g), which in different sections referred both to the adoption of a section 112(g) program in a State or local jurisdiction by the responsible permitting authority and to the effective date of a title V permit program in a State. The EPA agrees with the commenters that these provisions were confusing and inconsistent. Sections 63.41 and 63.42(a) of this rule make it clear that section 112(g)(2)(B) will take effect in a State or local jurisdiction only after the permitting authority has been afforded an opportunity to adopt a program to implement this provision. The effective date of section 112(g)(2)(B) in a given State or local jurisdiction will be the date on which the permitting authority places its implementing program into effect or the date which is 18 months after the date of publication of this rule in the **Federal Register**, whichever is earlier. This affords those permitting authorities which are prepared to implement section 112(g)(2)(B) quickly an opportunity to do so, but also recognizes that some State permitting authorities will need additional time to take the necessary steps to plan for and adopt a satisfactory program.

The meaning of "effective date of a title V permit program" is indicated in the final regulations for implementation of title V of the Act, which are contained in 40 CFR Parts 70 and 71, and which were published on July 21, 1992 (57 FR 32250) and July 1, 1996 (61 FR 34202), respectively. Under these regulations, States were required to submit a permit program for review by the EPA on or before November 15, 1993. The EPA was required to approve or disapprove the permit program within 1 year after receiving the submittal. The EPA's title V 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 effective date of approval by the Administrator. The effective date of a permit program promulgated by the Administrator shall be the date of promulgation.

This definition is incorporated into the operating permit regulations as 40 CFR 70.4(g).

If a project does not receive its air quality construction permits before the effective date of section 112(g), then this rule will be applicable. The EPA requested comment on other alternatives, such as grandfathering projects for which a complete application has been submitted to the permitting authority, or grandfathering projects from the date of "onsite fabrication, erection, or installation." Some commenters agreed with the EPA's current approach; however, many commenters supported grandfathering projects that had applied for, but not yet received, a permit. The EPA believes the chosen approach reflects the best option for ensuring adequate controls on sources seeking to add new equipment, while grandfathering sources which have already made significant investments in equipment. This approach assures that if prior to the permit issuance, new approaches to control HAP emissions are considered appropriate, the source will apply the latest control technology. This approach is also most consistent with current Federal policy in the prevention of significant deterioration program (PSD), in which sources with an approved permit are grandfathered when the attainment status of the region changes. In the new source review (NSR) program as well, while sources with a complete application which might otherwise be considered major modifications are grandfathered, these modifications do not escape review; they are treated as minor modifications instead.

(b) Major Source. Section 112(g) applies only to major sources as defined in section 112(a)(1) of the Act. This definition, from 40 CFR 63, subpart A, (the general provisions of part 63), is as follows:

> The term '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.

The definition also allows the EPA to establish a lesser quantity than 10 or 25 tons to define "major source" with respect to particular HAP where warranted on the basis of potency, persistence, and other factors. To date, no such lesser quantities have been established.

As a result of this definition, the section 112(g) requirements do not apply if the total emissions from an entire "contiguous area under common control" (in general, the entire plant site) do not exceed the major source level.

An important element of the major source definition is the term "potential to emit." "Potential to emit" is based on the source's capability to emit HAP considering enforceable limitations. Such limitations include restrictions on capacity, restrictions on the types of materials used, emission limitations, and other types of restrictions. A definition of "potential to emit" is contained in 40 CFR 63, subpart A (General Provisions), as well as in further guidance provided by the EPA available on the Technology Transfer Network (referenced above), under Clean Air Act, Title III, Policy and Guidance, as well as on the EPA web site address (also reference above).

3. Section 63.40(c) Exclusion for Steam Generating Units

Section 63.40(c) of this rule clarifies that electric utility steam generating units are not yet subject to the requirements of section 112(g).

Section 112(n)(1) requires the EPA to perform a study of the hazards to public health associated with HAP emissions from electric utility steam generating units. This paragraph states that:

> The Administrator shall regulate electric utility steam generating units *under this section*, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this paragraph. (emphasis added)

The EPA reads the phrase "under this section" as a broad exemption from regulation under section 112, including section 112(g), pending the results of the utility health hazards study.

4. Section 63.40(d) Relationship to State and Local Requirements

Most state and local regulatory agencies maintain regulatory programs that involve toxic air pollutant reviews for constructed and reconstructed sources. Section 63.40(d) clarifies that the requirements of section 112(g) do not supersede any requirements of these programs that are more stringent than this rule. Any such State requirements which are more stringent than the requirements of this rule would not be federally enforceable under section 112(g).

5. Section 63.40(e) Source Categories Deleted

This rule provides an exclusion for sources in source categories which have

been deleted by the EPA from the source category list for standards [57 FR 31576, July 16, 1992]. These sources are excluded because for any such category the EPA will have determined, in lieu of making a MACT determination, that MACT should not apply.

6. Section 63.40(f)—Research and Development Facilities

This rule also provides an exclusion for research and development facilities that meet the specific definition in section 63.41. The proposed rule requested comment on whether to provide this exclusion, and the EPA received significant comment in favor of providing it, based on the potential resource burden of reviewing operations which by design change frequently and do not produce a product for commercial use. The title V operating permit program has issued a policy memorandum aimed at reducing the permit requirements for such facilities. In the interest of consistency with previous exclusions for research and development activities and its anticipated use in the title V program, this rule adopts the definition of research and development facilities provided in section 112(c)(7) of the Act.

B. Section 63.41 Definitions

1. Terms Defined in the General Provisions

A number of terms used in the rule have already been defined for all of 40 CFR Part 63 by the General Provisions contained in subpart A. Readers interested in the definitions and rationale for those terms should refer to subpart A. Relevant terms defined in the General Provisions include:

—Act
—Approved permit program
—Capital expenditure
—Federally enforceable
—Hazardous air pollutant
—Major source
—Permit program
—Potential to emit
—Relevant standard
—Title V permit

In the definition of Construct a Major Source, the threshold level for a major source is a source which emits or has the potential to emit (PTE) 10 tons/year of any HAP or 25 tons/year of any combination of HAP. The PTE means the maximum capacity of a source to emit any air pollutant under its physical and operation design. A source's PTE may also take into account enforceable requirements for air pollution control equipment, and enforceable restrictions on operation such as maximum hours of operation or types of materials consumed.[1]

This means that if a source keeps its emissions below the threshold limits for a major source through enforceable limits, it will not meet the definition of "Construct a Major Source" under section 112(g), and thus will not have to apply new source MACT. For example, if a plant to be constructed will have uncontrolled emissions of a HAP of 40 tons/year, it would normally be subject to new source MACT under section 112(g). The owners are, however, able to install emission controls achieving a 75 percent reduction in emissions of the HAP in question. By imposing on themselves this control system and making their emissions limit and operating conditions enforceable, as a practical matter they can keep their PTE below the major source threshold of 10 tons/year. Such a source would not be subject to section 112(g), even if the 75 percent emissions reduction did not achieve a "new source MACT" level of control.

2. Terms Related to Construction and Reconstruction

The following terms are included in section 63.41:

—Construct A Major Source
—Reconstruct A Major Source
— Greenfield Site

The definition of "construct a major source" in this rule refers to two types of sources. The first is any "major emitting" construction at a greenfield site (i.e., construction which emits or has the potential to emit HAP in amounts that would make it a major source). The other is any construction of a new "process or production unit" at an existing site where the process or production unit is itself major-emitting. (The definition of "process or production unit" is discussed below in this section.)

It should be noted that a major source "construction" or "reconstruction" project may require more than one MACT determination. As outlined in paragraph (3) of the definition, the EPA believes that MACT determinations consistent with section 112(d) of the Act may not include combinations of emission points involving more than one category on a published list of source categories (57 FR 31576). For example, most types of combustion sources appear as individually listed categories. As a result, a "construction" or "reconstruction" involving boilers and other process equipment must make a separate MACT determination for the boilers.

In response to EPA's request for comments on the exclusion from section 112(g) for major sources that use existing emission controls, several issues were raised. Most industry commenters supported the exclusion, but favored broadening it and wanted the rule to state clearly that the decision for what constitutes the best control technology is left to the discretion of the permitting authority. Industry supported replacing the phrase "control equipment" with "control technology" to cover pollution prevention approaches. Environmental groups and several States opposed this exclusion. They felt the use of the phrase "one of the best control technologies" was too open to interpretation and could be abused. These commenters cited the following concerns: the statute requires MACT or its equivalent, the technology determination should be based on recent standards (not standards used when the controls were originally constructed), all significant HAP should be controlled by the existing controls, and public review and comment should be required of the permitting authority's decision. Several States indicated that review of applications for this exclusion would be too resource intensive for their staffs.

The EPA agrees with the comment that the phrase "one of the best control technologies" is too ambiguous and open to varied interpretation. Nevertheless, the EPA recognizes that many sources will have previously

[1] Currently, there is a requirement in the general provisions to part 63 that PTE limits must be federally enforceable in order to be credited. In a 1995 court case (*National Mining v. EPA*, 59 F. 3d 1351, D.C. Cir. 1995), the court required EPA to reconsider this requirement. The EPA is currently developing rulemaking amendments that will address the concerns raised by the court. It is expected that these rulemaking amendments will be finalized in mid-1998.

The EPA believes that virtually all of the new constructed or reconstructed sources with a possibility of triggering section 112(g) requirements, and requiring emission limitations in order to avoid section 112(g), will need to obtain a preconstruction minor NSR permit from a State and local air quality agency. Because those minor NSR permits are federally enforceable, the practical implications of the above-mentioned PTE rulemaking may not be as pronounced for section 112(g) as for other requirements of part 63.

There may be a few situations where a source seeks to attain "synthetic area" status for section 112(g) for a new greenfield site, or seeks PTE limits to ensure that a newly constructed source avoids becoming a 10-ton "affected source" under section 112(g), and the limitation issued by a State program is not federally enforceable. For example, a State's air toxics preconstruction permitting program that creates limits for non-VOC HAP's such as methylene chloride may not in some circumstances yield federally enforceable limits. For any such circumstances that arise before EPA issues its rulemaking amendments addressing the *National Mining* decision, the EPA will accept, for purposes of section 112(g), limitations that are practicably enforceable by a State and local air pollution control agency.

installed controls at the plant site, and that such controls may be sufficient for case-by-case MACT when new process or production units are added to them. It is our intent to provide flexibility to the permitting authority in making case-by-case MACT determinations, but believe we are obligated to provide guidance as to how those determinations are evaluated. Consequently, the final rule clarifies the criteria that must be met for a new major process or production unit to qualify for this exemption from section 112(g) review.

The definition of "construct a major source" excludes such process or production units, provided the controls meet six specific criteria.

One criterion is that all HAP that would otherwise be controlled by a case-by-case MACT determination are controlled by the existing technology. For example, if a source has previously installed controls designed for total volatile organic compounds (which may also be HAP), those controls must achieve a MACT level of control for all of the HAP in the emission stream that would normally be expected to be controlled by a MACT determination. (For example, a MACT standard might reasonably be expected to address all the HAP emitted in a stream except for those emitted in trace amounts.) In addition, the control efficiency of the equipment for HAP prior to addition of the new process or production unit must be maintained after addition of the new equipment.

The definition also requires either that the previously installed control technology has been reviewed and approved within the last 5 years under another air quality program that requires best available control technology (BACT), lowest achievable emission rate (LAER), or State-level toxics BACT (T-BACT) or MACT. Alternatively, the permitting authority may determine that the previously installed control technology is equivalent to what would be currently required by another similar air quality program. Use of the exclusion must be documented in the title V permit at the time of permit issuance or renewal. These requirements provide a safeguard that the new process or production unit will be adequately controlled, even if it does not undergo section 112(g) review.

In addition, an opportunity is required for public review of the permitting authority's decision to allow use of this exclusion. If any commenter questions the permitting authority's view that previously installed controls are adequate for section 112(g) purposes, then the permitting authority must explain its decision in response to those comments. In general, the EPA believes that controls that were constructed in accordance with an earlier determination could be adequate; however, such previously installed controls may not be adequate if that same determination, made currently, would be significantly different. For example, a BACT determination made in 1992 could be significantly different from a determination made in 1997 on similar equipment if advances in control technology have occurred during that time.

Finally, the EPA generally does not view this "good controls" exclusion under section 112(g) as satisfying MACT for new sources under section 112(d) or section (j). As such, sources subject to later MACT determinations pursuant to section 112(d) or section 112(j) may have additional compliance requirements placed upon them.

3. Terms Related to MACT

Definitions for the following terms related to levels of control technology are included in section 63.41 of this rule:

—Available information
—MACT
—Control Technology
—MACT Emission Limitation for New Sources

The basis for the MACT definitions is statutory language contained in section 112(d) of the Act. The term "MACT" 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. The term "MACT" was used in this context in the House Bill, H. R. 3030. For purposes of the definitions in this rule, the EPA assumes that MACT is a reference to the "maximum degree of reduction in emissions" language contained in section 112(d)(3).

The term "available information" is used to define the extent of review for permitting authorities and applicants for case-by-case MACT determinations. This rule defines "available information" to include information made available by the EPA in the process of setting emission standards, including but not limited to MACT standards. The EPA intends that information made publicly available in background or other documents in the process of developing a "presumptive MACT" for a source category should be considered "available information." In this rule, information is considered to be "available" that is available as of the permitting authority's final determination, i.e., the date the permitting authority makes the final determination after receiving all comments. Some commenters argued that information should only be considered "available" if it has been available as of the date of application for a MACT determination. The EPA believes, however, that new information presented during a public comment period should be considered in the MACT determination. The issue of "available information" is discussed in more detail in section III.D.3. below.

4. Terms Affecting Extent of Coverage by MACT

The following terms are used to describe equipment subject to a MACT determination:

—Affected source
—List of source categories
—Process or production unit

As explained above, the EPA believes that Congress did not intend section 112(g)(2)(B) to be so limited in scope that it would apply only to construction or reconstruction of entire facilities, and that this section was also intended to apply to construction of new process or production units and reconstruction of existing process or production units at existing facilities. Accordingly, it is necessary for EPA to decide what types of new equipment constitute the unit to be controlled under section 112(g).

A number of commenters expressed concerns regarding the exclusion for an "integral component of a process or production unit," in the draft final rule, which required that the component be an "essential part" of a larger process or production unit. The nature of the comments made it clear that this definition was subject to greatly differing interpretations. Many commenters stated that the definition was too narrow, while some argued that it could be construed so broadly that no new equipment would qualify. Several commenters who believed the proposed definition of "integral component" to be too narrow suggested that EPA use alternative criteria such as "functions as a part of" or "integrated with" a larger process or production unit instead. The EPA believes the concept of a functional relationship to be a useful one, but by itself this concept is susceptible to an unduly broad interpretation.

The EPA is concerned about the varying interpretations given to this term by the commenters. Therefore, instead of defining the equipment which should be excluded from section 112(g), the EPA has chosen to define the

equipment to which section 112(g) should apply controls. This rule applies section 112(g) to equipment which meets the definition of a "process or production unit."

The definition of "process or production unit" requires that the unit to which section 112(g) applies should be "any collection of structures and/or equipment that processes, assembles, applies, or otherwise uses material inputs to produce an intermediate or final product," and notes that the process or production unit may be a part of a facility which contains several such units. By requiring that the unit produce a product, the EPA intends section 112(g) to apply to units which are discrete, not units which are just one essential part of a larger function. The EPA also intends that the requirement that the unit produce a product be read to include those units whose product is energy, such as boilers.

At the same time, some commenters suggested that an entire plant site should generally be considered the unit to which section 112(g) applies, an interpretation which the EPA does not share. Therefore, by specifying that the process or production unit may be a part of a facility, the EPA intends that the definition be interpreted to cover a process line or production operation within a facility.

The draft final rule contained separate definitions of "process" and "production unit." Under the draft language, storage tanks would have been considered processes or production units in some situations. Because the final rule consolidates the two definitions, the EPA has changed the definition of process or production unit to include the storage of materials, where storage is the primary function of the facility (e.g., tank farms), as a process or production unit. These issues are discussed and illustrated further in section III.D. below.

5. Electric Utility Steam Generating Unit

The definition of electric utility steam generating unit in the proposed rule is taken directly from section 112(a) of the Act.

C. Section 63.42 Program Requirements Governing Construction or Reconstruction of Major Sources

Several commenters expressed concerns regarding the provision in the draft final rule under which section 112(g) would have taken effect immediately upon promulgation of this rule in those States which have already developed section 112(g) programs. Some of these commenters noted that it is illogical to assume that a program adopted by a State in advance of issuance of this rule will meet its requirements, and that States should be required to evaluate their programs for conformity to this rule before they take effect. The EPA agrees with this comment, and has therefore required that each permitting authority certify that its implementing program is in conformity with the provisions of this rule as part of its adoption of a program.

Some commenters requested that EPA provide a fuller description of the steps by which a permitting authority can adopt a section 112(g) program. Other commenters argued that a program should not take effect without some sort of notice to affected facilities. The EPA agrees with these comments and has therefore also required that a permitting authority establish in advance an effective date for its program, and publish notice of the adoption of the program prior to that effective date.

One commenter argued that section 112(g) programs adopted by a State permitting authority cannot take effect unless they are expressly approved by EPA, either as part of a title V program or as a delegation of authority to the State under section 112(l). The commenter argued that EPA must also afford an opportunity for public comment prior to any such approval. The EPA does not agree with the position expressed by this commenter.

The EPA interprets section 112(g) as assigning to the permitting authority for each State, whether it be the State or the EPA Regional Office acting on behalf of the Administrator, the responsibility for making section 112(g) determinations. This construction of section 112(g) is implicit in the language which makes the applicability of the prohibitions in section 112(g)(2)(B) contingent on the effective date of a title V permit program in each State. Moreover, the EPA has previously taken steps to effectuate this construction of the Act. Each State which received approval to operate a title V permit program was required to state that it had the requisite authority to implement section 112(g). While an individual State (or the EPA Regional Office if it is the permitting authority under title V) is not in a position to adopt a section 112(g) program which satisfies Federal requirements for such programs until after EPA has issued its general guidance concerning the nature of these requirements, there is no indication in the language of section 112(g) that EPA must then "delegate" to each State the authority already assigned it by the statute itself.

The EPA believes that it would be permissible for EPA to require that State section 112(g) programs be approved by the EPA before they could take effect, but does not intend to do so. The EPA acknowledges that the difficulties it has encountered in devising guidance on implementation of section 112(g) which is both effective and practicable have resulted in unfortunate delays in implementation, and that EPA must necessarily afford State permitting authorities some additional time after issuance of this rule to plan for and adopt their implementing programs. However, inclusion of additional EPA comment and review procedures which are not mandatory would only serve to further delay implementation of this provision, thereby undermining the congressional intent.

Section 63.42(c) says that no person may "begin actual construction or reconstruction" of a major source unless a case-by-case MACT determination has been made. The EPA intends that the phrase "begin actual construction or reconstruction" have the same meaning as the phrase "begin actual construction" in 40 CFR 51 and 52 [the NSR and PSD programs], i.e. initiation of physical onsite construction activities as set forth in those programs.

If a facility which wishes to undertake construction or reconstruction of a major source after the effective date of section 112(g)(2)(B) in a State or local jurisdiction is unable to obtain the case-by-case MACT determination required by that provision, this could prevent the facility from proceeding with construction or reconstruction. Although the potential for constraints on construction or reconstruction when no section 112(g) program is in place is inherent in the structure of the statute itself, the EPA has included in the final rule two provisions which are intended to avert such a result in the event that a State permitting authority is unable to adopt a section 112(g) program in a timely manner.

First, in those instances where a State has not adopted a section 112(g) program within 18 months but concludes that it can still make the required case-by-case MACT determinations, the State may elect to make such determinations subject to written concurrence by the EPA Regional Office. Upon written concurrence by the EPA, the MACT determination will become final and federally enforceable. Second, in those instances where a State has not adopted a section 112(g) program within 18 months and concludes that it is unable to make case-by-case MACT determinations in the absence of such a program, the State may request that the EPA Regional Office implement a transitional section 112(g) program for a

period not to exceed 5 years. Although it is clear that failure to adopt a section 112(g) program would constitute a material deficiency in a State's title V permitting program, the EPA would prefer to afford those States who have encountered practical difficulties in timely adoption of a section 112(g) program additional time rather than immediately applying the sanctions and remedies set forth in section 502(i).

Industry commenters have expressed concern that individual States might use adoption of a section 112(g) program to "federalize" elements of existing State air toxics programs which are not required to implement section 112(g) with respect to construction or reconstruction of major sources. Conversely, some States have expressed concern that adoption of a section 112(g) program might operate to preempt other existing provisions in State air toxics programs which are not required to implement section 112(g). The EPA does not intend or support either of these results. The program adopted by each State to implement section 112(g) will be intrinsically less extensive in its scope than many existing State air toxics programs. When this is the case, the section 112(g) program should not be treated as either subsuming or superseding extraneous State program elements. Accordingly, the EPA has included in the final rule explicit language making it clear that nothing in the section 112(g) rule can be construed to require compliance with State program elements not intended to implement section 112(g) with respect to construction or reconstruction of major sources, and nothing in the rule can be construed to preclude enforcement of such State program elements under any other provision of applicable law. State permitting authorities may examine their existing State air toxics programs to determine if they contain the requirements of this rule. If so, a permitting authority may use its existing air toxics program as a vehicle for implementing section 112(g) requirements.

D. Section 63.43 MACT Determinations for Constructed and Reconstructed Major Sources

Section 63.43 (in combination with a number of definitions contained in section 63.41) contains the requirements for constructed and reconstructed major sources described in section 112(g)(2)(B) of the Act. Equipment affected by this section must comply with a "new source MACT" level of control.

1. Applicability

1. "Greenfield" Facilities. The most straightforward case for section 112(g) is for a new plant site emitting (or having the PTE) more than major amounts of HAP (that is, 10 tons/yr of one HAP, 25 tons/yr of multiple HAP, or amounts that exceed any lesser quantity cutoffs that may be established under subpart C of part 63). The EPA believes that the statute clearly requires such a new plant site to be treated as a "constructed major source" subject to a "new source MACT" level of control.

2. Addition of Equipment at an Existing Plant Site. This rule treats addition of a new "process or production unit" as construction, as discussed above, and requires application of new source MACT to that process or production unit. This ensures that new major-emitting process or production units (that is, those emitting more than 10 tons/year of a HAP, or 25 tons/year from all HAP, or amounts exceeding a lesser quantity cutoff), which generally would represent sizeable investments, will be built with state-of-the art control technology. It is generally recognized that it is more straightforward to build such a level of control technology into the original design, and that it is difficult or sometimes even impossible to retrofit such controls at a later date. A fundamental goal of many EPA programs, such as the new source performance standards program under section 111 of the Act and the effluent guidelines program under the Clean Water Act, is to achieve long-term reductions in emissions by requiring "best" controls as old production operations are replaced with new operations. In addition, this requirement prevents inequities in the implementation of the 112(g) program, because a new process or production unit at an existing plant would be subject to the same standard as a "greenfield" plant site with identical equipment. If this rule only covered greenfield sites, as some commenters suggested, then that same new process or production unit would not be controlled at all under section 112(g).

The guidance in this preamble is designed to help the permitting authority determine whether a new major addition constitutes a process or production unit. The EPA is providing the following examples to illustrate its intent for applicability of section 112(g). The rationale for each case is explained based on the definition of a process or production unit.

Because this rule is generic to all industries, the definition of "process or production unit" and the use of the terms "intermediate or final product" in this rule are necessarily generic. As a result, in applying this definition to individual plant sites, permitting authorities will need to exercise their reasonable judgment in determining the "collection of structures and/or equipment that * * * produce(s) an intermediate or final product." The following discussion and examples provide guidance on factors and considerations that EPA believes are appropriate in making this judgment. None of the factors or considerations by itself should be considered absolute in determining applicability, but these should be weighed by the permitting authority in reaching a decision.

In applying the definition of "process or production unit" to a facility, a key question is: What are the intermediate or final products? There is no intention for this rule to impart any regulatory significance to informal uses of the term "intermediate." The examples below illustrate EPA's intent for a variety of industries.

A second question is: Do the new equipment and/or structures constitute a collection of equipment and/or structures that produces such a product? The EPA believes that an appropriate factor for the permitting authority to consider is the extent to which the new equipment and structures are discrete—in other words, whether as a technical matter the new equipment and structures can produce an intermediate or final product independently, in substantial degree, from the existing equipment or structures. If so, this would tend to support a judgment by the permitting authority that the new equipment and structures constitute a process or production unit. If not, this would support the opposite conclusion. The EPA notes that in making this judgment concerning "discreteness," one relevant consideration is whether the types of new equipment and structures in question are reasonably controlled independently.

In many cases it will be easy to discern whether changes at a plant site will constitute construction or reconstruction of a "process or production unit." For example, if a new unit is added to an existing plant site, and that type of unit is often built alone at a greenfield site, the logical conclusion is that the new unit is a process or production unit. Also, if minor changes are being made to existing equipment, it should be clear that no process or production unit is being constructed or reconstructed. Of course, there is no need to define the "process or production unit" at all

unless the group of HAP-emitting equipment being constructed at an existing plant site have the potential to emit major amounts of HAP.

The following sample applicability determinations provide further guidance in judging when a source is subject to section 112(g) requirements:

Example 1. At a plant which manufactures fiberglass reinforced plastic boats, the owners wish to add more spray guns to an existing fabrication line to supplement the existing spray guns in laminating a particular model of boat hulls. The new spray guns will have a PTE greater than 10 tons/year of a HAP.

In this example, EPA views the fiberglass hull of a boat as an intermediate product in the manufacture of the final product (i.e., the boat with deck, trim, paint, engine, etc.) The collection of structures and/or equipment needed to manufacture the intermediate product, in this case, includes the existing spray guns and other operations in the building (e.g., the lamination operation and other supporting equipment) that typically are found in the production of boats. Because the newly added spray guns in and of themselves do not produce the intermediate product, the EPA does not view the additional spray guns for lamination as a process or production unit that is subject to review under section 112(g).

Example 2. Using Example 1, assume that the owner adds more spray guns to laminate a second model of boat hulls. The room is large enough to accommodate two lamination processes at the same time. The new spray guns have a PTE greater than 10 TPY.

The same rationale used in Example 1 applies here. The collection of equipment needed to produce the boat hull includes the lamination process as well as the gel coat process. Because the addition of the second lamination process does not produce an intermediate product, if no additional laminating or other essential equipment were added, it would not be subject to review under section 112(g).

Example 3. Using Example 2, a gel coat spray booth and supporting equipment needed to manufacture the boat hulls are added in addition to the spray guns.

The process or production unit in this example is the set of equipment that consists of the gel coat spray booths, the spray gun, and the supporting equipment. This new set of equipment can reasonably operate alone and produce an intermediate product. Consequently, all sources of HAP in this set of equipment, which includes the gel coat spray booth and the spray guns in the laminating room, are subject to review under section 112(g).

Example 4. An aluminum reduction plant has several potlines which manufacture aluminum. Each potline consists of between 100 and 200 electrolytic reduction cells or "pots" that are connected together in series electrically to complete a circuit. Each pot produces molten aluminum. The company wishes to add more pots on each line. The additional pots will result in a major increase in emissions.

Although each individual pot contributes to the production of the aluminum, the separate pots are not considered to be discrete process or production units in that they cannot operate independently. In addition, it does not make sense from an engineering standpoint to apply new source MACT only to the additional pots. The best time to apply new source MACT is when constructing an entirely new potline. The EPA does not view each separate pot as a process or production unit and thus the individual pots are not subject to review under section 112(g). The EPA sees the pots within the potline as being both functionally and physically interconnected and unable to function alone. Thus, EPA does not consider the pots as discrete process or production units.

Example 5. Using Example 4, assume the aluminum production facility adds a new potline which is a major source of HAP.

The EPA considers the entire potline as the collection of structures and equipment that produces an intermediate product (i.e., molten aluminum). Since it fits within the definition of a process or production unit, the potline is subject to review under 112(g). Also, note that the potline is an example of a process or production unit that is part of a larger production unit, the aluminum production plant.

Example 6. At an automobile assembly paint shop, three coating steps, primer, surfacer, and top coat, are used to paint the automobile body. Another parallel topcoat step is added to the existing topcoat step. Both top coat steps then feed back into a bake oven. The new top coat step will be a major source of HAP.

The new parallel topcoat step is not subject to review under section 112(g). The intermediate product in this case is the painted automobile body. The top coating step cannot take place without the preceding primer and surfacer steps and the supporting infrastructure. Additionally, the intermediate product cannot be completed without the bake oven step. Consequently, the topcoat by itself is not a discrete process as it is only one step in a series of steps necessary to produce an intermediate or final product. (Although unlikely, if an existing automobile assembly plant were to build a second paint shop, this should be reviewed under section 112(g).)

3. Reconstruction. Section 112(g) continues the concept of "reconstruction" contained in past regulatory programs. The concept of reconstruction is intended to prevent the circumvention of "new source" requirements by completely overhauling existing equipment. Current air pollutant emission standards under previous requirements of the Act treat replacement of components as a reconstruction if the replacement represents more than 50 percent of the capital cost of the new unit.

For section 112(g), the requirements apply to the reconstruction of a "major source," and this rule defines "reconstruct a major source" as the replacement of components at a major source such that the replacement exceeds 50 percent of the capital cost of either an entirely new major source, or of a comparable process or production unit where the process or production unit, if newly constructed, would have been considered a constructed major source under this rule. (For the sake of clarity, the EPA has deleted that portion of the reconstruction definition in the draft rule that referred to a "group of process or production units" being reconstructed, so that the definitions of both construction and reconstruction would refer to the same units).

MACT Determinations

Section 63.43 reflects the statutory requirement that an owner or operator who proposes to "construct or reconstruct" a major source must obtain a determination from the "permitting authority" that the "MACT emission limitation for new sources" will be met. The "permitting authority" is defined as the agency responsible for the title V permit program. Further discussion of this issue, and of other issues related to implementation of section 112(g), is contained in section IV of this preamble.

This section of the preamble discusses the procedures for making these MACT determinations. These procedures include technical review procedures needed to establish a MACT emission limitation and a corresponding MACT control technology, and, (where appropriate), administrative procedures for submitting and reviewing applications for MACT determinations. In this rule, the overall process for MACT determinations is outlined in § 63.43.

1. Overall Process for MACT Determinations. Where no MACT standard under section 112(d) has been promulgated, section 112(g) requires a case-by-case determination of the MACT emission limitation. This "determination" can take any of three

forms, as described below and in § 63.43(c) of this rule. Under any approach, the process for review is conceptually similar.

The process begins with a MACT analysis by the owner and operator. This MACT analysis must be consistent with general principles described in § 63.43(d). The owner or operator provides an application for a MACT determination to the permitting authority. Requirements for the contents of this application are listed in § 63.43(e). Commenters indicated that the source cannot certify that the control technology meets MACT because the permitting authority has not yet made the MACT determination. The EPA agrees with these commenters and has therefore eliminated the requirement from § 63.43(e)(2) of the draft final rule for a responsible official to certify that the control technology meets the requirements of section 112(g) of the Act. (The EPA wishes to clarify that the requirement in § 63.43(e)(2)(vi) 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 speciations. 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.)

This application for a MACT determination is then reviewed by the permitting authority according to one of the following procedures (at the permitting authority's discretion): (1) the permitting authority's own review procedures (so long as they provide for public participation in the determination), (2) the administrative procedures outlined in 40 CFR part 70 or part 71, or (3) the administrative procedures described in § 63.43, paragraphs (f), (g), and (h). If approvable, the permitting authority will then either: (1) issue approval under its own procedures, (2) revise the part 70 or part 71 permit, or (3) issue a Notice of MACT Approval. Regardless of which review procedure is used, the provisions of section 63.43, paragraphs (j), (k), (l), and (m) apply.

Section 63.43(c)(3) of this rule provides that a source may seek approval of case-by-case MACT determinations for new alternate operating scenarios (that were not incorporated in a State permit) when obtaining its title V permit. As a result, the source would have met the requirements of section 112(g) at the time of permit approval, and thus would be free to activate any such alternative operating scenario in the future without having to undergo any further section 112(g) review.

Where EPA determines that the MACT determination made by the permitting authority fails to meet any of the requirements of § 63.43, EPA may take one of two actions to address the deficient MACT determination. (a) Where the MACT determination is made part of a source's part 70 permit, EPA may veto issuance of the permit in accordance with the provisions of 40 CFR 70.8(c). The EPA may also use the veto process outlined in 40 CFR 70.8(c) where the State has "enhanced" its section 112(g) process to incorporate the part 70 procedures.

(b) Where the MACT determination is made before the source obtains or revises its part 70 permit, either through a Notice of MACT Approval or the permitting authority's own procedures, EPA may exercise its authority under section 113(a)(5) of the Act to prohibit construction, issue an administrative penalty order, or bring a civil action against the source upon finding that the State has not acted in compliance with any requirement or prohibition relating to the construction or reconstruction of new sources.

Many commenters have expressed opposition to the provision in the draft final rule which provides that an owner or operator shall be deemed to be in compliance with section 112(g)(2)(B) only to the extent that the constructed or reconstructed major source is in compliance with the terms and conditions of the MACT determination. The commenters contend that this provision would operate to treat sources that are temporarily in violation of the terms of a MACT determination the same as sources who completely ignore section 112(g)(2)(B) and proceed to construct or reconstruct without obtaining a MACT determination. One commenter even argues expansively that this proposed provision would operate to subject the violator to penalties for the entire period since the original construction or reconstruction, rather than only for the period of the violation itself.

It was not the intent of EPA, nor would it be appropriate, to transform prior compliance into a violation based on the occurrence of subsequent violations. The EPA has clarified the language of the provision to assure that any violation of the terms and conditions in a MACT determination will be construed as a violation of section 112(g)(2)(B) only for that period that the owner or operator is actually in violation of such terms or conditions.

In general, the commenters assume that the MACT determinations made by a State will themselves be automatically federally enforceable, regardless of whether they have been incorporated in a title V operating permit for the facility. One commenter expressly invoked the language of section 113 by referring to a MACT determination as a "permit," while another argued to the contrary that Federal enforceability is not mandatory for MACT determinations under section 112(g). The EPA agrees that MACT determinations made pursuant to the authority conferred on a State by section 112(g) should be construed as federally enforceable actions, regardless of whether their terms have been incorporated into a title V operating permit. The EPA notes that a significant period may elapse between the time a facility first obtains a MACT determination and the subsequent issuance of a title V operating permit for that facility. The MACT determinations in this interim period are federally enforceable.

Congress clearly intended that the EPA should be able to enforce the requirement for sources to apply MACT prior to construction or reconstruction of a major source. If a facility obtains a MACT determination but does not adhere to its terms and conditions, then that facility should not be shielded from Federal enforcement. The provision in the final rule which makes failure to adhere to the requirements in the MACT determination a violation of section 112(g)(2)(B) itself, but only for the period that the facility is actually violating those requirements, is reasonable. It provides additional assurance that no facility will be able to avoid Federal enforcement based on a contention that the MACT determination has not yet been incorporated into a title V operating permit and should not be deemed directly enforceable.

2. Requirement for Preconstruction Determination. Section 63.43 requires the MACT determination before construction or reconstruction of the major source. The requirement is based upon the language in section 112(g)(2)(B) requiring that the Administrator (or the State) determine that MACT "will be met." The EPA believes that the future tense suggests an up-front determination.

In addition, the EPA believes that there are substantial implementation disadvantages for any program that would allow equipment to be constructed before a determination is made. The EPA's past experience in enforcing air quality regulations suggests strongly that it would be very

difficult to require substantial changes in the design of equipment once it is in place. The EPA feels that fairness or equity arguments, based on investments already made and the costs of retrofit and shutdown, could be made by a source seeking to begin operation under these circumstances.

3. General Principles for MACT Determinations. Section 63.43(d) reviews a number of general principles that govern MACT determinations under this rule. As required by section 112(g)(2)(B), this rule requires a case-by-case determination by the permitting authority that the technology selected by the owner or operator is consistent with what would have been required under section 112(d) of the Act. For constructed and reconstructed major sources, the minimum requirement 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 definition of MACT for new source MACT in this rule does not require consideration of sources outside the U.S. However, sources and permitting authorities are expected to consider controls on sources across the U.S., as opposed to considering just those controls used on sources in a particular State.

In determining the appropriate level of control, this rule requires consideration of "available information." In some instances, such information sources are readily apparent. For example, if a Federal MACT standard has been proposed, but not yet promulgated, the EPA expects that a MACT determination will strongly consider that proposal. (Other information may be available in some cases, for example, based upon public comment on the MACT proposal, but such data would need to be adequate to refute the finding in the proposal). In other cases, the EPA will have generated background documents summarizing MACT findings which should be readily available.

In some cases, during the course of developing the MACT standard the EPA will decide upon and make publicly available a "presumptive MACT" emission limitation that anticipates what the ultimate MACT determination will be. The EPA may do this before a proposed MACT standard has been published in the Federal Register for a source category. If so, sources and States should use such a "presumptive MACT" emission limitation as guidance in making case-by-case MACT determinations, because these determinations would be the best available information on the eventual MACT emission limitation.

The most recent performance standards for existing control technologies must be met. These include standards for BACT, LAER, or State T–BACT established within the last 5 years. The EPA plans to develop guidance for performance standards for 10-year MACT categories. Any relevant performance standards established in this guidance should be used once it is available. Determinations by the permitting authority on the adequacy of equivalent controls should be evaluated by the most recent performance standards available at the time of construction. As indicated in the draft final rule, the resulting level of control must at least meet that provided by the control technology prior to the inclusion of additional sources.

In addition, the EPA currently maintains a number of data bases that may be useful as a resource for information on available control technologies. The EPA has also designed a data management system that will support case-by-case MACT determinations. This data base is called the MACT data base. The EPA is developing guidance documents on how to use the MACT data base. Section 63.43(m) requires States to report all case-by-case MACT determinations to the MACT data base.

Finally, it should be noted that the final rule changes the term "control equipment" to "controls" to include any pollution prevention strategy that effectively limits emissions and is federally enforceable.

4. General Issues with Regard to MACT Determinations. For constructed and reconstructed major sources, section 112(g) of the Act requires an emission limitation consistent with a "new source MACT" level of control. The Act states:

> 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.

For the purposes of section 112(g), two criteria should be used to determine if a source is similar: (1) whether the two sources have similar emission types, and (2) whether the sources can be controlled with the same type of control technology. The EPA can classify the emission source as one of five different types. They are as follows:

Process vent or stack discharges—the direct or indirect discharge of an organic liquid, gas, fume, or particulate by mechanical or process-related means. Examples would be emission discharges from columns and receiving tanks from distillation, fractionation, thin-film evaporation, solvent condensers, incinerators, flares, and closed-looped biological treatment units.

Equipment leaks—fugitive emissions from the following types of equipment: valves, pumps, compressors, pressure valves and lines, flanges, agitators, sampling connection systems, and valve connectors.

Evaporation and breathing losses—emissions from storage or accumulation of product or waste material; for example: stationary and mobile tanks, containers, landfills, and surface impoundments, and pilings of material or waste.

Transfer losses—emission of an organic liquid, gas, fume, vapor or particulate resulting from the agitation of material during transfer or the material from one unit to another. Examples of such activities are filling of mobile tanks, dumping of coke into coke quench cars, transfer of coal from bunker into larry car, emptying of baghouse hoppers, and sludge transfer.

Operational losses—emissions resulting from the process operation which would result in fugitive emissions if uncontrolled by hoods or vacuum vent, or other vent systems. Examples of operation losses are emission resulting from spray coating booths, dip-coating tanks, quenching towers, lubricating stations, flash-off areas, or grinding and crushing operations.

These five types of emission sources can serve as a general guide in identifying available control options while also considering the concentration and the type of constituents of a gas stream. However, while two pieces of apparatus can be classified within the same emission source type, this does not automatically mean that the emission points can be controlled using the same type of control technology. For instance, storage tanks and landfills are both listed in the evaporation and breathing losses classification, but it is unlikely that a storage tank and landfill would be controlled with the same technology.

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. EPA believes that the use of the word "similar" provides 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 consider transfer technologies when appropriate.

Some commenters expressed concern that the EPA's definition of "similar source" could be interpreted too broadly. The EPA believes that the practical use and effectiveness of any transfer technology should be generally comparable across emission units. While the particular pollutants emitted need not be the same, the following factors may be considered: the volume and concentration of emissions, the type of emissions, the similarity of emission points, and the cost and effectiveness of controls for one source category relative to the cost and effectiveness of those controls for the other source category, as well as other operating conditions. The uninstalled cost of controls should not be a factor in determining similarity across emission units. What should be a factor is the uninstalled cost of controls *plus* the costs associated with installation and operation of those controls. Therefore, whenever costs are quantified, such costs should include the purchase price of controls plus the costs associated with installation and operation of those controls for the source in question. In addition, the EPA recognizes that control efficiencies across similar sources may be different. The permitting authority is expected to use its judgement in determining when operating conditions are comparable across emission units.

Another general problem that must be addressed in determining the MACT, is the identification of the universe of equipment that must be considered for control. When the notice of initial list of categories of sources under section 112(c)(1) of the Act was published (57 FR 31576), 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 identify technically distinct groupings within these broad categories. During the standard-setting process, EPA may find it appropriate to further subcategorize to distinguish among classes, types and sizes of sources.

In making case-by-case MACT determinations, the EPA believes that permitting authorities may find it necessary to subcategorize particular source categories into technically distinct groupings. This rule allows permitting authorities to subcategorize, at their discretion, on a case-by-case basis, giving permitting authorities the greatest flexibility in case-by-case MACT determinations. In their comments, some permitting authorities indicated that reviewing agencies may not have the resources to address this subcategorization issue. The EPA recognizes that allowing permitting authorities discretion to subcategorize or not subcategorize may lead to some national inconsistency in implementation for source categories for which the EPA has not yet established a presumptive MACT, or has not yet collected enough information on the source category to establish subcategories. To limit inconsistencies, the EPA strongly encourages those States which have collected information on particular source categories to share that information with other States through the MACT data base.

In the proposed rule, EPA also sought comment on the criteria for which subcategorization would be allowed. Possible criteria can include technically distinct processes or operations (including differences between batch and continuous operation), fundamental differences in emission characteristics or control device applicability, differences in safety considerations, and the appropriate consideration of opportunities for pollution prevention. Most commenters supported allowing sources and/or States the discretion to subcategorize on a case-by-case basis. The EPA has not subcategorized source categories in this rule because it is most feasible to do so on a case-by-case basis.

5. Application for a MACT Determination. Section 63.43(e) of this rule describes the information the owner or operator is required to provide with an application for a MACT determination or in a title V permit application for which a MACT determination is requested. These information requirements are designed to identify the equipment to be controlled, and to demonstrate that the selected control technology for those units is consistent with or exceeds the requirements of the statute.

6. Review Process. Analysis of the relationship of section 112(g) to the operating permits program. This rule, in section 63.43, paragraphs (f), (g), (h), and (i), establishes an administrative process for reviewing a request by an owner or operator for a MACT determination. As discussed previously, the EPA believes that section 112(g) of the Act requires such a determination to be made before constructing or reconstructing a major source. There will be cases when the title V permit process will be used for section 112(g) reviews, and there will be cases when it will not be used and MACT determinations will be incorporated into the permit after commencement of operation. Section 63.43(c) of this rule states that when the title V procedures are used, this process would be sufficient. When the title V process does not occur until after construction or reconstruction of a major source requiring a case-by-case MACT determination, this rule requires that the owner or operator follow either of the other two administrative review processes described in § 63.43. Where the change that is subject to section 112(g) review is addressed or prohibited by an existing title V permit, the change would of course need to be processed as a revision to the title V operating permit prior to commencing operation.

Regardless of the timing for incorporation of section 112(g) determinations into the operating permit, there are certain 40 CFR Part 70 requirements that apply. The title V permit must be revised or issued according to procedures set forth in part 70, and must incorporate the compliance provisions of part 70. If, during the EPA's review of the section 112(g) 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 if part 70 requires revision to an existing title V permit prior to operation, or if the permitting authority otherwise requires incorporation into a title V permit as a step in the section 112(g) determination process. However, even where there is no formal incorporation into a title V permit prior to operation, subsequent title V review may effectively be avoided if the State's section 112(g) process is "enhanced" to include the required title V procedures, thereby allowing for later incorporation into the title V permit by administrative amendment.

7. Streamlined Administrative Process. Section 63.43, paragraphs (f), (g), and (h) of this rule establish an administrative review process for case-by-case MACT determinations for permitting authorities to use at their discretion. The process begins with a 45-day completeness determination. (In this rule the EPA suggests a completeness determination of 45 days, and a public review period of 30 days, in order to be consistent with the time periods set forth in part 70 for a permit application, so that a permitting

authority can easily combine these processes). 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. The proposed decision to either approve or disapprove the application is then subject to public review. This rule provides for public review through issuance of a notice containing all the relevant background information about the application and allows 30 days for the public to comment on whether the application should or should not be granted. To expedite approval of noncontroversial case-by-case MACT determinations, this rule allows such determinations to become final following the close of the comment period if no adverse comments have been received. If adverse comments are received, a final notice addressing the comments must be published either approving or disapproving the application.

8. Notice of MACT Approval or similar document. The end result of the administrative review process is a determination set forth in a State permit or other document issued by the permitting authority. Necessary elements of this document are set forth in section 63.43(g) of this rule. This document should contain the emission limitations, notification, operating and maintenance, performance testing, monitoring, reporting, record keeping and any other requirements needed to ensure that the case-by-case MACT emission limitation will be met.

The Notice of MACT Approval or other document serves to provide a mechanism for Federal enforceability of these conditions in the interim time period between initial operation of the constructed or reconstructed major source and the time the conditions are added to the title V permit. The EPA has added a provision under which a Notice of MACT Approval would expire if construction does not begin within 18 months from the issuance of the notice. Such an 18-month expiration period is included in criteria pollutant preconstruction review programs.

9. Compliance. Section 63.43(k) requires the permitting authority to establish compliance dates for MACT. For constructed and reconstructed major sources subject to a "new source MACT" level of control, compliance upon startup is required. Some commenters requested that compliance be required by the date 180 days after startup to allow for a "shakedown" period for controls. However, sources subject to this rule are also subject to the relevant requirements of subpart A of this part (the general provisions for part 63), including compliance requirements. Since subpart A does not require the first performance test until 180 days after startup, the EPA believes that a "shakedown" period for controls is already accounted for through subpart A.

To ensure Federal enforceability, section 63.43(l) of this rule requires that the Notice of MACT Approval or other such document contain, at a minimum, monitoring, record keeping and reporting requirements sufficient to document the source's compliance. Because major sources obtaining MACT determinations will incorporate that determination into a title V permit, this rule includes a requirement that the monitoring, record keeping, and reporting requirements required for a case-by-case MACT determination be consistent with the compliance requirements contained in part 70.

In addition to part 70 compliance requirements, additional requirements may need to be considered at the time of the MACT determination. Under section 114(a)(3) of the Act, EPA regulations for major sources must assure that owners or operators are accountable for their emissions and compliance status on a continuous basis. In this way, the EPA is assured that the emissions reductions intended by regulations are in fact achieved. Some commenters noted that monitoring requirements were not consistent with the requirements being developed for the Compliance Assurance Monitoring (CAM) rulemaking. However, the CAM rule does not apply to new standards promulgated currently under section 112. A new program, such as section 112(g), should apply monitoring as directed by section 114(a)(3) of the Act.

It is important to distinguish between continuous compliance and continuous monitoring. Under section 112 of the Act, to demonstrate continuous compliance, a source may not be required to record emissions data on a continuous, instantaneous basis such as with a continuous emission monitor. Depending on the type of standard, regular parameter monitoring, equipment inspections, and/or maintenance of raw material records, etc., may be sufficient to demonstrate continuous compliance. For all standards, monitoring frequency must be based on the averaging time of the applicable limitation or standard, and the likely variability of potential emissions from a particular emissions unit. If the potential variability is high, monitoring must be done frequently. If the potential variability is low, monitoring may be conducted less frequently at regular intervals.

Where the Notice of MACT Approval or other such document fails to meet any requirement of section 63.43, EPA may exercise its authority under section 113(a)(5) of the 1990 Amendments to prohibit construction or reconstruction, issue an administrative penalty order or bring a civil action against the source upon finding that the State has not acted in compliance with any requirement or prohibition relating to the construction or reconstruction of new sources.

10. Reporting to National Data Base. Section 63.43(m) requires permitting authorities to provide EPA with information on all case-by-case MACT determinations issued under this subpart. The intent of this paragraph is to use EPA's MACT data base to store data on well-controlled sources and on previous MACT determinations to help facilitate the MACT determination process.

E. Section 63.44 Requirements for Process or Production Units Subject to a Subsequently Promulgated MACT Standard or MACT Requirement

The EPA anticipates that new source MACT requirements adopted with respect to construction or reconstruction of a particular source under section 112(g)(2)(B) will normally be at least as stringent as any subsequent requirements for existing sources adopted as part of a MACT standard issued under section 112(d). However, should a subsequently promulgated MACT standard impose more stringent requirements, the EPA believes that it may be appropriate in some instances for the EPA to establish a later compliance date for those sources which have acted in reliance on a prior case-by-case MACT determination. This rule expressly provides that the EPA may establish separate compliance dates for facilities which have notified EPA of such determinations in a timely manner. Specifically, the EPA may establish, in the MACT standard, a later compliance date for those sources which have received a final and legally effective MACT determination pursuant to section 112(g), and have provided the EPA with data on their section 112(g) control determination by the end of the public comment period on the subsequent Federal standard.

In those instances where the subsequent MACT standard does not establish a compliance date for sources subject to a prior case-by-case MACT determination, this rule authorizes the permitting authority to grant up to 8 years of additional time for the affected

source to comply with the subsequent MACT standard. The EPA has previously explained that the structure of section 112 as a whole supports such a construction of section 112(g), and a source may also be afforded up to 8 years to comply with a MACT standard in instances where a prior emission limitation has been established by permit under section 112(j).

This provision is a modified form of the provision that appeared in the original proposed rule. The original provision has been modified in two respects. First, commenters indicated that inequities might result from the fact that the original provision stated that the revised compliance date should not be more than 8 years after a standard promulgated under section 112(d), or 8 years after the date by which the source must comply with the MACT determination under section 112(g), whichever is earlier. For example, if a standard under section 112(d) is promulgated 7 years after a source's compliance date under section 112(g), the source might only have one year to comply with the standard under section 112(d). Therefore the EPA has removed this condition, and allowed the extension to be counted from the section 112(d) compliance date in all cases.

Second, commenters noted that the EPA had required, in § 63.44(a), that a source must comply with a relevant section 112(d) standard if it has not yet obtained a "final and legally effective MACT determination" under section 112(g) before promulgation of the relevant section 112(d) standard. However, the EPA had required, in § 63.44(b), that the source must have "commenced construction" in order to be eligible for a compliance extension under section 112(d). In order to eliminate this inconsistency, the EPA has changed section 63.44(b) to require that the source must have obtained a "final and legally effective MACT determination" in order to be eligible for a compliance extension under section 112(d).

Several industry commenters felt that section 112(g) compliance should constitute compliance with subsequent MACT standards. The EPA is currently evaluating this issue in the context of setting policy for section 112(d) and section 112(j) standards. The EPA believes that in most cases the section 112(g) determination will be equivalent to MACT, but that this decision should be made on a case-by-case basis in the context of a determination under section 112(d) or section 112(j).

Several commenters requested EPA to clarify whether a source which met a new source section 112(g) MACT determination would be considered to be a new or existing source under a subsequent section 112(d) standard. According to section 112(a)(4) of the Act, if the source begins construction before the section 112(d) standard is proposed, then it is considered an existing source under a section 112(d) MACT standard. Sources constructed after a section 112(d) standard is proposed are treated as new sources under section 112(d). This applies as well to sources that have met new source MACT under section 112(g).

IV. Discussion of the Relationship of the Requirements of This Rule to Other Requirements of the Act

The previous sections of this preamble discuss the requirements of this rule in defining the requirements of section 112(g) of the Act as it relates to constructed or reconstructed major sources of HAP. In addition, there are a number of issues concerning the relationship between the requirements of section 112(g) and other requirements of the Act that are relevant to the implementation of the requirements of this rule. These issues are important in defining the overall responsibilities of States and the EPA in carrying out the requirements of section 112(g), and in understanding how section 112(g) requirements relate to other important requirements of the Act. The purpose of this section of the preamble is to present a number of regulatory and statutory interpretations related to these implementation issues.

A. Relationship of Section 112(g) Implementation to Title V Program Approval

Title V of the Act and the part 70 regulations provide that a State seeking to obtain or retain approval of a title V program must have authority to assure compliance with all applicable requirements through the title V permit (section 502(b)(5)(A); 40 CFR 70.4(b)(3)(i)). The preamble to the operating permits rule explains that, in the context of section 112, the permitting authority must have authority to develop and enforce case-by-case MACT determinations under section 112(g).

This rule and preamble language represent what EPA considers to be the most natural reading of section 112(g). The EPA reads the reference in section 112(g)(2) to case-by-case determinations made by "the Administrator (or the State)" to mean that these determinations must be made by the title V permitting authority. This reading is consistent with the reference in section 112(g)(2) to the effective date of the title V program as the date on which the requirements of section 112(g) become applicable, and with the title V requirement that major sources of HAP submit applications for title V permits regardless of whether they are subject to a MACT standard. It is also consistent with the reference in section 112(j) to "the Administrator (or the State)" as the entity that must make case-by-case determinations of MACT and issue permits incorporating these determinations.

B. Relationship to the 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. The EPA promulgated a rule for the implementation of section 112(l) on November 26, 1993 (58 FR 62262). This rulemaking added sections 63.90 through 63.96 to 40 CFR 63.

During the mid to late 1980's, most States adopted regulations or procedures to review toxic air pollutant emissions from new (and modified) sources. In some cases, these programs already regulate all of the equipment covered by section 112(g). It is the EPA's view that the Act directly confers on the permitting authority the obligation to implement section 112(g) and to adopt a program which conforms to the requirements of this rule. Therefore, the permitting authority need not apply for approval under section 112(l) in order to use its own program to implement section 112(g). A State need simply certify that their State program meets the requirements of section 112(g), and notify the EPA to that effect. (For further discussion of this issue see section III.C., above.)

C. Section 112(i)(5) Early Reductions Program

Section 112(i)(5) allows owners and operators, that provide early reductions in HAP emissions, to be granted a 6-year extension of any compliance date for emission standards issued under section 112(d). In order to participate in the section 112(i)(5) program, the owner or operator defines a "source" at a plant-site for which a 90 or 95 percent reduction in emissions can be accomplished before the proposal date of the emission standard. There are a few items of clarification on the relationship between the section 112(i)(5) requirements and section 112(g).

First, the extension granted by section 112(i)(5) applies only to that equipment incorporated within the "source" for

which the 90 or 95 percent reduction was accomplished. Other equipment at a plant-site not included within that "source" definition are subject to section 112(g) requirements if they make changes that would be considered to be construction or reconstruction of a major source under this rule.

On the other hand, equipment within the "source" definition for which there is an approved early reductions submittal are not subject to further control technology requirements under section 112(g). Section 112(g) requires case-by-case MACT where no "applicable emission limitation" exist. The "alternative emission limitation" under section 112(i)(5) should be considered an "applicable emissions limitation" for purposes of section 112(g), such that compliance with such alternative emissions limitation shields a source from having to comply with section 112(g).

D. Subpart A "General Provisions"

The EPA has promulgated "general provisions" to the MACT program as subpart A to 40 CFR 63. These general provisions contain a number of definitions and provisions that generally affect the subparts of part 63 that follow, including subpart B discussed here. In general, the relevant requirements of subpart A apply to sources subject to case-by-case MACT determinations under this rule. For example, requirements for monitoring, record keeping, and reporting established in subpart A apply to a section 112(g) source which uses the control equipment at which such requirements are directed. It should be noted, however, that specific preconstruction review requirements in subpart A apply only to standards promulgated under section 112(d), section 112(f), or section 112(h) of the Act—not to section 112(g), which establishes its own requirements. This is set out in section 112(i) of the Act, from which subpart A draws its authority to require preconstruction review.

V. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866, (58 FR 51,735 (October 4, 1993)) 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 result in a rule that may:

(1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, 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 obligations of recipients thereof; or

(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.

Although this rule will not have an annual effect on the economy of $100 million or more, and therefore is not economically significant, EPA has determined that this rule is a "significant regulatory action" because it contains novel policy issues. This action was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12866. Any written comments from OMB and any EPA response to OMB comments are in the public docket.

B. Regulatory Flexibility

The EPA considered the impact of this rule on small entities. In general, the EPA believes that very few small entities will actually be affected by the rule. Estimating the number of small entities that may be affected, however, is difficult due to the large number of industries potentially affected, and the need to predict the frequency of what is generally a fairly uncommon event, a small entity making an expansion which is itself a major source. In examining the potential impact on small entities, the EPA took into account the factors listed in the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, for conducting a final regulatory flexibility analysis.

The approach chosen in this final rule is a less burdensome option for small entities than the approach contained in the proposed rule. The proposed rule to implement section 112(g) contained requirements for modifications, as noted above. These requirements would have required control on many smaller equipment changes at industrial facilities. The EPA has chosen instead only to implement section 112(g)(2)(B) at this time (and not all of section 112(g)). By doing so, this rule eliminates much of the complexity inherent in the portion of section 112(g) which covers modifications to existing sources. It should be noted that some commenters requested that the EPA restrict section 112(g) requirements even further, to just covering construction of new "greenfield" facilities or reconstruction of entire plantsites. The EPA rejected this approach because the EPA believes it makes sense to control major sources at the time of construction when they are most cost-effective to control, whether or not they are constructed at existing plantsites.

C. Paperwork Reduction Act

The information collection requirements in this proposal have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An information collection request (ICR) document has been prepared by the EPA (ICR No. 1658.01) and a copy may be obtained from Sandy Farmer, Information Policy Branch (2136), U.S. Environmental Protection Agency, 401 M Street, South West, Washington, DC 20460, or by calling (202) 260–2740.

The EPA prepared estimates of the average annual burden hours needed to collect and prepare information required under section 112(g). The burden estimates presented below are an accumulation of the estimated annual burden hours that would be experienced by industry respondents, State and local agencies, and EPA under the various regulatory scenarios. The approximate annual burden-hours that would be required would peak in 1999 at 167,134 hours, and reduce to 23,218 by 2003.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may

significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This determination was made based on the analyses conducted for the proposal RIA.

E. Submission to Congress and the General Accounting Office

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

The statutory authority for this rule is provided by sections 101, 112, 114, 116, and 301 of the Clean Air Act as amended; 42 U.S.C. 7401, 7412, 7414, 7416, and 7601.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practices and procedures, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: December 13, 1996.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, part 63 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

1. The authority citation for part 63 continues to read as follows:

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

Subpart B—Requirements for Control Technology

Determinations for Major Sources In Accordance with Clean Air Act Sections, Section 112(g) and 112(j).

2. Part 63 is amended by adding new §§ 63.40 through 63.44 to subpart B to read as follows:

§ 63.40 Applicability of §§ 63.40 through 63.44

(a) *Applicability.* The requirements of §§ 63.40 through 63.44 of this subpart carry out section 112(g)(2)(B) of the 1990 Amendments.

(b) *Overall requirements.* The requirements of §§ 63.40 through 63.44 of this subpart apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants after the effective date of section 112(g)(2)(B) (as defined in § 63.41) and the effective date of a title V permit program in the State or local jurisdiction in which the major source is (or would be) located unless the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to section 112(d), section 112(h), or section 112(j) and incorporated in another subpart of part 63, or the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before the effective date of section 112(g)(2)(B).

(c) *Exclusion for electric utility steam generating units.* The requirements of this subpart do not apply to electric utility steam generating units unless and until such time as these units are added to the source category list pursuant to section 112(c)(5) of the Act.

(d) *Relationship to State and local requirements.* Nothing in this subpart shall prevent a State or local agency from imposing more stringent requirements than those contained in this subpart.

(e) *Exclusion for stationary sources in deleted source categories.* The requirements of this subpart do not apply to stationary sources that are within a source category that has been deleted from the source category list pursuant to section 112(c)(9) of the Act.

(f) *Exclusion for research and development activities.* The requirements of this subpart do not apply to research and development activities, as defined in § 63.41.

§ 63.41 Definitions.

Terms used in this subpart that are not defined in this section have the meaning given to them in the Act and in subpart A.

Affected source means the stationary source or group of stationary sources which, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this section.

Affected States are all States:

(1) Whose air quality may be affected and that are contiguous to the State in which a MACT determination is made in accordance with this subpart; or

(2) Whose air quality may be affected and that are within 50 miles of the major source for which a MACT determination is made in accordance with this subpart.

Available information means, for purposes of identifying control technology options for the affected source, information contained in the following information sources as of the date of approval of the MACT determination by the permitting authority:

(1) A relevant proposed regulation, including all supporting information;

(2) Background information documents for a draft or proposed regulation;

(3) Data and information available for the Control Technology Center developed pursuant to section 113 of the Act;

(4) Data and information contained in the Aerometric Informational Retrieval System including information in the MACT data base;

(5) Any additional information that can be expeditiously provided by the Administrator; and

(6) For the purpose of determinations by the permitting authority, any additional information provided by the applicant or others, and any additional information considered available by the permitting authority.

Construct a major source means:

(1) To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any HAP's or 25 tons per year of any combination of HAP, or

(2) To fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, unless the process or production unit satisfies criteria in paragraphs (2) (i) through (vi) of this definition.

(i) All HAP emitted by the process or production unit that would otherwise be controlled under the requirements of this subpart will be controlled by

emission control equipment which was previously installed at the same site as the process or production unit;

(ii) (A) The permitting authority has determined within a period of 5 years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT), lowest achievable emission rate (LAER) under 40 CFR part 51 or 52, toxics—best available control technology (T–BACT), or MACT based on State air toxic rules for the category of pollutants which includes those HAP's to be emitted by the process or production unit; or

(B) The permitting authority determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, T–BACT, or State air toxic rule MACT determination);

(iii) The permitting authority determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

(iv) The permitting authority has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (2)(i), (2)(ii), and (2)(iii) of this definition apply and concerning the continued adequacy of any prior LAER, BATC, T–BACT, or State air toxic rule MACT determination;

(v) If any commenter has asserted that a prior LAER, BACT, T–BACT, or State air toxic rule MACT determination is no longer adequate, the permitting authority has determined that the level of control required by that prior determination remains adequate; and

(vi) Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the permitting authority are applicable requirements under section 504(a) and either have been incorporated into any existing title V permit for the affected facility or will be incorporated into such permit upon issuance.

Control technology means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants through process changes, substitution of materials or other modifications;

(1) Reduce the quantity 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 42 U.S.C. 7412(h); or

(5) Are a combination of paragraphs (1) through (4) of this definition.

Effective date of section 112(g)(2)(B) in a State or local jurisdiction means the effective date specified by the permitting authority at the time the permitting authority adopts a program to implement section 112(g) with respect to construction or reconstruction or major sources of HAP, or June 29, 1998 whichever is earlier.

Electric utility steam generating unit means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

Greenfield suite means a contiguous area under common control that is an undeveloped site.

List of Source Categories means the Source Category List required by section 112(c) of the Act.

Maximum achievable control technology (MACT) emission limitation for new sources means the emission limitation which is not less stringent that the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of deduction in emissions 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 the constructed or reconstructed major source.

Notice of MACT Approval means a document issued by a permitting authority containing all federally enforceable conditions necessary to enforce the application and operation of MACT or other control technologies such that the MACT emission limitation is met.

Permitting authority means the permitting authority as defined in part 70 or 71 of this chapter.

Process or production unit means any collection of structures and/or equipment, that processes assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

Reconstruct a major source means the replacement of components at an existing process or production unit that in and of itself emits or has that potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, whenever:

(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 process or production unit; and

(2) It is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under this subpart.

Research and development activities means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a *de minimis* manner.

Similar source means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology.

§ 63.42 Program requirements governing construction or reconstruction of major sources.

(a) *Adoption of program.* Each permitting authority shall review its existing programs, procedures, and criteria for preconstruction review for conformity to the requirements established by §§ 63.40 through 63.44, shall make any additions and revisions to its existing programs, procedures, and criteria that the permitting authority deems necessary to properly effectuate §§ 63.40 through 63.44, and shall adopt a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP. As part of the adoption by the permitting authority of a program to implement section 112(g) with respect to construction or reconstruction of

major sources of HAP, the chief executive officer of the permitting authority shall certify that the program satisfies all applicable requirements established by §§ 63.40 through 63.44, and shall specify an effective date for that program which is not later than June 29, 1998. Prior to the specified effective date, the permitting authority shall publish a notice stating that the permitting authority has adopted a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP and stating the effective date, and shall provide a written description of the program to the Administrator through the appropriate EPA Regional Office. Nothing in this section shall be construed either:

(1) To require that any owner or operator of a stationary source comply with any requirement adopted by the permitting authority which is not intended to implement section 112(g) with respect to construction or reconstruction of major sources of HAP; or

(2) To preclude the permitting authority from enforcing any requirements not intended to implement section 112(g) with respect to construction or reconstruction of major sources of HAP under any other provision of applicable law.

(b) *Failure to adopt program.* In the event that the permitting authority fails to adopt a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP with an effective date on or before June 29, 1998, and the permitting authority concludes that it is able to make case-by-case MACT determinations which conform to the provisions of § 63.43 in the absence of such a program, the permitting authority may elect to make such determinations. However, in those instances where the permitting authority elects to make case-by-case MACT determinations in the absence of a program to implement section 112(g) with respects to construction or reconstruction of major sources of HAP, no such case-by-case MACT determinations shall take effect until after it has been submitted by the permitting authority in writing to the appropriate EPA Regional Office and the EPA Regional Office has concurred in writing that the case-by-case MACT determination by the permitting authority is in conformity with all requirements established by §§ 63.40 through 63.44. In the event that the permitting authority fails to adopt a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP with an effective date on or before June 29, 1998, and the permitting authority concludes that it is unable to make case-by-case MACT determinations in the absence of such a program, the permitting authority may request that the EPA Regional Office adopt and implement a transitional program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP in the affected State of local jurisdiction while the permitting authority completes development and adoption of a section 112(g) program. Any such transitional section 112(g) program adopted by the EPA Regional Office shall conform to all requirements established by §§ 63.40 through 63.44, and shall remain in effect for no more than 1 year. Continued failure by the permitting authority to adopt a program to implement section 112(g) with respect to construction or reconstruction of major sources of HAP shall be construed as a failure by the permitting authority to adequately administer and enforce its title V permitting program and shall constitute cause by EPA to apply the sanctions and remedies set forth in the Clean Air Act section 502(l).

(c) *Prohibition.* After the effective date of section 112(g)(2)(B) (as defined in § 63.41) in a State or local jurisdiction and the effective date of the title V permit program applicable to that State or local jurisdiction, no person may begin actual construction or reconstruction of a major source of HAP in such State or local jurisdiction unless:

(1) The major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to section 112(d), section 112(h) or section 112(j) in part 63, and the owner and operator has fully complied with all procedures and requirements for preconstruction review established by that standard, including any applicable requirements set forth in subpart A of this part 63; or

(2) The permitting authority has made a final and effective case-by-case determination pursuant to the provisions of § 63.43 such that emissions from the constructed or reconstructed major source will be controlled to a level no less stringent than the maximum achievable control technology emission limitation for new sources.

§ 63.43 Maximum achievable control technology (MACT) determinations for constructed and reconstructed major sources.

(a) *Applicability.* The requirements of this section apply to an owner or operator who constructs or reconstructs a major source of HAP subject to a case-by-case determination of maximum achievable control technology pursuant to § 63.42(c).

(b) *Requirements for constructed and reconstructed major sources.* When a case-by-case determination of MACT is required by § 63.42(c), the owner and operator shall obtain from the permitting authority an approved MACT determination according to one of the review options contained in paragraph (c) of this section.

(c) *Review options.* (1) When the permitting authority requires the owner or operator to obtain, or revise, a permit issued pursuant to title V of the Act before construction or reconstruction of the major source, or when the permitting authority allows the owner or operator at its discretion to obtain or revise such a permit before construction or reconstruction, and the owner or operator elects that option, the owner or operator shall follow the administrative procedures in the program approved under title V of the Act (or in other regulations issued pursuant to title V of the Act, where applicable).

(2) When an owner or operator is not required to obtain or revise a title V permit (or other permit issued pursuant to title V of the Act) before construction or reconstruction, the owner or operator (unless the owner or operator voluntarily follows the process to obtain a title V permit) shall either, at the discretion of the permitting authority:

(i) Apply for and obtain a Notice of MACT Approval according to the procedures outlined in paragraphs (f) through (h) of this section; or

(ii) Apply for a MACT determination under any other administrative procedures for preconstruction review and approval established by the permitting authority for a State or local jurisdiction which provide for public participation in the determination, and ensure that no person may begin actual construction or reconstruction of a major source in that State or local jurisdiction unless the permitting authority determines that the MACT emission limitation for new sources will be met.

(3) When applying for a permit pursuant to title V of the Act, an owner or operator may request approval of case-by-case MACT determinations for alternative operating scenarios. Approval of such determinations satisfies the requirements of section 112(g) of each such scenario.

(4) Regardless of the review process, the MACT emission limitation and requirements established shall be effective as required by paragraph (j) of

this section, consistent with the principles established in paragraph (d) of this section, and supported by the information listed in paragraph (e) of this section. The owner or operator shall comply with the requirements in paragraphs (k) and (l) of this section, and with all applicable requirements in subpart A of this part.

(d) *Principles of MACT determinations.* The following general principles shall govern preparation by the owner or operator of each permit application or other application requiring a case-by-case MACT determination concerning construction or reconstruction of a major source, and all subsequent review of and actions taken concerning such an application by the permitting authority:

(1) The MACT emission limitation or MACT requirements recommended by the applicant and approved by the permitting authority shall not be less stringent than the emission control which is achieved in practice by the best controlled similar source, as determined by the permitting authority.

(2) Based upon available information, as defined in this subpart, the MACT emission limitation and control technology (including any requirements under paragraph (d)(3) of this section) recommended by the applicant and approved by the permitting authority shall achieve the maximum degree of reduction in emissions of HAP which can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.

(3) The applicant may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the permitting authority may approve such a standard if the permitting authority specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in section 112(h)(2) of the Act.

(4) If the Administrator has either proposed a relevant emission standard pursuant to section 112(d) or section 112(h) of the Act or adopted a presumptive MACT determination for the source category which includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.

(e) *Application requirements for a case-by-case MACT determination.* (1) An application for a MACT determination (whether a permit application under title V of the Act, an application for a Notice of MACT Approval, or other document specified by the permitting authority under paragraph (c)(2)(ii) of this section) shall specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the MACT emission limitation or standard as determined according to the principles set forth in paragraph (d) of this section.

(2) In each instance where a constructed or reconstructed major source would require additional control technology or a change in control technology, the application for a MACT determination shall contain the following information:

(i) The name and address (physical location) of the major source to be constructed or reconstructed;

(ii) A brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included;

(iii) The expected commencement date for the construction or reconstruction of the major source;

(iv) The expected completion date for construction or reconstruction of the major source;

(v) the anticipated date of start-up for the constructed or reconstructed major source;

(vi) The HAP emitted by the constructed or reconstructed major source, and the estimated emission rate for each such HAP, to the extent this information is needed by the permitting authority to determine MACT;

(vii) Any federally enforceable emission limitations applicable to the constructed or reconstructed major source;

(viii) The maximum and expected utilization of capacity of the constructed or reconstructed major source, and the associated uncontrolled emission rates for that source, to the extent this information is needed by the permitting authority to determine MACT;

(ix) The controlled emissions for the constructed or reconstructed major source in tons/yr at expected and maximum utilization of capacity, to the extent this information is needed by the permitting authority to determine MACT;

(x) A recommended emission limitation for the constructed or reconstructed major source consistent with the principles set forth in paragraph (d) of this section;

(xi) The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the permitting authority);

(xii) Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology; and

(xiii) Any other relevant information required pursuant to subpart A.

(3) In each instance where the owner or operator contends that a constructed or reconstructed major source will be in compliance, upon startup, with case-by-case MACT under this subpart without a change in control technology, the application for a MACT determination shall contain the following information:

(i) The information described in paragraphs (e)(2)(i) through (e)(2)(x) of this section; and

(ii) Documentation of the control technology in place.

(f) *Administrative procedures for review of the Notice of MACT Approval.* (1) The permitting authority will notify the owner or operator in writing, within 45 days from the date the application is first received, as to whether the application for a MACT determination is complete or whether additional information is required.

(2) The permitting authority will initially approve the recommended MACT emission limitation and other terms set forth in the application, or the permitting authority will notify the owner or operator in writing of its intent to disapprove the application, within 30 calendar days after the owner or operator is notified in writing that the application is complete.

(3) The owner or operator may present, in writing, within 60 calendar days after receipt of notice of the permitting authority's intent to disapprove the application, additional information or arguments pertaining to, or amendments to, the application for consideration by the permitting authority before it decides whether to finally disapprove the application.

(4) The permitting authority will either initially approve or issue a final disapproval of the application within 90 days after it notifies the owner or operator of an intent to disapprove or

within 30 days after the date additional information is received from the owner or operator; whichever is earlier

(5) A final determination by the permitting authority to disapprove any application will be in writing and will specify the grounds on which the disapproval is based. If any application is finally disapproved, the owner or operator may submit a subsequent application concerning construction or reconstruction of the same major source, provided that the subsequent application has been amended in response to the stated grounds for the prior disapproval.

(6) An initial decision to approve an application for a MACT determination will be set forth in the Notice of MACT Approval as described in paragraph (g) of this section.

(g) *Notice of MACT Approval.* (1) The Notice of MACT Approval will contain a MACT emission limitation (or a MACT work practice standard if the permitting authority determines it is not feasible to prescribe or enforce an emission standard) to control the emissions of HAP. The MACT emission limitation or standard will be determined by the permitting authority and will conform to the principles set forth in paragraph (d) of this section.

(2) The Notice of MACT Approval will specify any notification, operation and maintenance, performance testing, monitoring, reporting and record keeping requirements. The Notice of MACT Approval shall include:

(i) In addition to the MACT emission limitation or MACT work practice standard established under this subpart, 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 record keeping requirements that are consistent with the requirements of § 70.6(c) of this chapter;

(iii) In accordance with section 114(a)(3) of the Act, monitoring shall be capable of demonstrating continuous compliance during the applicable reporting period. Such monitoring data shall be of sufficient quality to be used as a basis for enforcing all applicable requirements established under this subpart, including emission limitations;

(iv) A statement requiring the owner or operator to comply with all applicable requirements contained in subpart A of this part;

(3) All provisions contained in the Notice of MACT Approval shall be federally enforceable upon the effective date of issuance of such notice, as provided by paragraph (j) of this section.

(4) The Notice of MACT Approval shall expire if construction or reconstruction has not commenced within 18 months of issuance, unless the permitting authority has granted an extension which shall not exceed an additional 12 months.

(h) *Opportunity for public comment on the Notice of MACT Approval.* (1) The permitting authority will provide opportunity for public comment on the Notice of MACT Approval, including, at a minimum:

(i) 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 initial decision to approve the application;

(ii) A 30-day period for submittal of public comment; and

(iii) A notice by prominent advertisement in the area affected of the location of the source information and initial decision specified in paragraph (h)(1)(i) of this section.

(2) At the discretion of the permitting authority, the Notice of MACT Approval setting forth the initial decision to approve the application may become final automatically at the end of the comment period if no adverse comments are received. If adverse comments are received, the permitting authority shall have 30 days after the end of the comment period to make any necessary revisions in its analysis and decide whether to finally approve the application.

(i) *EPA notification.* The permitting authority shall send a copy of the final Notice of MACT Approval, notice of approval of a title V permit application incorporating a MACT determination (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or other notice of approval issued pursuant to paragraph (c)(2)(ii) 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 affected States.

(j) *Effective date.* The effective date of a MACT determination shall be the date the Notice of MACT Approval becomes final, the date of issuance of a title V permit incorporating a MACT determination (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or the date any other notice of approval issued pursuant to paragraph (c)(2)(ii) of this section becomes final.

(k) *Compliance date.* On and after the date of start-up, a constructed or reconstructed major source which is subject to the requirements of this subpart shall be in compliance with all applicable requirements specified in the MACT determination.

(l) *Compliance with MACT determinations.* (1) An owner or operator of a constructed or reconstructed major source that is subject to a MACT determination shall comply with all requirements in the final Notice of MACT Approval, the title V permit (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or any other final notice of approval issued pursuant to paragraph (c)(2)(ii) of this section, including but not limited to any MACT emission limitation or MACT work practice standard, and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements.

(2) An owner or operator of a constructed or reconstructed major source which has obtained a MACT determination shall be deemed to be in compliance with section 112(g)(2)(B) of the Act only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the final Notice of MACT Approval, the title V permit (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or any other final notice of approval issued pursuant to paragraph (c)(2)(ii) of this section. Any violation of such requirements by the owner or operator shall be deemed by the permitting authority and by EPA to be a violation of the prohibition on construction or reconstruction in section 112(g)(2)(B) for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action under the Act.

(m) *Reporting to the Administrator.* Within 60 days of the issuance of a final Notice of MACT Approval, a title V permit incorporating a MACT determination (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or any other final notice of approval issued pursuant to paragraph (c)(2)(ii) of this section, the permitting authority shall provide a copy of such notice to the Administrator, and shall provide a summary in a compatible electronic

format for inclusion in the MACT data base.

§ 63.44 Requirements for constructed or reconstructed major sources subject to a subsequently promulgated MACT standard or MACT requirement.

(a) If the Administrator promulgates an emission standard under section 112(d) or section 112(h) of the Act or the permitting authority issues a determination under section 112(j) of the Act that is applicable to a stationary source or group of sources which would be deemed to be a constructed or reconstructed major source under this subpart before the date that the owner or operator has obtained a final and legally effective MACT determination under any of the review options available pursuant to § 63.43, the owner or operator of the source(s) shall comply with the promulgated standard or determination rather than any MACT determination under section 112(g) by the permitting authority, 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 section 112(h) of the Act or the permitting authority makes a determination under section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this subpart and has been subject to a prior case-by-case MACT determination pursuant to § 63.43, and the owner and operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, then the permitting authority shall (if the initial title V permit has not yet been issued) issue an initial operating permit which incorporates the emission standard or determination, or shall (if the initial title V permit has been issued) revise the operating permit according to the reopening procedures in 40 CFR part 70 or part 71, whichever is relevant, to incorporate the emission standard or determination.

(1) The EPA may include in the emission standard established under section 112(d) or section 112(h) of the Act a specific compliance date for those sources which have obtained a final and legally effective MACT determination under this subpart and which have submitted the information required by § 63.43 to the EPA before the close of the public comment period for the standard established under section 112(d) of the Act. Such date shall assure that the owner or operator shall comply with the promulgated standard as expeditiously as practicable, but not longer than 8 years after such standard is promulgated. In that event, the permitting authority shall incorporate the applicable compliance date in the title V operating permit.

(2) If no compliance date has been established in the promulgated 112(d) or 112(h) standard or section 112(j) determination, for those sources which have obtained a final and legally effective MACT determination under this subpart, then the permitting authority shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than 8 years after such standard is promulgated or a section 112(j) determination is made.

(c) Notwithstanding the requirements of paragraphs (a) and (b) of this section, if the Administrator promulgates an emission standard under section 112(d) or section 112(h) of the Act or the permitting authority issues a determination under section 112(j) of the Act that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this subpart and which is the subject of a prior case-by-case MACT determination pursuant to § 63.43, and the level of control required by the emission standard issued under section 112(d) or section 112(h) or the determination issued under section 112(j) is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the permitting authority is not required to incorporate any less stringent terms of the promulgated standard in the title V operating permit applicable to such source(s) and may in its discretion consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such an operating permit.

[FR Doc. 96–32236 Filed 12–26–96; 8:45 am]
BILLING CODE 6560–50–P

(Authority: 20 U.S.C. 1145g)

6. In § 86.3 paragraphs (a) and (b) are amended by removing "for IHEs and §§ 86.200 and 86.201 for SEAs and LEAs".

7. Section 86.4 is amended by removing "(a) *IHE drug prevention program certification.*" in paragraph (a) and by removing paragraphs (b) and (c).

8. Section 86.6 is amended by revising the heading; removing ", SEA, or LEA" both times it appears in paragraph (a), both times it appears in paragraph (b)(1), and in paragraph (b)(2); and revising paragraph (b)(3) to read as follows:

§ 86.6 When must an IHE submit a drug prevention program certification?

* * * * *

(b) * * *

(3) An IHE shall submit a request for an extension to the Secretary.

§ 86.7 [Amended]

9. Section 86.7 is amended by removing paragraph (a); redesignating paragraphs (b) and (c) as paragraphs (a) and (b), respectively; by removing "Local educational agency" and "State educational agency" from the list of terms in redesignated paragraph (a); and by removing ", SEA, or LEA" both times it appears in the definition of "Compliance agreement" in redesignated paragraph (b).

Subpart C—[Removed and Reserved]

10. Subpart C is removed and reserved.

Subpart D—[Amended]

11. The heading of Subpart D is amended by removing ", SEA, or LEA".

§ 86.300 [Amended]

12. Section 86.300 is amended by removing ", SEA, or LEA" in the heading, the undesignated introductory text, and paragraph (b) introductory text; and by removing "or by an SEA or LEA under §§ 86.200(c) and 86.201(a)" in paragraph (b)(2).

13. The authority citation following each section of the regulations is revised to read as follows:

(Authority: 20 U.S.C. 1145g)

[FR Doc. 96–31874 Filed 12–16–96; 8:45 am]

BILLING CODE 4000–01–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD–FRL–5601–7]

RIN 2060–AE02
RIN 2060–AD98

National Emission Standards for Hazardous Air Pollutants for Source Categories: Aerospace Manufacturing and Rework Facilities and Shipbuilding and Ship Repair (Surface Coating) Operations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: This action corrects the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Aerospace Manufacturing and Rework Facilities and Shipbuilding and Ship Repair (Surface Coating) Operations promulgated in the Federal Register on September 1, 1995 (60 FR 45948) and December 15, 1995 (60 FR 64330), respectively. This action also announces that the Information Collection Requirements (ICR) contained in the NESHAP for Shipbuilding and Ship Repair (Surface Coating) Operations have been approved by the Office of Management and Budget (OMB).

EFFECTIVE DATE: December 17, 1996.

FOR FURTHER INFORMATION CONTACT: For information on the aerospace manufacturing and rework facilities standard contact Mr. James Szykman at (919) 541–2452, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. For information on the shipbuilding and ship repair (surface coating) standard contact Dr. Mohamed Serageldin at (919) 541–2379, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The Administrator is invoking the "good cause" exception of the Administrative Procedures Act, 5 U.S.C. 553(b)(3)(B), which allows an agency to promulgate rules without notice or the opportunity for comment when it finds that such procedures would be "impracticable, unnecessary, or contrary to the public interest." Following notice and comment procedures for this rule would be unnecessary because the changes effected here are only minor corrections that do not changes the intended effect of the original rule. The Administrator is also invoking the good cause provision to make this rule immediately effective upon its date of publication.

I. Shipbuilding and Ship Repair (Surface Coating)

The NESHAP for shipbuilding and ship repair (surface coating) operations was promulgated in the Federal Register on December 15, 1995 (60 FR 64330) as subpart II of 40 CFR Part 63.

The final rule contained (1) errors in numbering the incorporations by reference which were added to § 63.14; (2) improper punctuation in § 63.788(b)(3)(ii)(B); (3) a footnote to Table 2 of subpart II which incorrectly identified those coating categories that were not given cold-weather allowances; and (4) inappropriate use of the term "unaffected" major sources in § 63.788(b)(1). This action corrects these portions of the final rule. In addition, it amends the table in 40 CFR Part 9 of ICR control numbers issued by OMB for approved collections of information in certain EPA regulations. At the time of publication of the final rule, the EPA did not have an approved ICR control number to add to the table. The OMB subsequently approved the ICR for the final NESHAP, and the approved ICR control number (2060–0330) is being added to 40 CFR Part 9.

II. Aerospace Manufacturing and Rework Facilities

The NESHAP for aerospace manufacturing and rework facilities was promulgated in the Federal Register on September 1, 1995 (60 FR 45948). A document of correction to the final rule was published in the Federal Register on February 9, 1996 (61 FR 4902) which corrected the deadline for existing sources to submit an initial notification to the Administrator.

The amendatory language for this final rule correction inadvertently referenced paragraph (a)(1) instead of referencing paragraph (a)(2) of Section 63.753. The amendatory language should have read, "Section 63.753 is amended by adding a new sentence to the beginning of paragraph (a)(2) as follows:" This document includes the applicable language to make this correction.

Administrative Requirements

I. Paperwork Reduction Act

The information collection requirements of the previously promulgated NESHAP were submitted to and approved by the Office of Management and Budget (OMB). A copy of the Information Collection Request (ICR) documents (OMB number 1414.02 and 1687.01, for shipbuilding and

established administrative and legislative procedures in the State.

* * * * *

[FR Doc. 96–31750 Filed 12–16–96; 8:45 am]
BILLING CODE 4310–05–M

DEPARTMENT OF EDUCATION

34 CFR Part 86

RIN 1810–AA83

Drug and Alcohol Abuse Prevention

AGENCY: Department of Education.
ACTION: Final regulations.

SUMMARY: The Secretary amends the regulations on Drug-Free Schools and Campuses to incorporate changes made by the Improving America's Schools Act of 1994. As a result of that legislation, these regulations no longer apply to State educational agencies (SEAs) and local educational agencies (LEAs). The Secretary amends the regulations to conform them to these revised statutory provisions.

EFFECTIVE DATE: These regulations take effect January 16, 1997.

FOR FURTHER INFORMATION CONTACT: William Wooten, U.S. Department of Education, Office of Elementary and Secondary Education, Room 4000, Portals Bldg., 600 Independence Avenue, SW, Washington, DC 20202–6123. Telephone: (202) 260–1922. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8330 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Provisions in 20 U.S.C. 3224a relating to certification of drug and alcohol abuse prevention programs by State and local educational agencies were eliminated by amendments to the Elementary and Secondary Education Act of 1965 contained in the Improving America's Schools Act of 1994, Pub. L. 103–382, enacted October 20, 1994. As a result of this statutory amendment, which became effective July 1, 1995, State and local educational agencies are no longer subject to the certification requirements contained in 34 CFR part 86.

The regulations in part 86 implemented the Drug-Free Schools and Communities Act requirement for a one-time certification by all SEAs and LEAs that they had adopted and implemented drug prevention policies and programs for their students and employees. Virtually all SEAs and LEAs had submitted the required certification by the time the statute was reauthorized, and the certification requirement was no longer needed. Furthermore, by the time the statute was reauthorized as the Safe and Drug-Free Schools and Communities Act, LEAs were developing comprehensive, community-wide prevention strategies in addition to school-based programs, and were beginning to integrate drug prevention with activities designed to prevent other significant problems such as youth violence. Consequently, the Safe and Drug-Free Schools and Communities Act has eliminated the one-time certification requirement and replaced it with the requirement that LEAs adopt and carry out comprehensive drug and violence prevention programs designed for all students and employees. In keeping with this legislative change, the regulations in part 86 pertaining to SEAs and LEAs are no longer necessary and are being eliminated.

The regulations are amended in accordance with the President's Regulatory Reinvention Initiative in order to reflect removal of the statutory requirement and relieve a burden imposed on State and local educational agencies. Part 86 is still applicable to institutions of higher education.

Waiver of Proposed Rulemaking

In accordance with the Administrative Procedure Act (5 U.S.C. 553), it is the practice of the Secretary to offer interested parties the opportunity to comment on proposed regulations. However, these regulations merely reflect statutory changes and do not establish substantive policy. Therefore, the Secretary has determined, pursuant to 5 U.S.C. 553(b)(B), that public comment is unnecessary and contrary to the public interest.

Paperwork Reduction Act of 1980

These regulations have been examined under the Paperwork Reduction Act of 1980 and have been found to contain no information collection requirements.

Assessment of Educational Impact

Based on its own review, the Department has determined that the regulations in this document do not require transmission of information that is being gathered by or is available from any other agency or authority of the United States.

List of Subjects in 34 CFR Part 86

Drug abuse, Elementary and secondary education, Grant programs—education, Postsecondary education.

Dated: December 10, 1996.
Richard W. Riley,
Secretary of Education.

(Catalog of Federal Domestic Assistance numbers do not apply)

The Secretary amends Title 34 of the Code of Federal Regulations by amending part 86 as follows:

Authority: 20 U.S.C. 1145g, unless otherwise noted.

PART 86—DRUG AND ALCOHOL ABUSE PREVENTION

1. The authority citation for part 86 is revised to read as follows:

2. The heading of part 86 is revised to read as set forth above.

3. Part 86 is amended by removing ", SEA, or LEA" in the following places:

(a) § 86.2(a) and (b);
(b) § 86.3 heading, (a), and (b);
(c) § 86.5 heading, (a), and (b);
(d) § 86.301 heading, (a) introductory text (twice), (a)(2), (b) introductory text (twice), (b)(1), and (b)(2)(i)(B);
(e) § 86.302(a) and (b);
(f) § 86.303(a) introductory text, (b) (twice), (c), (d), and (e) (twice);
(g) § 86.304(a) introductory text, (a)(1), (a)(2)(i), (a)(3) introductory text (twice), (a)(3)(ii), (b) introductory text, (b)(1), and (b)(2) introductory text;
(h) § 86.400(a);
(i) § 86.401(d)(1) and (2);
(j) § 86.402(a);
(k) § 86.407(a) and (d);
(l) § 86.408(a)(1)(ii);
(m) § 86.409(c) introductory text and (e)(2);
(n) § 86.410(a)(1) introductory text and (d); and
(o) § 86.411(a)(1), (a)(2), and (b).

4. Part 86 is amended by removing ", SEA's, or LEA's " in the following places:

(a) § 86.301(b)(2)(i)(A); and
(b) § 86.304 heading, (a) introductory text, and (a)(3)(ii).

5. Section 86.1 is revised to read as follows:

§ 86.1 What is the purpose of the Drug and Alcohol Abuse Prevention regulations?

The purpose of the Drug and Alcohol Abuse Prevention regulations is to implement section 22 of the Drug-Free Schools and Communities Act Amendments of 1989, which added section 1213 to the Higher Education Act. These amendments require that, as a condition of receiving funds or any other form of financial assistance under any Federal program, an institution of higher education (IHE) must certify that it has adopted and implemented a drug prevention program as described in this part.

aerospace, respectively) 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 should have no impact on the information collection burden estimates made previously.

II. Executive Order 12866 Review

Under Executive Order 12866, the EPA must determine whether the proposed regulatory action is "not 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 affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in 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 obligations of recipients thereof; or

(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.

The Shipbuilding NESHAP promulgated on December 15, 1995 was determined to not be a "significant regulatory action" under Executive Order 12866. The Aerospace NESHAP promulgated on September 1, 1995 has been determined to be a "significant regulatory action" under Executive Order 12866. The amendments issued today do not add any additional control requirements or costs. Therefore, this regulatory action does not affect the previous decisions and is not considered to be significant.

III. Submission to Congress and the General Accounting Office

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

IV. Unfunded Mandates

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

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector.

Therefore, the requirements of the Unfunded Mandates Reform Act do not apply to this action.

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: August 22, 1996.

Mary D. Nichols,

Assistant Administrator for Air and Radiation.

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, 1318, 1321, 1326, 1330, 1342, 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 the new entries 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[3]	
* * * * *	
63.5(d)	2060–0330
63.787 (a)–(b)	2060–0330
63.788 (a)–(c)	2060–0330
* * * * *	

[3] The ICRs referenced in this section of the Table encompass the applicable general provisions contained in 40 CFR Part 63, subpart A, which are not independent information collection requirements.

PART 63—[AMENDED]

3. The authority citation for Part 63 continues to read as follows:

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

4. Section 63.14 is amended by redesignating paragraphs (b)(4) through (b)(14) added on December 15, 1995 at 60 FR 64336 as paragraphs (b)(8) through (b)(18).

Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities

5. Section 63.753 is amended by adding a new sentence to the beginning of paragraph (a)(2) to read as follows:

§ 63.753 Reporting requirements.

(a)(1) * * *

(2) The initial notification for existing sources, required in § 63.9(b)(2) shall be submitted no later than September 1, 1997. * * *

* * * * *

Subpart II—National Emission Standards for Shipbuilding and Ship Repair (Surface Coating) Operations

6. Section 63.788 is amended to revise the first sentence of paragraph (b)(1) as follows:

* * * * *

§ 63.788 Recordkeeping and Reporting Requirements.

* * * * *

(b) * * *

(1) Each owner or operator of a major source shipbuilding or ship repair facility having surface coating operations with less than 1000 liters (L) (264 gallons (gal)) annual marine

coating usage shall record the total volume of coating applied at the source to ships. * * *

* * * * *

7. Table 2 to Subpart II of Part 63, footnote (e) is revised as follows:

* * * * *

Table 2 to Subpart II of Part 63.—Volatile Organic HAP (VOHAP) Limits for Marine Coatings

* * * * *

These limits apply during cold-weather time periods, as defined in § 63.782. Cold-weather allowances are not given to coatings in categories that permit less than 40 percent volume solids (nonvolatiles). Such coatings are subject to the same limits regardless of weather conditions.

* * * * *

[FR Doc. 96–31344 Filed 12–16–96; 8:45 am]
BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MM Docket No. 96–121; RM–8806 and RM–8820]

Radio Broadcasting Services; Forestville and Algoma, WI

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: Action in this proceeding allots Channel 271A to Forestville, Wisconsin, as that community's first local service in response to a petition filed by Lyle Robert Evans d/b/a The Radio Company. *See* 61 FR 30585, June 17, 1996. The coordinates for Channel 271A at Forestville are 44–45–54 and 87–28–48. There is a site restriction 8.5 kilometers (5.3 miles) north of the community. In response to the counterproposal filed by WTRW, Incorporated, we shall allot Channel 281A to Algoma, Wisconsin, without a site restriction. The coordinates for Channel 281A are 44–36–18 and 87–26–12. Since Algoma and Forestville are both located within 320 kilometers (200 miles) of the U.S.-Canadian border, concurrence of the Canadian government has been obtained for both channels. With this action, this proceeding is terminated.

DATES: Effective January 27, 1997. The window period for filing applications for Channel 2271A at Forestville, Wisconsin, and Channel 281A at Algoma, Wisconsin, will open on January 27, 1997, and close on February 27, 1997.

FOR FURTHER INFORMATION CONTACT: Kathleen Scheuerle, Mass Media Bureau, (202) 418–2180.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order, MM Docket No. 96–121, adopted December 6, 1996, and released December 13, 1996. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center (Room 239), 1919 M Street, NW, Washington, D.C. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 2100 M Street, N.W., Suite 140, Washington, D.C. 20037, (202) 857–3800.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Part 73 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 73—[AMENDED]

1. The authority citation for Part 73 continues to read as follows:

Authority: Secs. 303, 48 Stat., as amended, 1082; 47 U.S.C. 154, as amended.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Wisconsin, is amended by adding Channel 281A at Algoma and by adding Forestville, Channel 271A.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 96–31937 Filed 12–16–96; 8:45 am]
BILLING CODE 6712–01–P

47 CFR Part 73

[MM Docket No. 96–37; RM–8765]

Radio Broadcasting Services; Sylvan Beach, NY

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission, at the request of Michael S. Celenza, allots Channel 262A to Sylvan Beach, NY, as the community's first local aural service. *See* 61 FR 10977, March 18, 1996. Channel 262A can be allotted to Sylvan Beach in compliance with the Commission's minimum distance separation requirements without the imposition of a site restriction, at coordinates 43–11–47 NL; 75–43–51 WL. Canadian concurrence in the allotment has been received since Sylvan Beach is located within 320 kilometers (200 miles) of the U.S.-Canadian border. With this action, this proceeding is terminated.

DATES: Effective January 17, 1997. The window period for filing applications will open on January 17, 1997, and close on February 18, 1997.

FOR FURTHER INFORMATION CONTACT: Leslie K. Shapiro, Mass Media Bureau, (202) 418–2180.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Report and Order, MM Docket No. 96–37, adopted November 22, 1996, and released November 29, 1996. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (Room 239), 1919 M Street, NW, Washington, D.C. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3800, 2100 M Street, N.W., Suite 140, Washington, D.C. 20037.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Part 73 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 73—[AMENDED]

1. The authority citation for Part 73 continues to read as follows:

Authority: Secs. 303, 48 Stat., as amended, 1082; 47 U.S.C. 154, as amended.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under New York, is amended by adding Sylvan Beach, Channel 262A.

Federal Communications Commission

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 96–31936 Filed 12–16–96; 8:45 am]
BILLING CODE 6712–01–P

47 CFR Part 73

[MM Docket No. 95–175; RM–8707]

Radio Broadcasting Services; Ada, Newcastle and Watonga, Oklahoma

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission, at the request of Tyler Broadcasting Corporation, reallots Channel 227C1

(c) *Effective date.* These regulations become effective on December 14, 1996, from 5 p.m. EST and terminate at 10 p.m. that day.

Dated: November 15, 1996.

J.D. Hull,

Captain, U.S. Coast Guard, Acting Commander, Seventh Coast Guard District.

[FR Doc. 96–31576 Filed 12–11–96; 8:45 am]

BILLING CODE 4910–14–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD-FRL–5664–6] NESHAPS

RIN 2060–AE04

National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule; extension of compliance dates.

SUMMARY: This action amends the national emission standards for hazardous air pollutants (NESHAP) for secondary lead smelting by extending by six months the compliance date of the rule and the dates on which existing smelters must submit standard operating procedures (SOP) manuals. This action also sets the deadline for requests for extension of compliance at June 23, 1997. The current rule requires existing smelters to submit SOP manuals for baghouses and fugitive dust control by December 23, 1996, and to achieve compliance with the rule by June 23, 1997. The EPA is currently planning to revise portions of the final rule to address comments received in petitions for reconsideration. These revisions, which are scheduled to be published in February 1997, will materially effect the content of the SOP manuals and the air pollution controls needed to comply with the rule. Today's action is being taken to allow affected facilities adequate time to incorporate the revised requirements into their SOP manuals and to have sufficient time to comply with the emission standards in the rule. This revised compliance date remains within the three year period for compliance allowed by section 112 (i)(3)(A) of the Clean Air Act.

DATE(S): *Effective date:* This final action will be effective on December 12, 1996 unless EPA receives adverse public comment on this document by January 13, 1997. In the event that EPA receives adverse public comment, the Agency will withdraw this rule and issue a proposal to extend the effective date to comply with the rule and to submit SOP manuals.

Judicial Review. Under section 307(b)(1) of the Act, judicial review of a 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 final 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: *Docket.* Docket No. A–92–43, containing information considered by the EPA in development of the promulgated standards, is available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday except for Federal holidays, at the following address: U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street, SW, Washington, DC 20460; telephone (202) 260–7548. The docket is located at the above address in Room M–1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. Kevin Cavender, Metals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone (919) 541–2364.

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

I. Background
II. Need for this Action
III. Rationale for Direct Final Rule and Immediate Effective Date
IV. Administrative
A. *Executive Order 12866*
B. *Unfunded Mandates Act*
C. *Paperwork Reduction Act*
D. *Regulatory Flexibility Act*
E. *Submission to Congress and the General Accounting Office*

I. Background

The NESHAP for secondary lead smelting (40 CFR part 63, subpart X) was proposed in the **Federal Register** on June 9, 1994 (59 FR 29750). The EPA received 31 letters commenting on the proposed rule and proposed area source listing. After considering fully the comments received, the EPA promulgated this NESHAP in the **Federal Register** on June 23, 1995 (60 FR 32587).

The final rule establishes emission limits for lead, as a surrogate for all metallic Hazardous Air Pollutants (HAP), from smelting furnaces, refining kettles, agglomerating furnaces, dryers, and fugitive dust sources at secondary lead smelters. The final rule also establishes emission limits for Total Hydrocarbons (THC), as a surrogate for HAP organics, from smelting furnaces. Work practice standards (ie. minimum hood face velocities, and building enclosures) are specified for the capture and control of process fugitive sources including furnace charging equipment and tapping locations, refining kettles, driers, and agglomerating furnace vents and taps. The final rule also requires smelters to develop site specific SOP manuals for fugitive dust control and baghouse operation and maintenance. Minimum SOP requirements are specified in the rule.

The final rule requires existing facilities to submit SOP manuals for baghouses and fugitive dust control within 18 months of publication (that is, by December 23, 1996), and to achieve compliance with the rule within 2 years of publication (namely, by June 23, 1997). The June, 1997 ultimate compliance date is one year earlier than the maximum amount of time—3 years—allowed for compliance with MACT standards. See CAA section 112(i)(3)(A).

The EPA received three petitions for reconsideration pursuant to section 307(d)(7)(B) of the Act from two secondary lead owners/operators, and the Association of Battery Recyclers. The petitioners objected to the introduction of bag leak detection (§ 63.548(e)) and the minimum baghouse SOP requirements (§ 63.548(c)) stating they were not logical extensions of the proposal. In addition, the petitioners requested that EPA reconsider requirements in the final rule dealing with the THC limit for collocated blast and reverberatory furnaces (§ 64.543(c)).

The EPA has determined that several of the objections contained in the petitions are properly founded and is considering amending the rule accordingly, and is planning to publish amendments to the NESHAP in February 1997.

II. Need for This Action

As stated above, the current rule requires existing owners and operators of secondary lead smelters to submit the required SOP manuals for baghouses and fugitive dust control by December 23, 1996, and to achieve compliance with the rule no later than June 23, 1997. In addition, 40 CFR 63.6(i) sets the deadline for requests for extension of compliance to one year prior to the

SUPPLEMENTARY INFORMATION: In accordance with 5 U.S.C. 553, a notice of proposed rulemaking has not been published for these regulations. Following normal rulemaking procedures would have been impracticable as there was insufficient time to publish a proposed rule in advance of the event or to provide for a delayed effective date. The information regarding this event was received less than three weeks before the date of the event leaving insufficient time to follow normal rulemaking procedures.

Discussion of Regulations

Special Local Regulations are being established for the Continental Airlines Boat Parade. The Continental Airlines Boat Parade is a nighttime parade with approximately 110 pleasure and fishing boats ranging in length from 20 feet to 200 feet decorated with holiday lights. There will be approximately 1000 spectator craft. This concentration of spectator and event participating vessels associated with the Continental Airlines Boat Parade poses a safety concern which is addressed in these regulations. Therefore, these regulations are necessary for the safety of life on navigable waters during the boat parade. The event will be held on December 14, 1996, from 5:20 p.m. EST until 9:30 p.m. EST.

The parade will form in the staging area at the Port Everglades turning basin then proceed north up the Intracoastal Waterway (ICW) to Lake Santa Barbara where the parade will disband. These regulations establish a moving regulated area of 1000 feet ahead and 1000 feet astern of the string of parade vessels. The regulated area also includes an area 50 feet east and west along the north-south axis of the regulated area as the participating vessels navigate north in the Intercoastal Waterway (ICW). The regulated area also includes the assembly area which is that portion of the Intracoastal Waterway extending from the 17th Street Causeway to the Dania Cut-Off Canal. The regulations also establish no anchorage areas in the vicinity of the viewing area which extends from the New River Sound Day Beacon 7 (LLNR42620) to New River Sound Day Beacon 11 (LLNR42630) to the east of the ICW.

Regulatory Evaluation

This regulation is not a significant regulatory action under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that order. It has been exempted from review by the Office of Management and Budget under the order. It is not significant under the regulatory policies and procedures of the Department of Transportation (DOT) (44 FR 11040; February 26, 1979). The Coast Guard expects the economic impact of this rule to be so minimal that a full Regulatory Evaluation under paragraph 10e of the regulatory policies and procedures of DOT is unnecessary, because entry into the regulated area is prohibited for only 5 hours on the day of the event.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard must consider whether this rulemaking will have a significant 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).

The Coast Guard certifies under 5 U.S.C. 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) that this final rule will not have a significant economic impact on a substantial number of small entities, because the regulated area will be in effect for only 5 hours on the day of the event.

Federalism

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

Environmental Assessment

The Coast Guard has considered the environmental impact of this action consistent with Section 2.B.2. of Commandant Instruction M16475.1B, (as revised by 59 FR 38654, July 29, 1994). In accordance with that instruction section 2.B.4.g., this action has been environmentally assessed (EA completed), and the Coast Guard has concluded that it will not significantly affect the quality of the human environment. An environmental assessment and finding of no significant impact have been prepared and are available for inspection and copying from LTJG J. Delgado, Coast Guard Group Miami, Florida, (305) 535–4461. As a condition to the permit, the applicant is required to educate the operators of spectator craft and parade participants regarding the possible presence of manatees and the appropriate precautions to take if the animals are sighted.

List of Subjects in 33 CFR Part 100

Marine safety, Navigation (water), Reporting and recordkeeping requirements, Waterways.

Temporary Regulations

For reasons set out in the preamble, the Coast Guard amends part 100 of Title 33, Code of Federal Regulations, as follows:

PART 100—[AMENDED]

1. The authority citation for part 100 continues to read as follows:

Authority: 33 U.S.C. 1233, 49 CFR 1.46 and 33 CFR 100.35.

2. A temporary § 100.35T–07–067 is added to read as follows:

§ 100.35T–07–067 Continental Airlines Boat Parade; City of Fort Lauderdale, FL.

(a) *Regulated area.* A moving regulated area is established surrounding the parade participants as they transit the parade route. Nonparticipating vessels will be prohibited from entering an area encompassing 50 feet on either side of the north-south axis of the parade. The axis extends from 1000 feet ahead of the lead vessel in the parade to 1000 feet astern of the last participating vessel in the parade as the parade transits north in the Intracoastal Waterway (ICW) from Port Everglades turning basin, the staging area of the parade, to Lake Santa Barbara, where the parade will disband. A regulated area is established in the viewing area which is located to the east of the Intracoastal Waterway from New River Sound Day Beacon 7 (LLNR 42620) to the New River Sound Day Beacon 11 (LLNR 42630). A regulated area is established in the assembly area which is that portion of the Intracoastal Waterway extending from the 17th Street Causeway to the Dania Cut-Off Canal.

(b) *Special local regulations.* (1) Entry into the moving regulated area is prohibited unless authorized by the Patrol Commander. Anchoring in the viewing area is prohibited unless authorized by the Patrol Commander. Entry or anchoring in the staging area is prohibited, unless authorized by the Patrol Commander. After the passage of the parade participants, all vessels may resume normal operations.

(2) A succession of not fewer than 5 short whistle or horn blasts from a patrol vessel will be the signal for any non-participating vessel to stop immediately. The display of an orange distress smoke signal from a patrol vessel will be the signal for any and all vessels to stop immediately.

compliance date, in this case June 23, 1996.

Section 112(i)(3)(A) of the Act instructs the EPA to "provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard." At the time of publication of the final rule, EPA believed that a 2 year period would allow facilities adequate time to achieve compliance with the rule, and that an 18 month period would be adequate to prepare and submit the requisite SOP manuals.

As stated, the EPA is currently planning to revise portions of the rule to address comments received in the petitions for reconsideration. These revisions, which are scheduled to be published in February 1997, will materially effect the content of the SOP manuals and the air pollution controls needed to obtain compliance.

Currently, owners and operators will not be able to prepare their SOPs on time, or will have to revise their SOPs once the amendments are published. They will also have less than 4 months to purchase and install control equipment necessary to comply with the final rule. Also, with out this extension, the owners and operators will not have an opportunity to prepare and submit a request for extension of compliance if needed after the amendments are published. The EPA does not believe that this situation is reasonable. Today's action extends the compliance date to December 23, 1997—30 months after the original effective date and so within the time period for compliance allowed by section 112(i)(3)(A)—and extends the SOP submittal date to June 23, 1997, two years after the effective date and again within a permissible compliance period under the Act. This action also sets the submittal date for requests for extension of compliance at June 23, 1997 as provided for under 40 CFR 63.6(i)(3)(B). The EPA believes that these extended dates provide a reasonable amount of time to comply with the rule and that these extended dates will not compromise the rule's ultimate effectiveness, and indeed, will promote sound implementation of the rule by allowing sufficient time for compliance.

III. Rationale for Direct Final Rule and Immediate Effective Date

The EPA is promulgating this extension of the rule's compliance dates as a direct final rule (and therefore without prior notice and opportunity for public comment) because EPA views this as a noncontroversial action which appropriately corrects the rule's compliance dates after EPA received information which will require some changes to the rule and therefore will alter the provisions with which secondary lead smelters must comply. In fact, most of the secondary lead smelting industry has submitted comment to EPA on this issue through the petition for reconsideration process. However, should EPA receive any comment objecting to this notice, the Agency will withdraw this action and issue a proposal to extend the compliance dates (should EPA still consider that action to be appropriate). Objections may be addressed to Mr. Kevin Cavender, Metals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

In addition, pursuant to section 553(d) of the Administrative Procedure Act (5 U.S.C. 553(d)), EPA is finding that this amendment relieves a regulatory restriction and therefore can be made effective less than 30 days from its publication date.

IV. Administrative

A. Executive Order 12866

The Agency must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the E.O. 12866, (58 FR 51735, October 4, 1993). The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, 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 obligations of recipients thereof; or

(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.

It has been determined that this amendment to the final rule is not a "significant regulatory action" under the terms of the Executive Order and is therefore not subject to OMB review.

B. Unfunded Mandates Act

Section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act") requires that the Agency prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditure by State, local, and tribal governments, in aggregate, or by the private sector, of $100 million or more in any 1 year. Section 203 requires the Agency to establish a plan for obtaining input from and informing, educating, and advising any small governments that may be significantly or uniquely affected by the rule.

Under section 205 of the Unfunded Mandates Act, the Agency must identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which a budgetary impact statement must be prepared. The Agency must select from those alternatives the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule, unless the Agency explains why this alternative is not selected or the selection of this alternative is inconsistent with law.

Because this final rule is estimated to result in the expenditure by State, local, and tribal governments or the private sector of significantly less than $100 million in any 1 year, the Agency has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. Because small governments will not be significantly or uniquely affected by this rule, the Agency is not required to develop a plan with regard to small governments.

C. Paperwork Reduction Act

Under the Paperwork Reduction Act, 44 U.S.C 3501 et seq., EPA must consider the paperwork burden imposed by any information collection request in a proposed or final rule. This amendment to the rule will not impose any new information collection requirements.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (or RFA, Pub. L. 96–354, September 19, 1980) requires Federal agencies to give special consideration to the impact of regulation on small businesses. The RFA specifies that a regulatory flexibility analysis must be prepared if a screening analysis indicates a regulation will have a significant economic impact on a substantial number of small entities. This amendment will not result in increased economic impacts to small entities.

E. Submission to Congress and the General Accounting Office

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

List of Subjects in 40 CFR Part 63

Environmental protection, Compliance dates, Reporting and recordkeeping requirements, Secondary lead smelters.

Dated: December 9, 1996.

Carol M. Browner,

The Administrator.

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations 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. Section 63.546 is amended by revising paragraph (a) to read as follows:

§ 63.546 Compliance dates.

(a) Each owner or operator of an existing secondary lead smelter shall achieve compliance with the requirements of this subpart no later than December 23, 1997. Existing sources wishing to apply for an extension of compliance pursuant to § 63.6(i) of this part must do so no later than June 23, 1997.

* * * * *

3. Section 63.549 is amended by revising paragraph (b) to read as follows:

§ 63.549 Notification requirements.

* * * * *

(b) The owner or operator of a secondary lead smelter shall submit the fugitive dust control standard operating procedures manual required under § 63.545(a) and the standard operating procedures manual for baghouses required under § 63.548(a) to the Administrator or delegated authority along with a notification that the smelter is seeking review and approval of these plans and procedures. Owners or operators of existing secondary lead smelters shall submit this notification no later than June 23, 1997. The owner or operator of a secondary lead smelter that commences construction or reconstruction after June 9, 1994, shall submit this notification no later than 180 days before startup of the constructed or reconstructed secondary lead smelter, but no sooner than June 23, 1995.

[FR Doc. 96–31704 Filed 12–11–96; 8:45 am]
BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 61

[CC Docket No. 93–129; CC Docket No. 86–10; FCC 96–392]

800 Data Base Access Tariffs and the 800 Service Management System Tariff; Provision of 800 Services

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: On September 26, 1996, the Commission adopted a Report and Order that concludes and terminates an investigation into tariffs filed by local exchange carriers (LECs) in March 1993, for 800 data base services. This Order requires LECs that filed tariffs for 800 data base services in accordance with the Commission's rules in CC Docket No. 86–10, to recalculate their price cap indexes and resubmit their tariffs. In the Order, we examine terms and conditions of the LECs' tariffs for compliance with various Commission Orders concerning 800 data base service. We also determine the reasonableness of the price cap LECs' restructure of their 800 data base service rates, the reasonableness of certain exogenous costs claimed by those LECs and the allocation of those exogenous costs between the interstate and intrastate jurisdictions.

With regard to the Bell Operating Companies' (BOC) central data base service tariff, we determine the reasonableness of a number of tariff provisions as well as the reasonableness of the costs and cost allocations underlying the BOCs' rates for that service. Finally, in this Order we deny an application for review filed by several LECs seeking reversal of the cost disclosure requirements imposed by the Bureau in this investigation and we grant GTE's revised petition for waiver of the cost disclosure requirements. By issuing this Order, the Commission intended to bring tariffs filed by LECs and BOCs into compliance with the requirements of the Communications Act of 1934, as amended, the Commission's rules and the policies adopted for 800 data base services in CC Docket 86–10.

EFFECTIVE DATE: January 13, 1997.

FOR FURTHER INFORMATION CONTACT: John Scott, Competitive Pricing Division, Common Carrier Bureau, (202) 418–1528.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order adopted September 26, 1996, and released October 28, 1996. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Public Reference Room (Room 230), 1919 M St., NW, Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Suite 140, 2100 M Street, NW., Washington, DC 20037.

Summary of Report and Order

In CC Docket 86–10, the Commission required all LECs to convert simultaneously on May 1, 1993, to a new "data base" system of 800 access. LECs decided to implement this data base system by linking their signalling system 7 (SS7) networks with data bases containing customer information associated with each 800 number, including the inter-exchange carrier (IXC) selected by the 800 subscriber, to deliver calls to that 800 number. There are two types of 800 data base access services that IXCs may purchase from the LECs: "basic" query service and "vertical features." The LECs were required to tariff the 800 data base basic query service, which is the access service used to route 800 calls to the customer's chosen IXC. Other 800 data base service capabilities, such as sophisticated routing, were classified as "vertical features" that the LECs also had to tariff. The LECs filed 800 data base access service tariffs in March 1993. The Common Carrier Bureau suspended these tariffs for one day, imposed an accounting order, and initiated this investigation.

Terms and Conditions of the LEC 800 Data Base Tariffs

1. Area of Service (AOS) Routing in Basic Query Service

(a). Although we encourage LECs to offer more refined routing, we decline to expand our requirement beyond LATA-wide routing.

(b). We conclude that BellSouth does not clearly state in its tariff that it offer AOS routing at the LATA level. We therefore require BellSouth to file tariff

Federal Register
Thursday
December 5, 1996

Part II

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5658–5]

RIN 2060–AC19

National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Rule Clarifications

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; amendments.

SUMMARY: On April 22, 1994 and June 6, 1994, the EPA issued the National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks. This rule is commonly known as the Hazardous Organic NESHAP or the HON. In June 1994, petitions for review of the April 1994 rule were filed in the U.S. Court of Appeals for the District of Columbia Circuit. The petitioners raised over 75 technical issues and concerns with drafting clarity of the rule. On August 26, 1996, the EPA proposed correcting amendments to the rule to address the petitioners' issues. Among the proposed amendments were proposed revisions that would eliminate the need for filing some implementation plans that would otherwise be due December 31, 1996, and would allow the filing of requests for compliance extensions up to four months before the April 1997 compliance date. Today's action takes final action on those proposed amendments.

These amendments to the rule will not change the basic control requirements of the rule or the level of health protection it provides. The rule requires new and existing major sources to control emissions of hazardous air pollutants (HAP) to the level reflecting application of the maximum achievable control technology. Final action on the rest of the amendments proposed on August 26, 1996 will be taken in a separate **Federal Register** document at a later date.

EFFECTIVE DATE: December 5, 1996.

FOR FURTHER INFORMATION CONTACT: For general questions, contact Dr. Janet S. Meyer; Coatings and Consumer Products Group; (919) 541–5254 or Mary Tom Kissell; Waste and Chemical Processes Group; (919) 541–4516. The mailing address for the contacts is Emission Standards Division (MD–13); U.S. Environmental Protection Agency; Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

I. Regulated Entities and Background Information

A. Regulated Entities

The regulated category and entities affected by this action include:

Category	Examples of regulated entities
Industry	Synthetic organic chemical manufacturing industry (SOCMI) units, e.g., producers of benzene, toluene, or any other chemical listed in Table 1 of 40 CFR Part 63, subpart F.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be interested in the revisions to the regulation affected by this action. Entities potentially regulated by the HON are those which produce as primary intended products any of the chemicals listed in Table 1 of 40 CFR Part 63, subpart F and are located at facilities that are major sources as defined in Section 112 of the Clean Air Act (CAA). To determine whether your facility is regulated by this action, you should carefully examine all of the applicability criteria in 40 CFR Section 63.100. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** Section.

B. Background on Rule

On April 22, 1994 (59 FR 19402) and June 6, 1994 (59 FR 29196), the EPA published in the **Federal Register** the NESHAP for the SOCMI, and for several other processes subject to the equipment leaks portion of the rule. These regulations were promulgated as subparts F, G, H, and I in 40 CFR Part 63 and are commonly referred to as the hazardous organic NESHAP, or the HON. Since the April 22, 1994 notice, there have been several amendments to clarify various aspects of the rule. Readers should see the following **Federal Register** notices for more information: September 20, 1994 (59 FR 48175); October 24, 1994 (59 FR 53359); October 28, 1994 (59 FR 54131); January 27, 1995 (60 FR 5321); April 10, 1995 (60 FR 18020); April 10, 1995 (60 FR 18026); December 12, 1995 (60 FR 63624); February 29, 1996 (61 FR 7716); June 20, 1996 (61 FR 31435); and August 26, 1996 (61 FR 43698).

In June 1994, the Chemical Manufacturers Association (CMA) and Dow Chemical Company filed petitions for review of the promulgated rule in the U.S. Court of Appeals for the District of Columbia Circuit, *Chemical Manufacturers Association* v. *EPA*, 94–1463 and 94–1464 (D.C. Cir.) and *Dow Chemical Company* v. *EPA*, 94–1465 (D.C. Cir.). The petitioners raised over 75 technical issues on the rule's structure and applicability. Issues were raised regarding details of the technical requirements, drafting clarity, and structural errors in the drafting of certain sections of the rule. On August 26, 1996, the EPA proposed clarifying and correcting amendments to subparts F, G, H, and I of Part 63 to address the issues raised by CMA and Dow on the April 1994 rule.

In the August 26, 1996 notice, the EPA committed to taking final action on some portions of the proposed amendments to the rule as soon as possible after the close of the comment period in order to give sources as much lead time as possible. The comment period on the August 26, 1996 proposal ended on September 25, 1996. With today's action, the EPA is taking final action on those portions of the proposed amendments that would eliminate the need for filing some implementation plans that would otherwise be due December 31, 1996, and would allow the filing of requests for compliance extensions up to four months before the April 1997 compliance date.

C. Public Comment on the August 26, 1996 Proposal

Eighteen comment letters were received on the August 26, 1996 notice of proposed changes to the rule. All comment letters received were from industry representatives and trade associations. All comment letters were supportive of the proposed amendments pertaining to the requirements for implementation plans and to the deadline for filing of compliance extension requests. A few of these comment letters also included suggested editorial revisions to further clarify some aspects of these proposed amendments. The EPA considered these suggestions and, where appropriate, made changes to the proposed amendments.

D. Judicial Review

Under Section 307(b)(1) of the C[illegible] judicial review of this final action is available only on 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 final rule. Under Section 307(b)(2) of the CAA, the requirements that are subject to today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

II. Summary of Comments and Amendments to the Rule

A. Rule Changes To Eliminate the Need for Filing Implementation Plans

1. Rule Changes To Remove Requirement for Filing Implementation Plans

On August 26, 1996 the EPA proposed to remove the requirement for submittal of implementation plans for existing sources' emission points that are not included in an emissions average. Under the 1994 final rule, owners or operators who have not yet submitted an operating permit application with the information specified in § 63.152(e) were required to submit by December 31, 1996, an implementation plan for all points not included in an emissions average. The proposed amendments to the rule to eliminate this requirement specified that this information would be provided in an operating permit application or as otherwise specified by the permitting authority.

All comments on the proposed amendments supported the proposal to remove the redundant reporting requirement. Commenters also recommended that § 63.151(a)(2) should be revised to clarify that new sources are required to submit an implementation plan unless an operating permit application containing the information specified in § 63.152(e) has been submitted. This correction was recommended in order to make this paragraph consistent with § 63.151(c) and thereby eliminate the potential for misunderstandings. The EPA agrees that the suggested correction of § 63.151(a)(2) is appropriate and this correction is included in the final amendments to this paragraph. No editorial revisions were suggested for any of the other paragraphs affected by this change to the rule.

Although no public comments were received requesting revisions to other paragraphs affected by this group of amendments, the EPA has also corrected drafting errors in proposed § 63.120(d)(2) and § 63.151(c). In today's amendments, in addition to revising § 63.120(d)(2) to remove the reference to the Implementation Plan, the EPA is revising § 63.120(d)(2) to specify that the monitoring plan for storage vessels complying using a control device must be submitted as part of the Notification of Compliance Status. The rule amendments proposed on August 26, 1996, required that the monitoring plan be submitted, but did not specify when the monitoring plan had to be submitted. The need to specify a submittal date was inadvertently overlooked when the revisions to remove the implementation plan requirement were considered. Because the monitoring plan specifies the compliance monitoring requirements for storage vessels complying using a control device, the EPA considers the Notification of Compliance Status to be the most appropriate report for this information. This correction also makes paragraph § 63.120(d)(2) consistent with paragraph § 63.120(d)(3) which requires that the operating range for the monitored parameter be reported in the Notification of Compliance Status. The EPA also made minor editorial revisions to § 63.151(c) to improve the organization of this paragraph. The specific changes made were to remove redundant text in paragraph (c)(1) and to redesignate paragraph (c)(1)(i) as (c)(1). Under this reorganized structure, paragraph (c)(1)(ii) is no longer reserved.

The other proposed changes to remove the requirement to file an implementation plan are being added to the final rule without change. Today's amendments revise all provisions that require filing of implementation plans by December 31, 1996. Some provisions in §§ 63.143, 63.146, and 63.147 still refer to the implementation plan. These sections are part of the wastewater provisions in subpart G which the EPA anticipates will be final no later than December 31, 1996.

2. Associated Changes to Rule, § 63.100(i)

In the August notice, the EPA proposed to revise paragraph (i) to include provisions to address the assignment of dedicated distillation units and clarify that the assignment procedure in this paragraph applies to distillation units shared among several processes. Revisions were also proposed to paragraph (i) to clarify the wording of the requirement to reassess the assignment of the equipment whenever there is a change in the use of the equipment.

Today's amendments include these clarifying changes to § 63.100(i). These changes are being made at this time because it is not practical to remove the requirement for submittal of implementation plans from these provisions without also finalizing these changes. Furthermore, there were no adverse or editorial comments on the proposed revisions to paragraph (i). Thus, the proposed changes to paragraph (i) are being added to the final rule without change.

B. Timing of Compliance Extension Requests

The April 22, 1994 rule required that requests for compliance extensions be submitted one year prior to the otherwise applicable compliance date. In the August 26, 1996 **Federal Register**, the EPA proposed to revise this requirement, which is in § 63.151(a)(6)(i), to allow submittal of requests up to 120 days prior to the compliance date. The EPA also proposed to add a new paragraph (iv) to § 63.151(a)(6) that would allow requests during the last 120 days before the compliance date if the need arose during that 120 days and if the need was due to circumstances beyond the reasonable control of the owner or operator. All comments were supportive of these proposed amendments and of the rationale for these changes. None of the comments included recommendations for editorial changes to clarify these provisions. Thus, the proposed amendments are being added to the rule without change.

One commenter did, however, encourage the EPA to refrain from taking enforcement actions against applicants during the EPA's review of the requested compliance extension. While the rule is silent on this issue, the EPA will bear the commenter's concern in mind in reviewing such applications. It is generally not the EPA's practice to take enforcement action against a source that has timely filed an extension request until the request has been acted on negatively.

C. Correction to § 63.106(a)

In the August notice, the EPA proposed to correct the delegation of authority citation in § 63.106(a) to reference Section 112(l), not Section 112(d), of the CAA. No comments were received on this proposed change. Thus, the proposed change to § 63.106(a) is being added to the final rule without change.

III. Administrative Requirements

A. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in the rule the Provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 et seq. and has assigned OMB control number *2060–0282*. An Information Collection

Request (ICR) document was prepared by EPA (ICR No. 1414.02) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., S.W.; Washington, DC 20460 or by calling (202) 260–2740.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15.

The changes listed in this Rule: Amendments to the NESHAP will have no impact on the information collection burden estimates previously made. Further, the changes remove redundant reporting requirement, do not impose additional ones, and appropriately revises the deadline for submitting compliance extension requests for this rule. Consequently, the ICR has not been revised for this rule.

B. Executive Order 12866 Review

Under Executive Order 12866, the EPA must determine whether the proposed 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 affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in 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 obligations of recipients thereof; or

(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.

The Hon rule promulgated on April 22, 1994 was considered "significant" under Executive Order 12866, and a regulatory impact analysis was prepared. The amendments issued today remove a redundant reporting requirement and revise the deadline for submitting compliance extension requests to a date more appropriate for this rule. These amendments do not add any new control requirements. Therefore, this regulatory action is considered "not significant."

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities. See the April 22, 1994 **Federal Register** (59 FR 19449) for the basis for this determination. The changes to the rule remove a reporting requirement and provide additional time to request compliance extensions. Therefore, the changes do not create a burden for any of the regulated entities.

D. Submission to Congress and the General Accounting Office

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

E. Unfunded Mandates Reform Act

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

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

List of Subjects in 40 CFR Part 63

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

Dated: November 27, 1996.

Carol M. Browner,

Administrator.

Chapter I, Part 63 of the Code of Federal Regulations 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.*

Subpart F—National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

2. Section 63.100 is amended by revising paragraph (d)(3)(ii); revising the last sentence in paragraph (g)(2)(iii); revising the last sentence of paragraph (h)(2)(iv); revising paragraph (i); revising paragraph (l)(3)(ii)(B); revising the second and third sentences in paragraph (l)(4)(iii) introductory text and revising paragraph (l)(4)(iii)(A); and revising paragraph (m)(2) to read as follows:

§ 63.100 Applicability and designation of source.

* * * * *

(d) * * *

(3) * * *

(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 as part of an operating permit application or as otherwise specified by the permitting authority.

* * * * *

(g) * * *

(2) * * *

(iii) * * * This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

* * * * *

(h) * * *

(2) * * *

(iv) * * * This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

* * * * *

(i) Except as provided in paragraph (i)(4) of this section, the owner or operator shall follow the procedures specified in paragraphs (i)(1) through (i)(3) and (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) Where a distillation unit is dedicated to a chemical manufacturing process unit, the distillation column shall be considered part of that chem 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 distillation unit 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 distillation unit is not part of the source to which this subpart applies.

(2) If a distillation unit is not dedicated to a single chemical manufacturing process unit, then the applicability of this subpart and subpart G of this part shall be determined according to the provisions in paragraphs (i)(2)(i) through (i)(2)(iv) of this section.

(i) 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.

(ii) 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.

(iii) If a distillation unit is shared among chemical manufacturing process units so that there is no single predominant use as described in paragraphs (i)(2)(i) and (i)(2)(ii) 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 subpart.

(iv) 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 as part of an operating permit application or as otherwise specified by the permitting authority.

(3) If the chemical manufacturing process unit to which the distillation unit is assigned is subject to this subpart, then each vent from the individual distillation unit shall be considered separately to determine whether it is a process vent (as defined in § 63.101 of this subpart). Each vent that is a process vent is part of the source to which this subpart applies.

(4) If the distillation unit is part of one of the chemical manufacturing process units listed in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, then each vent from the individual distillation unit shall be considered separately to determine whether it is a process vent (as defined in § 63.101 of this subpart). Each vent that is a process vent is 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.

(5) If a distillation unit that was dedicated to a single chemical manufacturing process unit, or that was part of a chemical manufacturing unit identified in paragraphs (i)(4)(i) through (i)(4)(iii) of this section, begins to serve another chemical manufacturing process unit, or if applicability was determined under the provisions of paragraphs (i)(2)(i) through (i)(2)(iv) of this section and there is a change so that the predominant use may reasonably have changed, the owner or operator shall reevaluate the applicability of this subpart to the distillation unit.

* * * * *

(l) * * *

(3) * * *

(ii) * * *

(B) Changes that meet the criteria in § 63.151(j) of subpart G of this part, unless the information has been submitted in an operating permit application or amendment;

* * * * *

(4) * * *

(iii) * * * 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 § 63.155(i) or (j) of subpart G of this part. The applicable reports include, but are not limited to:

(A) Reports 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;

* * * * *

(m) * * *

(2) The compliance schedule shall be submitted with the report 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) or 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. Section 63.102 is amended by revising paragraph (c) introductory text and removing and reserving paragraph (c)(2) to read as follows:

§ 63.102 General standards.

* * * * *

(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 by the date determined by 40 CFR part 70 or part 71, as appropriate.

* * * * *

(2) [Reserved]

* * * * *

4. Section 63.106 is amended by revising paragraph (a) to read as follows:

§ 63.106 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under Section 112(l) of the CAA, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

* * * * *

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

5. Section 63.110 is amended by revising paragraphs (e)(2)(ii) introductory text and (f)(4)(ii) to read as follows:

§ 63.110 Applicability.

* * * * *

(e) * * *

(2) * * *

(ii) The owner or operator shall submit, no later than four months before the applicable compliance date specified in § 63.100 of subpart F of this part, 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.

* * * * *

(f) * * *

(4) * * *

(ii) The owner or operator may submit, no later than four months before the applicable compliance date specified in § 63.100 of subpart F of this

part, 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.

* * * * *

6. Section 63.117 is amended by revising the last sentence in paragraph (e) to read as follows:

§ 63.117 Process vents provisions—reporting and recordkeeping requirements for group and TRE determinations and performance tests.

* * * * *

(e) * * * The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

* * * * *

7. Section 63.120 is amended by revising the introductory text of paragraph (d)(2), revising paragraph (d)(2)(i), and revising the first sentence in paragraph (d)(3)(i) to read as follows:

§ 63.120 Storage vessel provisions—procedures to determine compliance.

* * * * *

(d) * * *

(2) The owner or operator shall submit, as part of the Notification of Compliance Status required by § 63.151 (b) of this subpart, a monitoring plan containing 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 (e.g., when the liquid level in the storage vessel is being raised); and either

* * * * *

(3) * * *

(i) The operating range for each monitoring parameter identified in the monitoring plan. * * *

* * * * *

8. Section 63.122 is amended by removing and reserving paragraph (a)(2) and revising paragraph (b) to read as follows:

§ 63.122 Storage vessel provisions—reporting.

(a) * * *

(2) [Reserved]

* * * * *

(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 Monitoring Plan, 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.

* * * * *

§ 63.123 [Amended]

9. Section 63.123 is amended by removing and reserving paragraph (b).

10. Section 63.128 is amended by revising the introductory text in paragraph (h)(1), and revising paragraphs (h)(2) and (h)(3) to read as follows:

§ 63.128 Transfer operations provisions—test methods and procedures.

* * * * *

(h) * * *

(1) The owner or operator shall prepare, as part of the Notification of Compliance Status required by § 63.152(b) 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.

* * * * *

(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 for each control device. 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, except as provided in §§ 63.152(c) and 63.152(f) of this subpart.

11. Section 63.129 is amended by revising the last sentence in paragraph (b); and revising paragraphs (e) and (f) to read as follows:

§ 63.129 Transfer operations provisions—reporting and recordkeeping for performance tests and notification of compliance status.

* * * * *

(b) * * * The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application or by other appropriate means.

* * * * *

(e) 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 information specified in § 63.128(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 for each control device.

12. Section 63.151 is amended by revising the heading of the section; revising paragraph (a)(2); revising paragraph (a)(6)(i) and adding a new paragraph (a)(6)(iv); adding a new paragraph (a)(7); revising paragraphs (c) introductory text and (c)(1); revising paragraph (d)(8)(i); revising the introductory text in paragraph (e) and revising paragraph (e)(1); revising paragraph (e)(3); revising the introductory text in paragraph (f); revising paragraph (g)(1); revising paragraph (h); and revising paragraph (j) to read as follows:

§ 63.151 Initial Notification.

(a) * * *

(2) An Implementation Plan for new sources subject to this subpart or for emission points to be included in an emissions average, unless an operating permit application has been submitted prior to the date the Implementation Plan is due and the owner or operator has elected to include the information specified in § 63.152(e) in that application. The submittal date and contents of the Implementation Plan are specified in paragraphs (c) and (d) of this section.

* * * * *

(6) * * *

(i) For purposes of this subpart, a request for an extension shall be submitted to the permitting authority as part of the operating permit application or as part of the Initial Notification or as a separate submittal. Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in § 63.100(k)(2), § 63.100(l)(4), and § 63.100(m) of

subpart F of this part, except as provided for in paragraph (a)(6)(iv) of this section. 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 G.

* * * * *

(iv) An owner or operator may submit a compliance extension request after the date specified in paragraph (a)(6)(i) of this section provided the need for the compliance extension arose after that date and before the otherwise applicable compliance date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include, in addition to the information in paragraph (a)(6)(ii) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problem.

(7) The reporting requirements for storage vessels are located in § 63.122 of this subpart.

* * * * *

(c) Each owner or operator of an existing source with emission points that will be included in an emissions average or new source subject to this subpart must submit an Implementation Plan to the Administrator by the dates specified in paragraphs (c)(1) and (c)(2) of this section, unless an operating permit application accompanied by the information specified in § 63.152(e) of this subpart has been submitted. The Implementation Plan for emissions averaging is subject to Administrator approval.

(1) Each owner or operator of an existing source subject to this subpart who elects to comply with § 63.112 of this subpart by using emissions averaging for any emission points, and who has not submitted an operating permit application accompanied by the information specified in § 63.152(e) of this subpart at least 18 months prior to the compliance dates specified in § 63.100 of subpart F of this part, 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 of this part.

* * * * *

(d) * * *

(8) * * *

(i) The information used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream.

* * * * *

(e) An owner or operator expressly referred to this paragraph shall report, in an Implementation Plan, operating permit application, or as otherwise specified by the permitting authority, the information listed in paragraphs (e)(1) through (e)(5) of this section.

(1) A list designating each emission point complying with §§ 63.113 through 63.149 of this subpart and whether each emission point is Group 1 or Group 2, as defined in § 63.111 of this subpart.

* * * * *

(3) A statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in §§ 63.113 through 63.149 of this subpart that are applicable to each emission point will be implemented beginning on the date of compliance.

* * * * *

(f) The owner or operator who has been directed by any section of this subpart that expressly references this paragraph 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 of this subpart shall submit the information specified in paragraphs (f)(1), (f)(2), and (f)(3) of this section with the operating permit application or as otherwise specified by the permitting authority.

* * * * *

(g) * * *

(1) Requests shall be included in the operating permit application or as otherwise specified by the permitting authority and shall contain the information specified in paragraphs (g)(3) through (g)(5) of this section, as applicable.

* * * * *

(h) The owner or operator required to prepare an Implementation Plan, or otherwise required to submit a report, under paragraph (c), (d), or (e) of this section shall also submit a supplement for any additional alternative controls or operating scenarios that may be used to achieve compliance.

* * * * *

(j) The owner or operator of a source subject to this subpart, for emission points that are not included in an emissions average, shall report 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, or as otherwise specified by the permitting authority. 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 deliberate 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 of this part 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 previously reported to the Administrator or to the permitting authority, or plans to monitor a different parameter, or operate a control device in a manner other than that previously reported.

(3) Whenever an emission point or a chemical manufacturing process unit is added to a source, a written addendum to the information submitted under paragraph (e) of this section containing information on the new emission point shall be submitted.

13. Section 63.152 is amended by revising paragraph (a)(2); revising paragraph (c)(4)(ii); removing paragraph (c)(5)(ii)(F); and revising the introductory text in paragraph (e) to read as follows:

§ 63.152 General reporting and continuous records.

* * * * *

(a) * * *

(2) An Implementation Plan described in § 63.151(c), (d), and (e) of this subpart for existing sources with emission points that are included in an emissions average or for new sources.

* * * * *

(c) * * *

(4) * * *

(ii) Any supplements required under § 63.151(i) and (j) of this subpart,

* * * * *

(e) An owner or operator subject to this subpart shall submit the information specified in paragraphs (e)(1) through (e)(4) of this section with the operating permit application or as otherwise specified by the permitting authority. The owner or operator shall submit written updates as amendments to the operating permit application on the schedule and under the circumstances described in § 63.151(j) of this subpart. Notwithstanding, if the owner or operator has an operating permit under 40 CFR part 70 or 71, the owner or operator shall follow the schedule and format required by the permitting authority.

* * * * *

[FR Doc. 96–30866 Filed 12–4–96; 8:45 am]
BILLING CODE 6560–50–P

assessment of the costs and benefits of the rule, including the effect of the mandate on health, safety, the environment, and the federal resources available to defray the costs, (3) where feasible, estimates of future compliance costs and disproportionate impacts upon particular geographic or social segments of the nation or industry, (4) where relevant, an estimate of the effect on the national economy, and (5) a description of EPA's prior consultation with State, local, and tribal officials.

The amendments to the NESHAP that the Administrator is proposing today will not cause State, local, or tribal governments, or the private sector to incur costs that will be $100 million or more in any one year. Rather, the costs involved in this rulemaking are relatively insignificant in comparison to the $100 million threshold of the Unfunded Mandates Act. Therefore, the requirements of the Unfunded Mandates Act are not applicable to this rulemaking.

D. Regulatory Flexibility Analysis

EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. This rule will reduce regulatory burdens on small businesses because it will allow small businesses that own or operate those few transfer machines installed after December 9, 1991, but before September 22, 1993, to keep these machines in use rather than requiring such businesses to replace these machines or stop operations. EPA has determined that this rule will not have an significant adverse economic impact on a substantial number of small businesses.

E. Submission to Congress and the General Accounting Office

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

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: September 11, 1996.

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, *et seq.*

Subpart M—National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

2. Section 63.320 is amended by revising paragraphs (c), (d), (e), and (f) to read as follows:

§ 63.320 Applicability.

* * * * *

(c) Each dry cleaning system that commenced construction or reconstruction before December 9, 1991, and each new transfer machine system and its ancillary equipment that commenced construction or reconstruction on or after December 9, 1991 and before September 22, 1993, 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.

(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 and each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993, 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 paragraphs 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, and each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993, located in a dry cleaning facility that includes only transfer machine system(s) is exempt from § 63.322, § 63.323, and § 63.324, except paragraphs 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) and new transfer machine system(s) and its (their) ancillary equipment installed between December 9, 1991 and September 22, 1993 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.

* * * * *

3. Section 63.322 is amended by revising paragraphs (a) introductory text and (b) introductory text to read as follows:

§ 63.322 Standards.

(a) The owner or operator of each existing dry cleaning system and of each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993 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.

* * * * *

(b) The owner or operator of each new dry-to-dry machine and its ancillary equipment and of each new transfer machine system and its ancillary equipment installed after September 22, 1993:

* * * * *

[FR Doc. 96–23911 Filed 9–13–96; 8:45 am]
BILLING CODE 6560–50–P

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40 CFR Part 272

[FRL–5601–5]

Hazardous Waste Management Program: Incorporation by Reference of Approved State Hazardous Waste Program for New Mexico

AGENCY: Environmental Protection Agency.

ACTION: Immediate final rule.

SUMMARY: Under the Resource Conservation and Recovery Act of 1976, as amended (RCRA), the United States Environmental Protection Agency (EPA) may grant Final Authorization to States to operate their hazardous waste management programs in lieu of the Federal program. The EPA uses part 272 of Title 40 Code of Federal Regulations (CFR) to provide notice of the authorization status of State programs, and to incorporate by reference those provisions of the State statutes and regulations that EPA will enforce under RCRA Sections 3008, 3013 and 7003. Thus, EPA intends to codify the New Mexico authorized State program in 40 CFR Part 272. The purpose of this action is to incorporate by reference EPA's approval of recent revisions to New Mexico's program.

DATES: This document will be effective November 18, 1996 unless EPA publishes a prior **Federal Register** (FR) action withdrawing this immediate final rule. All comments on this action must be received by the close of business October 21, 1996. The incorporation by reference of certain New Mexico statutes and regulations was approved by the Director of the Federal Register as of November 18, 1996 in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

ADDRESSES: Written comments should be sent to Alima Patterson, Authorization Coordinator for Region 6, Grants and Authorization Section (6PD–G), Multimedia Planning and Permitting Division, EPA Region 6, First Interstate Bank Tower at Fountain Place, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202, Phone number: 214–665–8533.

FOR FURTHER INFORMATION CONTACT: Alima Patterson, Authorization Coordinator for Region 6, Grants and Authorization Section (6PD–G), Multimedia Planning and Permitting Division, EPA Region 6, First Interstate Bank Tower at Fountain Place, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202, Phone number: 214–665–8533.

SUPPLEMENTARY INFORMATION:

Background

Section 3006 of the Resource Conservation and Recovery Act of 1976, as amended (RCRA), 42 U.S.C. 6926 *et seq.*, allows the Environmental Protection Agency (EPA) to authorize State hazardous waste programs to operate in the State in lieu of the Federal hazardous waste program. The purpose of today's **Federal Register** document is to incorporate by reference EPA's approval of recent revisions to New Mexico's program.

Effective December 13, 1993 and August 21, 1995, Environmental Protection Agency incorporated by reference New Mexico's then authorized hazardous waste program (see 58 FR 52677 and 60 FR 32113). Effective July 10, 1995 and January 2, 1996 (see 60 FR 20238 and 60 FR 53708, respectively), Environmental Protection Agency granted authorization to New Mexico for additional program revisions. In this document, EPA is incorporating the currently authorized State hazardous waste program in New Mexico.

The Environmental Protection Agency provides both notice of its approval of State programs in 40 CFR part 272 and incorporates by reference therein the State statutes and regulations that EPA will enforce under sections 3008, 3013 and 7003 of RCRA. This effort will provide clearer notice to the public of the scope of the authorized program in New Mexico. Such notice is particularly important in light of the Hazardous and Solid Waste Act Amendments of 1984 (HSWA), Public Law 98–616. Revisions to State hazardous waste programs are necessary when Federal statutory or regulatory authority is modified. Because HSWA extensively amended RCRA, State programs must be modified to reflect those amendments. By incorporating by reference the authorized New Mexico program and by amending the Code of Federal Regulations whenever a new or different set of requirements is authorized in New Mexico, the status of Federally approved requirements of the New Mexico program will be readily discernible.

The Agency will only enforce those provisions of the New Mexico hazardous waste management program for which authorization approval has been granted by EPA. This document incorporates by reference provisions of State hazardous waste statutes and regulations and clarifies which of these provisions are included in the authorized and Federally enforceable program. Concerning HSWA, some State requirements may be similar to HSWA requirements that are in effect under Federal statutory authority in that State. However, a State's HSWA-type requirements are not authorized and will not be codified into the CFR until the Regional Administrator publishes his final decision to authorize the State for specific HSWA requirements. Until such time, EPA will enforce the HSWA requirements and not the State analogues.

New Mexico Authorized Hazardous Waste Program

The Environmental Protection Agency is incorporating by reference the New Mexico authorized hazardous waste program in subpart GG of 40 CFR part 272. The State statutes and regulations are incorporated by reference at § 272.1601(b)(1) and the Memorandum of Agreement, the Attorney General's Statement and the Program Description are referenced at § 272.1601 (b)(5), (b)(6) and (b)(7), respectively.

The Agency retains the authority under sections 3007, 3008, 3013 and 7003 of RCRA to undertake enforcement actions in authorized States. With respect to such an enforcement action, the Agency will rely on Federal sanctions, Federal inspection authorities, and the Federal Administrative Procedure Act rather than the authorized State analogues to these requirements. Therefore, the Agency does not intend to incorporate by reference for purposes of enforcement such particular, authorized New Mexico enforcement authorities. Section 272.1601(b)(2) of 40 CFR lists those authorized New Mexico authorities that are part of the authorized program but are not incorporated by reference.

The public also needs to be aware that some provisions of the State's hazardous waste management program are not part of the Federally authorized State program. These non-authorized provisions include:

(1) Provisions that are not part of the RCRA Subtitle C program because they are "broader in scope" than RCRA Subtitle C (see 40 CFR 271.1(i)); and

(2) Federal rules for which New Mexico is not authorized, but which have been incorporated into the State regulations because of the way the State adopted Federal regulations by reference.

State provisions which are "broader in scope" than the Federal program are not incorporated by reference for purposes of enforcement in 40 CFR part 272. Section 272.1601(b)(3) of 40 CFR lists, for reference and clarity the New Mexico provisions which are "broader in scope" than the Federal program and which are not, therefore, part of the authorized program being incorporated by reference. "Broader in scope" provisions will not be enforced by EPA: the State, however, will continue to enforce such provisions.

New Mexico has adopted but is not authorized for the Federal rules published in the **Federal Register** from January 28, 1983 through March 20, 1984 (48 FR 3977, 48 FR 39611, 48 FR 52718, 49 FR 5308, and 49 FR 10490); amendments to the Toxicity Characteristic rule as published on October 5, 1990 (55 FR 40834), February 1, 1991 (56 FR 3978), February 13, 1991 (56 FR 5910) and April 2, 1991 (56 FR

Federal Register
Thursday
September 12, 1996

Part II

Environmental Protection Agency

40 CFR Parts 9 and 63
National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins; Final Rule

NESHAP

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD–FRL–5508–6]

RIN 2060–AE37

National Emissions Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) from existing and new plant sites that emit organic hazardous air pollutants (HAP) identified on the EPA's list of 189 HAP. The organic HAP are emitted during the manufacture of one or more of the following Group IV polymers and resins: acrylonitrile butadiene styrene resin (ABS), styrene acrylonitrile resin (SAN), methyl methacrylate acrylonitrile butadiene styrene resin (MABS), methyl methacrylate butadiene styrene resin (MBS), polystyrene resin, poly (ethylene terephthalate) resin (PET), and nitrile resin.

In the production of thermoplastics, a variety of organic HAP are used as monomers or are created as by-products. Some of these organic HAP are considered to be mutagens and carcinogens, and all can cause reversible or irreversible toxic effects following exposure. The potential toxic effects include eye, nose, throat, and skin irritation; liver and kidney toxicity, and neurotoxicity. There effects can range from mild to severe. The standards are estimated to reduce organic HAP emissions from existing affected sources by 3,550 megagrams per year (Mg/yr).

The intent of this rule is to protect the public by requiring the maximum degree of reduction in emissions of organic HAP from new and existing major sources. The emissions reductions achieved by these standards, when combined with the emission reductions achieved by other similar standards, will achieve the primary goal of the Clean Air Act (Act) as amended in 1990.

EFFECTIVE DATE: September 12, 1996. See the Supplementary Information section concerning judicial review.

ADDRESSES: *Docket.* Docket No. A–92–45, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8 a.m. and 5:30 p.m., Monday through Friday at the following address in room M–1500, Waterside Mall (ground floor) U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street SW., Washington, DC 20460; telephone: (202) 260–7549. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For information concerning applicability and rule determinations contact:

Region I—Greg Roscoe, Air Programs Compliance, Branch Chief, U.S. EPA, Region I, SEA, JFK Federal Building, Boston, MA 02203, (617) 565–3221.

Region II—Kenneth Eng, Air Compliance Branch Chief, U.S. EPA, Region II, 290 Broadway, New York, NY 10007–1866, (212) 637–4000.

Region III—Bernard Turlinski, Air Enforcement Branch Chief, U.S. EPA, Region III, 3AT10, 841 Chestnut Building, Philadelphia, PA 19107, (205) 597–3989.

Region IV—Jewell A. Harper, Air Enforcement Branch, U.S. EPA, Region IV, 345 Courtland Street, N.E., Atlanta, GA 30365, (404) 347–2904.

Region V—George T. Czerniak, Jr., Air Enforcement Branch Chief, U.S. EPA, Region V, 5AE–26, 77 West Jackson Street, Chicago, IL 60604, (312) 353–2088.

Region VI—John R. Hepola, Air Enforcement Branch Chief, U.S. EPA, Region VI, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202–2733, (214) 665–7220.

Region VII—Donald Toensing, Chief, Air Permitting and Compliance Branch, U.S. EPA, Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7446.

Region VIII—Douglas M. Skie, Air and Technical Operations Branch Chief, U.S. EPA, Region VIII, 999 18th Street, Suite 500, Denver, CO 80202–2466, (303) 312–6432.

Region IX—Colleen W. McKaughan, Air Compliance Branch Chief, U.S. EPA, Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 744–1198.

Region X—Air and Radiation Branch Chief, U.S. EPA, Region X, AT–092, 1200 Sixth Avenue, Seattle, WA 98101, (206) 533–1152.

For information concerning the analyses performed in developing this rule, contact Mr. Robert Rosensteel at (919) 541–5410, organic Chemicals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by this action are those facilities which manufacture one or more of the 7 thermoplastic products identified in the rule and listed below:

Category	Examples of regulated entities
Industry	Facilities which manufacture acrylonitrile butadiene styrene resin, styrene acrylonitrile resin, methyl methacrylate acrylonitrile butadiene styrene resin, methyl methacrylate butadiene styrene resin, polystyrene resin, poly (ethylene terephthalate) resin, or nitrile resin.

This table is not intended to be exhaustive; but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in § 63.1310 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Response to Comment Document

The response to comment document for the promulgated standards contains: (1) A summary of all the public comments made on the proposed rule and the Administrator's response to the comments; and (2) A summary of the changes made to the rule since proposal. The document may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone (919) 541–2777; or from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22151, telephone (703) 487–4650. Please refer to "Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses" [EPA–453/R–96–001b; May 1996]. This document is also available for downloading from the Technology Transfer Network. The Technology Transfer Network is one of the EPA's electronic bulletin boards. The Technology Transfer Network provides information and technology exchange in various areas of air pollution control. The service is free except for the cost of a phone call. Dial (919) 541–5472 for up to a 14,400 bps modem. If more information on the Technology Transfer Network is needed, call the HELP line at (919) 541–5384.

Previous Background Documents

The following is a listing of background documents pertaining to this rulemaking. The complete title,

EPA publication number, publication date, docket number, and the abbreviated descriptive title used to refer to the document throughout this notice are included.

(1) Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Supplementary Information Document for Proposed Standards. EPA–453/R–95–003a. March 1995. Docket item A–92–45: II–A–9, Supplementary Information Document.

(2) Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Basis and Purpose Document for Proposed Standards. EPA–453/R–95–004a. March 1995. Docket item A–92–45: II–A–10. Basis and Purpose Document for Proposed Standards.

Judicial Review

National emission standards for organic HAP for Group IV polymers and resins were proposed in the **Federal Register** (FR) on March 29, 1995 (60 FR 16090). This **Federal Register** action announces the EPA's final decision on the rule. Under section 307(b)(1) of the Act, judicial review of the final rule 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 final 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.

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

I. Background
II. Summary of Considerations Made in Developing These Standards
A. Purpose of Standards
B. Technical Basis of Regulation
C. Stakeholder and Public Participation
III. Summary of Promulgated Standards
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C. Paperwork Reduction Act
D. Regulatory Flexibility Act
E. Unfunded Mandates

I. Background

Section 112(b) of the Act lists 1989 HAP and directs the EPA to develop standards to control all major sources and some area sources emitting HAP. On July 16, 1992, the EPA published a list of major and area source categories for which NESHAP are to be promulgated (57 FR 3156). Six of the seven source categories regulated by this rule were included on that list as major source categories. The other source category, nitrile resins production, has since been added to the source category list. On December 3, 1993, the EPA published a schedule for promulgating standards for the listed major and area source categories (58 FR 83941). Standards for these seven major source categories were proposed on March 29, 1995, under this rulemaking.

II. Summary of Considerations Made in Developing These Standards

A. Purpose of Standards

The Act was created in part "to protect and enhance the quality of the nation's air resources so as to promote the public health and welfare and the productive capacity of its population [the Act, section 101(b)(1)]. Title I of the Act establishes a control technology-based program to reduce stationary source emissions of HAP. The goal of the section 112(d) Maximum Achievable Control Technology standards (MACT) is to apply such control technology to reduce emissions and thereby reduce the hazard of pollutants emitted from stationary sources.

The Act strategy avoids dependence on a detailed and comprehensive risk assessment hampered by (but not limited to) the following caveats, as prerequisites for control of air toxics: (1) Some of the HAP emitted from stationary sources are unknown; and (2) Many of the HAP with emissions information have incomplete data in which to describe health hazard. In addition, these standards are not "significant" as defined by Executive Order 12866, and a specific benefits analysis is not required. Because of these issues, a detailed and intensive risk assessment of potential effects from the organic HAP emitted from stationary sources is not included in this rulemaking.

The EPA does recognize that the degree of adverse effects to health resulting from the most significant emissions identified can range from mild to severe. The extent to which the effects could be experienced is dependent upon the ambient concentrations and exposure time. The latter is further influenced by source-specific characteristics such as emission rates and local meteorological conditions. Human variability factors also influence the degree to which effects to health occur: genetics, age, pre-existing health conditions, and lifestyle.

The organic HAP listed in section 112(b)(1) of the Act emitted by the thermoplastic facilities covered by these standards include styrene, acrylonitrile, butadiene, ethylene glycol, methanol, acetaldehyde, and dioxane. Available emission date gathered, in conjunction with development of these MACT standards, show that these organic HAP are those which have the potential for reduction by the implementation of the standard.

Some of the effects of the pollutants whose emissions are reduced by these standards include central nervous system effects (e.g., drowsiness, dizziness, headaches, impairment of vision, peripheral nervous system effects expressed as numbness of the extremities, fatigue, and coma and death at lethal levels), respiratory irritation expressed as labored breathing and impaired lung function, eye irritation, reproductive and developmental effects, gastrointestinal effects, blood effects (e.g., anemia and leukocytosis), and liver and kidney toxicity. In addition, butadiene exposure to humans has been associated with increased risk of cardiovascular disease and effects on the blood. In regard to carcinogenicity, some of the organic HAP controlled under these standards are either probable (i.e., acetaldehyde, dioxane, acrylonitrile, and butadiene) or possible (i.e., styrene) human carcinogens.

These standards will result in a minimum organic HAP emission reduction of 3,550 Mg/yr for existing affected sources and 6,870 Mg/yr for new affected sources. The majority of the organic HAP regulated by these standards are also volatile organic compounds (VOC). In reducing emissions of organic HAP, emissions of VOC are also reduced. No other criteria pollutant ambient levels will be affected by these standards. The emission reductions achieved by these standards, when combined with the emission

reductions achieved by other standards mandated by the Act, will achieve the primary goal of the Clean Air Act.

B. Technical Basis of Regulation

National emission standards for sources of HAP established under section 112(d) of the Act reflect MACT:

> * * * the maximum degree of reduction in emissions of the HAP * * * 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 for new or existing sources in the category or subcategory to which such emission standard applies * * * [42 U.S.C. § 7412(d)(2)].

The amended Clean Air Act contains requirements for the development of regulatory alternatives for sources of HAP emissions. The statute requires the standards to reflect the maximum degree of reduction in emissions of HAP that is achievable for new or existing sources. This control level is referred to as MACT. The amended Clean Air Act also provides guidance on determining the least stringent level allowed for a MACT standard; this level is termed the "MACT floor."

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]. Existing source standards shall be no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources for source categories and subcategories with 30 or more sources or the average emission limitation achieved by the best performing 5 sources for source categories or subcategories with fewer than 30 sources [section 12(d)(3) of the Act]. These two minimum levels of control define the MACT floor for new and existing sources.

Two interpretations have been evaluated by the EPA for representing the MACT floor for existing sources. One interpretation is that the MACT floor is represented by the 88th percentile source. The second interpretation is that the MACT floor is represented by the "average emission limitation achieved" by the best performing sources, where the "average" is based on a measure of central tendency, such as the arithmetic mean, median, or mode. This latter interpretation is referred to as the "higher floor interpretation." In a June 6, 1994 Federal Register notice [59 FR 29196], the EPA presented its interpretation of the statutory language concerning the MACT floor for existing sources. Based on a review of the statute, legislative history, and public comments, the EPA believes that the "higher floor interpretation" is a better reading of the statutory language. The determination of the MACT floor for existing sources under the proposed and final rule followed the "higher floor interpretation."

The regulatory alternatives considered in the development of this rule, including those regulatory alternatives selected as standards for new and existing affected sources, are based on process and emissions data received from the existing plant sites known by the EPA to be in operation.

Regulatory alternatives more stringent than the MACT floor were selected when they were judged to be reasonable "taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts, and energy requirements" [42 U.S.C. § 7412(d)(2)].

Potential regulatory alternatives were developed based on the Hazardous Organic NESHAP (HON) (i.e., subparts F, G, H, and I of 40 CFR part 63), the Polymer Manufacturing New Source Performance Standards (NSPS) (subpart DDD of 40 CFR part 60), and the Batch Processes Alternative Control Techniques (ACT) document [EPA 453/R-93-017; November 1993]. The HON was selected as a basis for regulatory alternatives because: (1) the characteristics of the emissions from storage vessels, continuous process vents, equipment leaks, and wastewater at Group IV thermoplastic facilities are similar or identical to those addressed by the HON; and (2) The levels of control required under the HON were already determined through extensive analyses to be reasonable from a cost and impact perspective.

The Polymer Manufacturing NSPS, which covers certain process emissions at polystyrene and PET facilities using a continuous process, and cooling tower emissions at PET facilities, was selected for the same basic reasons as the HON. Although the Polymer Manufacturing NSPS was developed under section 111 of the Clean Air Act and was targeted to control VOC emissions, the requirements for setting standards under section 111 are very similar to the requirements under section 112 of the Clean Air Act Amendments of 1990, and all of the organic HAP identified from polystyrene and PET affected sources are also VOC.

Finally, the Batch Processes ACT was selected to identify regulatory alternatives for batch process vents, which are not addressed by either the HON or Polymer Manufacturing NSPS. As with the Polymer Manufacturing NSPS, the Batch Processes ACT addresses the control of VOC emissions, and all of the organic HAP identified for the Group IV thermoplastics facilities are also VOC. Unlike the HON and Polymer Manufacturing NSPS, the Batch Processes ACT is not a regulation and, therefore, does not specify a level of control that must be met. Instead, the Batch Processes ACT provides information on emissions estimation techniques and potential levels of control and their environmental, energy, and cost impacts. Based on the review of the Batch Processes ACT, the EPA selected a level of control equivalent to 90 percent reduction for batch process vents. This level of control was selected for regulatory analysis purposes.

C. Stakeholder and Public Participation

In the development of these standards, numerous representatives of the thermoplastics industry were consulted. Industry representatives have included trade associations and thermoplastic producers responding to section 114 questionnaires and information collection requests (ICR). Representatives from other interested EPA offices, Regional offices, and State environmental agency personnel, participated in the regulatory development process as members of the Work Group. The Work Group is involved in the regulatory development process, and is given opportunities to review and comment on the standards before proposal and promulgation. Therefore, the EPA believes that the implication to order EPA offices and programs has been adequately considered during the development of these standards. In addition, the EPA has met with members of industry concerning these standards. Finally, industry representatives, regulatory authorities, and environmental groups had the opportunity to comment on the proposed standards and to provide additional information during the public comment period that followed the proposal.

The standards were proposed in the Federal Register on March 29, 1995 (60 FR 16090). The preamble to the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of proposal. To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal. However, the public did no. request a hearing and, therefore, one

was not held. The public comment period was from March 29, 1995 to May 30, 1995. Twenty-seven comment letters were received. Commenters included industry representatives and State agencies. The comments were carefully considered, and changes were made in the proposed standards when determined by the EPA to be appropriate. A detailed discussion of these comments and responses can be found in the Basis and Purpose Document for Final Standards (EPA–453/R–96–001b; May 1996), which is referenced in the ADDRESSES section of this preamble. The summary of comments and responses in the Basis and Purpose Document for the Final Standards (EPA–453/R–96–001b; May 1996) serves as the basis for the revisions that have been made to the standards between proposal and promulgation. Section V of this preamble discusses these major changes.

III. Summary of Promulgated Standards

Emissions of specific organic HAP from the following types of emission points (i.e., emission source types) are being covered by the final standards: Storage vessels, continuous process vents, batch process vents, equipment leaks, wastewater operations, heat exchange systems, and some process contact cooling towers associated with the manufacture of PET. The organic HAP emitted and required to be controlled by these standards vary by subcategory. Each of the nineteen thermoplastic products constitutes a separate subcategory (i.e., affected source) that is regulated by these standards.

The existing affected source is defined as each group of one or more TPPUs that manufacture the same thermoplastic product as their primary product, and (1) are located at a major source plant site, (2) are not exempt, and (3) are not part of a new affected source. This means that each plant site will have only one existing affected source in any given subcategory.

New affected sources are created under various circumstances. If a plant site with an existing affected source producing thermoplastic A as its primary product constructs a new TPPU also producing thermoplastic A as its primary product, the new TPPU is a new affected source if the new TPPU has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of all HAP. In this situation, the plant site would have an existing affected source producing thermoplastic A and a new affected source producing thermoplastic A. Each subsequent new TPPU with potential HAP emissions above major source levels (i.e., 10/25 tons per year) would be a separate new affected source. New affected sources are also created when a TPPU is constructed at a major source plant site where the thermoplastic product was not previously produced, with no regard to the potential HAP emissions from the TPPU. This approach to defining new affected source was selected in order to make this subpart more consistent with the HON.

Another instance where a new affected source is created is if a new TPPU is constructed at a new plant site (i.e., green field site) that will be a major source. The final manner in which a new affected source is created is when an existing affected source undergoes reconstruction, thus making the previously existing affected source subject to new source standards.

This standard differs from the HON, however, in that it applies to multiple source categories. Thus, unlike the HON, a newly added TPPU at a facility is covered by this rule even if that TPPU is in a different source category from the existing TPPUs at the facility. It is the EPA's position that the addition of a process unit in a different source category is a new source and must meet the requirements for new sources even though the TPPU has the potential to emit less than 10 tons per year of a single HAP or 25 tons per year of all HAP. Indeed, if a source covered by another MACT standard (i.e., a different source category) were built at a HON facility, that source would be subject to new source requirements under that MACT standard.

Also, each affected source includes the following emission points and equipment that are associated with each group of TPPU: (1) Each wastewater stream; (2) each wastewater operation; (3) each heat exchange system; (4) each process contact cooling tower used in the manufacture of PET that is associated with a new affected source; and (5) each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

With relatively few exceptions, the final standards for storage vessels, continuous process vents, equipment leaks, wastewater streams, and heat exchange systems are the same as those promulgated for the corresponding types of emission points at facilities subject to the HON. As shown in Tables 1 and 2, some subcategories have requirements that differ from the HON; these cases are designated by "MACT Floor." These different requirements are specified in the final standards.

As in the HON, if an emission point within an affected source meets the applicability criteria and is required to be controlled under the standards, it is referred to as a Group 1 emission point. If an emission point within the affected source is not required to apply controls, it is referred to as a Group 2 emission point.

TABLE 1.— SUMMARY OF FINAL STANDARDS FOR EXISTING AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT

Subcategory	Type of emission point				
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems
ABS, continuous emulsion.	HON	HON	HON	HON	HON.
ABS, continuous mass	HON	Continous process vents: HON batch process vents: 90 percent reduction or complaint flare.	HON	HON	HON.
ABS, batch emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ABS, batch suspension	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ABS, latex	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.

TABLE 1.— SUMMARY OF FINAL STANDARDS FOR EXISTING AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point				
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems
MABS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
MBS	HON	Continuous process vents: MACT floor batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
SAN, continuous	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
SAN, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ASA/AMSAN	MACT floor	MACT floor	HON	No control	HON.
Polystyrene, continuous	MACT floor	Continuous process vents from material recovery sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Polystyrene, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Expandable polystyrene	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–TPA, continuous	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–TPA continuous high viscosity multiple end finisher.	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	No control	HON	HON.
PET–TPA, batch–DMT, batch.	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–DMT, continuous	HON	Continuous process vents from material recovery and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Nitrile	MACT floor	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.

ASA/AMSAN = acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin.
TPA = terephthalic acid.
DMT = dimethyl terephthalate.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
ABS, continuous emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, continuous mass	Regulatory alternative 2[1].	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, batch emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, batch suspension	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
ABS, Latex	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
MABS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
MBS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
SAN, continuous	MACT floor.	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
SAN, batch	HON	MACT floor	HON	No control	HON	NA.
ASA/AMSAN	MACT floor.	MACT floor	HON	No control	HON	NA.
Polystyrene, continuous	MACT floor.	Continuous process vents from material recovery sections: same as polymer manufacturing NSPS, other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
Polystyrene, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
Expandable polystyrene	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
PET–TPA, continuous	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as Polymer Manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
PET–TPA, continuous multiple end finisher.	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as Polymer Manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	No control	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
PET–TPA, batch –DMT, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
PET–DMT, continuous	HON	Continuous process vents from material recovery and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
Nitrile	MACT floor.	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.

[1] The final standard is stringent than the MACT floor, which is more stringent than the HON.
NA = Not applicable, not part of affected source.
ASA/AMSAN = acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin.
TPA = terephthalic acid.
DMT = dimethyl terephthalate.

A. Storage Vessel Provisions

The standards require owners and operators to first determine whether or not a storage vessel is required to be controlled. For those storage vessels determined to require control, the standards specify the appropriate level of control.

For most existing and new storage vessels, the criteria for determining which storage vessels must be controlled are identical to the criteria in the HON storage vessel provisions and are based on storage vessel capacity and vapor pressure of the stored material. Typically, applicability criteria are different for existing and new affected sources.

For most storage vessels, the level of control required is either technical modification to the tank (e.g., the installation of an internal floating roof) or the use of a closed vent system and control device that is generally required to achieve at least 95 percent emission reduction.

Note: This is the same level of control as required under the HON.

As shown in Tables 1 and 2, some subcategories also have requirements that differ from the HON. These requirements are specified in the final standards. For those subcategories not applying the HON level of control, the level of control varies depending on the subcategory. For example, the standards may require 90 or 98 percent emission reduction, as opposed to the 95 percent emission reduction required by the HON. Finally, to simplify the final rule, some chemicals with extremely low vapor pressure (e.g., ethylene glycol) have been exempted from the storage vessel provisions.

B. Process Vent Provisions

Similar to the standards for storage vessels, the standards for process vents require owners and operators to first determine whether or not a process vent, or set of process vents, requires control and, if so, then specifies the level of control required. The standards regulate both continuous and batch process vents.

Except for certain PET and polystyrene continuous process vents, the group status of a continuous process vent is determined by comparing the total resource effectiveness (TRE) value for each continuous process vent to a TRE value. The TRE value is a reflection of the cost effectiveness of controlling an individual continuous process vent. There are different TRE coefficients for continuous process vents depending on whether the affected source is new or existing. The TRE equations for new and existing continuous process vents differ because the standards for new affected sources are more stringent than the standards for existing affected sources. With one exception, continuous process vents with TRE values of 1.0 or less are Group 1 continuous process vents. For continuous process vents at existing MBS facilities, the TRE value for each continuous process vent is compared to a TRE value of 3.7. The proposed and final standards refer to the procedures in the HON for determination of the TRE value.

For continuous process vents associated with the material recovery section from *existing* PET affected sources using a continuous dimethyl terephthalate (DMT) process, the set of continuous process vents are designated as Group 1 continuous process vents if the combined uncontrolled emission rate is greater than the threshold emission rate. For other sets of continuous process vents associated with the raw material preparation section or polymerization reaction section at existing and new polystyrene and PET facilities, there are no applicability criteria. These sets of continuous process vents are considered to be Group 1 and must meet the specified emission limits. Continuous process vents associated with the material recovery section at *new* PET affected sources using a continuous DMT process are also designated as Group 1 and must meet the specified emission limits.

The group determination procedure for batch process vents differs from the procedure used for continuous process vents. First, the estimated annual emissions for an individual batch process vent are entered into the flow rate regression equation and a calculated flow rate is determined. Second, the actual flow rate for the batch process vent is compared to the calculated flow rate. If the actual flow rate is less than the calculated flow rate, then the batch process vent is designated as Group 1 and control is required. The batch process vent group determination procedure is the same for existing and new batch process vents.

There are exceptions to the procedures described above. For new SAN affected sources using a batch process, the standards require an overall emission reduction of 84 percent from all process vents (i.e., continuous and batch process vents), and a group determination is not required. For new and existing acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin (ASA/AMSAN) affected sources, the standards require that emissions from all process vents (i.e., continuous and batch process vents) be controlled by 98 percent, and a group determination is not required.

Another exception concerns a batch process vent that is combined with a continuous process vent prior to a control or recovery device. Said batch process vent is not required to comply with the batch process vent provisions if there are no emissions to the atmosphere up until the point the batch process vent is combined with the continuous process vent. The combined vent stream would be required to comply with the continuous process vent provisions. The presence of a batch process vent in a continuous process vent emission stream would necessitate that all applicability tests and performance tests be conducted while the batch process vent is emitting (i.e., maximum operating conditions for the combined vent stream).

The level of control required for most continuous process vents is the same as the level of control required by the HON: 98 percent emission reduction or an organic HAP concentration limit of 20 ppmv. If a flare is used, it must meet the design and operating requirements of § 63.11(b) of subpart A of 40 CFR part 63. Exceptions to this level of control are described in the following paragraphs.

For continuous process vents associated with material recovery sections at polystyrene affected sources using a continuous process, raw material preparation sections and polymerization reaction sections at PET affected sources using a continuous terephthalic acid (TPA) process, and material recovery sections and polymerization reaction sections at PET affected sources using a continuous DMT process, the standards require continuous process vents associated with these process sections to meet emission limits expressed as kilogram organic HAP per megagram of product. Depending on the process section, the standards provide several compliance options including limiting the outlet gas temperature from each final condenser or reducing emissions from each process section by 98 weight percent or to an organic HAP concentration limit of 20 ppmv. These are the same control requirements as specified in the Polymer Manufacturing NSPS, which serve as the basis for these specific provisions.

For batch process vents, the standards require Group 1 batch process vents to achieve emission reductions of 90 percent or greater for the batch cycle.

There are three subcategories where the standards are based on the MACT floor. These subcategories are existing MBS affected sources, existing and new ASA/AMSAN affected sources, and new SAN affected sources using a batch process. As described earlier, the applicability criteria and level of control differ from the HON for all three subcategories.

For existing MBS affected sources, the standards require continuous process vents at affected sources to either: (1) meet an emission limit of 0.000590 kilogram of emissions per megagram of product for all continuous process vents associated with the affected source; or (2) control emissions from continuous process vents with a TRE of 3.7 or less by 98 percent. The development of the MACT floor level of control and applicability criteria for MBS existing affected sources is documented in Docket Item II–B–21 of A–92–45 and in the Supplementary Information Document (SID) for Proposed Standards [EPA–453/R–95–003a; March 1995].

For both existing and new ASA/AMSAN affected sources, the standards require all continuous and batch process vents to achieve emission reductions of 98 percent.

For new SAN affected sources using a batch process, the standards require an overall emission reduction of 84 percent for all process vent emissions.

C. Heat Exchange Provisions

The standards apply to each heat exchange system that is associated with the affected source. The standards require a monitoring program to detect leakage of organic HAP from the process into the cooling water. The standards refer to the monitoring program in the HON.

D. Process Contact Cooling Tower Provisions

The standards require that owners or operators of new affected sources manufacturing PET not send contact condenser effluent associated with a vacuum system to a process contact cooling tower. For existing PET affected sources using a continuous TPA high viscosity multiple end finisher process, the owner or operator is required to keep the concentration of ethylene glycol in the process contact cooling tower water to 4 percent or less by weight provided the TPPU is or has become subject to 40 CFR part 60, subpart DDD. Process contact cooling towers at existing PET affected sources using other processes (e.g., DMT process) are not regulated.

Note: The standards treat the contact condenser effluent at existing affected sources as wastewater.

E. Wastewater Provisions

Except for ASA/AMSAN affected sources, the standards require owners and operators to comply with the wastewater provisions in the HON. Owners and operators are required to make a group determination for each wastewater stream based on the applicability criteria in the HON: flow rate and organic HAP concentration. The level of control required for Group 1 wastewater streams is dependent upon the organic HAP constituents in the wastewater stream. The standards do not require control of wastewater emissions from existing or new ASA/AMSAN affected sources.

The standards also require owners and operators to comply with the maintenance wastewater requirements in § 63.105 of subpart F of this part. These provisions require owners and operators to include a description of procedures for managing wastewaters generated during maintenance in their start-up, shutdown, and malfunction plan.

F. Equipment Leak Provisions

Except for one subcategory, both existing and new affected sources are required to comply with the equipment leak standards specified in subpart H of 40 CFR part 63. For PET affected sources using a continuous TPA high viscosity multiple end finisher process, the final rule does not require an equipment leak program. The final rule also exempts from the equipment leak standards any PET TPPU in which all of the components are either in vacuum service or in heavy liquid service.

In general, subpart H requires owners and operators to implement a leak detection and repair (LDAR) program, including various work practice and equipment standards. The subpart H standards are applicable to equipment in volatile HAP service for 300 or more hours per year (hr/yr). The standards define "in volatile HAP service" as being in contact with or containing process fluid that contains a total of 5 percent or more total HAP. Equipment subject to the standards are: valves, pumps, compressors, connectors, pressure relief devices, open-ended

valves or lines, sampling connection systems, instrumentation systems, agitators, and closed-vent systems and control devices.

A few differences to the subpart H standards are contained in the final rule. These differences include: exempting indications of liquids dripping from bleed ports on pumps and agitators at facilities producing polystyrene resins from the definition of a leak; not requiring the submittal of an Initial Notification; and allowing 150 days, rather than 90 days, to submit the Notification of Compliance Status. In addition, PET facilities are not required to provide a list of identification numbers for components in heavy liquid service, pressure relief devices in liquid service, and instrumentation systems. The final rule also clarifies that for these components the presence of a leak is to be determined exclusively through the use of visual, audible, olfactory, or any other detection methods, but that Method 21 is not to be used. Finally, bottoms receivers and surge control vessels are not regulated under the equipment leak provisions, but instead are regulated as storage vessels.

Affected sources subject to this rule currently complying with the NESHAP for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks [40 CFR part 63, subpart I] or with the equipment leak provisions in § 60.562–2 of 40 CFR part 60, subpart DDD, are required to continue to comply with subpart I or subpart DDD, as applicable, until the compliance date of the final rule, at which point in time they must comply with this rule and are no longer subject to subpart I and subpart DDD. Further, affected sources complying with subpart I through a quality improvement program are allowed to continue these programs without interruption as part of complying with this rule. In other words, becoming subject to this rule does not restart or reset the "compliance clock" as it relates to reduced burden earned through a quality improvement program.

G. Emissions Averaging Provisions

The EPA is allowing emissions averaging among continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, and wastewater streams, within an existing affected source. New affected sources are not allowed to use emissions averaging. Emissions averaging is not allowed between subcategories; it is only allowed between emission points within the same affected source. Under emissions averaging, a system of "credits" and "debits" is used to determine whether an affected source is achieving the required emission reductions. Twenty emission points per plant site are allowed in the emissions averaging plan submitted for the plant site, with an additional 5 emission points allowed if pollution prevention measures are used.

H. Compliance and Performance Test Provisions and Monitoring Requirements

Compliance and performance test provisions and monitoring requirements contained in the standards are very similar to those found in the HON. Each type of emission point included in the standards is discussed briefly in the following paragraphs. Significant differences from the continuous parameter monitoring requirements found in the HON are discussed in Section 8.

1. Storage Vessels

Monitoring and compliance provisions for storage vessel improvements include periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections. If a control device is used, the owner or operator must identify the appropriate monitoring procedures to be followed in order to demonstrate compliance. Monitoring parameters and procedures for many of the control devices likely to be used are identified in the standards. Reports and records of inspections, repairs, and other information necessary to determine compliance are also required by the standards.

2. Continuous Process Vents

The standards for continuous process vents require the owner or operator to either calculate a TRE index value to determine the group status of each continuous process vent or to comply with the control requirements. The TRE index value is determined after the last 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 specified in the standards.

Performance test provisions are included for Group 1 continuous process vents to verify that control or recovery devices achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the standards.

Compliance provisions for continuous process vents at polystyrene and PET affected sources are included in the standards. For owners or operators electing to comply with a kilogram organic HAP per megagram of product emission limit, procedures to demonstrate compliance are provided.

3. Batch Process Vents

Similar to the provisions for continuous process vents, there is a procedure for determining the group status of batch process vents. This procedure is based on annual emissions and annual average flow rate of the batch process vent. Equations for estimating and procedures for measuring annual emissions and annual average flow rates are provided in the standards. The use of engineering assessment is also allowed under certain circumstances.

Performance test provisions are included for Group 1 batch process vents to verify that control devices achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the standard.

For Group 2 batch process vents, the standard requires owners and operators to establish a batch cycle limitation. The batch cycle limitation restricts the number and type of batch cycles that can be accomplished per year. This enforceable limitation ensures that a Group 2 batch process vent does not become a Group 1 batch process vent as a result of running more batch cycles than anticipated when the group determination was made. The determination of the batch cycle limitation is not tied to any previous production amounts. As affected source may set the batch cycle limitation at any level it desires as long as the batch process vent remains a Group 2 batch process vent. Alternatively, an owner or operator may declare any Group 2 batch process vent to be a Group 1 batch process vent. In such cases, control of the batch process vent is required.

Procedures are included in the standards to demonstrate compliance with the requirement to reduce overall process vent emissions (i.e., continuous and batch process vents) by 84 percent for new SAN affected sources using a batch process.

4. Heat Exchange Systems

Monitoring of cooling water is required to detect leaks in heat exchange systems. If a leak is detected, the heat exchange system must be repaired.

5. Process Contact Cooling Towers

Owners and operators of new affected sources manufacturing PET are prohibited from sending contact condenser effluent associated with a vacuum system to a process contact

cooling tower. Owners and operators of existing PET affected sources using a TPA continuous high viscosity multiple end finisher process are required to monitor ethylene glycol concentration in the cooling tower water and to ensure that the levels do not exceed 4 percent by weight. Procedures for sampling cooling tower water and measuring the ethylene glycol concentration are included in the standards.

6. Wastewater

For demonstrating compliance with the various requirements, the standards allow the owners or operators to either conduct performance tests or to document compliance using engineering calculations. Appropriate compliance and monitoring provisions are included in the standards.

7. Equipment Leaks

Except for certain components at PET affected sources, the final rule retains the use of Method 21 to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. A "leak" is a concentration specified in the regulation for the type of equipment being monitored and is based on the instrument response to methane (i.e., the calibration gas) in air. The rule allows the use of engineering assessment to determine that equipment is not in organic HAP service. If there is disagreement between an owner or operator and the Administrator, the rule specifies that Method 18 or Method 25A be used to determine the organic HAP or total organic compounds (TOC) content of a process stream. To test for leaks in a batch system, test procedures using either a gas or a liquid for pressure testing the batch system are specified.

8. Continuous Parameter Monitoring

The final standards require owners or operators to establish parameter monitoring levels. The standards provide the owner or operator the flexibility to establish the levels based on site-specific information. Site-specific levels can best accommodate variation in emission point characteristics and control device designs. Three procedures for establishing these levels are provided in the final standards. They are based on performance tests; performance tests, engineering assessments, and/or manufacturer's recommendations; and engineering assessments and/or manufacturer's recommendations. While the establishment of a level based solely on performance tests is preapproved by the Administrator, values determined using the last two procedures, which may or may not use the results of performance tests, must be approved by the Administrator for each individual case.

The final standards require the availability of at least 75 percent of monitoring data to constitute a valid days worth of data for continuous and batch process vents. Failure to have a valid day's worth of monitoring data is considered an excursion. The criteria for determining a valid day's or hour's worth of data are provided in the standards.

A certain number of excused excursions have been allowed in the final standards; these provisions are the same as the provisions in the HON. The standards allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, one excused excursion is allowed each semiannual reporting period. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other federal requirements and could choose not to allow the excused excursion provisions contained in these standards.

I. Recordkeeping and Reporting Provisions

The standards require owners or operators of affected sources to maintain required records and reports for a period of at least 5 years. The final standards require that the following reports be submitted, as applicable: (1) Precompliance Report, (2) Emissions Averaging Plan, (3) Notification of Compliance Status, (4) Periodic Reports, and (5) other reports (e.g., notifications of storage vessel internal inspections).

Specific recordkeeping and reporting requirements are specified in each section that addresses an individual emission point (e.g., 63.1321 for batch process vents). The recordkeeping and reporting provisions related to the affected source as a whole (e.g., Notification of Compliance Status) are found in § 63.1335. Requirements found in an individual emission point section and the requirements in § 63.1335 are complementary. For example, § 63.1326 requires an owner or operator to record the batch cycle limitation for each Group 2 batch process vent. § 63.1327 goes on to require the owner or operator to submit this information in the Notification of Compliance Status, as specified in § 63.1335. Finally, § 63.1335 requires submittal of the information specified in § 63.1327.

IV. Summary of Impacts

This section presents impacts resulting from the control of organic HAP emissions under these standards. Because many organic HAP are also VOC, a reduction in VOC emissions will also result from controls imposed by the standards. The standards are estimated to reduce organic HAP emissions from all existing affected sources by 3,520 Mg/yr from a baseline level of 18,120 Mg/yr. For new affected sources, the standards are estimated to reduce organic HAP emissions by 6,870 Mg/yr from a baseline level of 11,610 Mg/yr. At baseline, the EPA found that many affected sources already had some controls in place. These standards generally achieve an emission reduction by meeting the MACT floor level of control. [Note: Costs and other impacts are not considered when the selected standard is based on the MACT floor.] In some cases, these standards achieve additional emission reduction, beyond the floor, that was determined to be cost effective.

Under the final standards, energy use is expected to increase by approximately 29,800 barrels of oil per year for existing affected sources and 43,600 barrels of oil per year for new affected sources. The emissions of secondary air pollutants associated with this energy increase are 70 Mg/yr for existing affected sources and 80 Mg/yr for new affected sources. At the same time, energy credits attributable to the prevention of organic HAP emissions from equipment leaks are approximately 7,000 barrels of oil per year for existing affected sources and 3,800 barrels of oil per year for new affected sources. This results in a net increase in energy usage equivalent to approximately 22,500 barrels of oil per year for existing affected sources and 39,700 barrels of oil per year for new affected sources.

These figures are related to the control of process vents, wastewater operations, and equipment leaks. Energy impacts related to storage vessels were not estimated because many storage vessels would be controlled through the use of internal floating roofs which do not have any associated energy impacts. Data are not available for the EPA to estimate energy impacts for the elimination of emissions from process contact cooling towers for new PET affected sources or the control of ethylene glycol concentration in the process contact cooling tower water for existing PET affected sources using a continuous TPA high viscosity multiple end finisher process.

Cost impacts include the capital costs of new control equipment, the cost of energy (i.e., supplemental fuel, steam, and electricity) required to operate control equipment, operation and maintenance costs, and the cost savings generated by reducing the loss of valuable product in the form of emissions. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with the standards.

Under the standards, it is estimated that total capital costs for existing affected sources would be $10.7 million (1989 dollars), and total annual costs would be $3.3 million (1989 dollars) per year. Total capital costs for new affected sources would be $6.5 million (1989 dollars), and total annual costs would generate a savings of $5.2 million (1989 dollars) per year. It is expected that the actual compliance cost impacts of the standard would be less than presented because of the potential to use common control devices, upgrade existing control devices, use other less expensive control technologies, implement pollution prevention technologies, or use emissions averaging. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices would be utilized, it is not possible to quantify the amount by which actual compliance costs would be reduced.

The economic impact analysis for the selected regulatory alternatives at proposal showed that the estimated price increases for the affected chemicals ranged from 0.1 percent for nitrile to 2.8 percent for SAN. Estimated decreases in output ranged from 0.1 percent for polystyrene to 4.6 percent for SAN. Net annual exports (i.e., exports minus imports) were predicted to decrease by an average of 2.5 percent. These impacts were judged, at proposal, to be acceptable. Because estimated costs of the final standards have decreased, the economic impacts determined at proposal will decrease as well. Therefore, the EPA finds the economic impacts associated with the final standards are less than at proposal and are judged to be acceptable.

V. Significant Comments and Changes to the Proposed Standards

In response to comments received on the proposed standards, changes have been made to the final standards. While several of these changes are clarifications designed to make the EPA's intent clearer, a number of them are significant changes to the requirements of the proposed standards. A summary of the substantive comments and/or changes made since the proposal are described in the following sections. The rationale for these changes and detailed responses to public comments are included in the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996]. Additional information on the final standards is contained in the docket for this rulemaking (see ADDRESSES section of this preamble).

A. Applicability Provisions and Definitions

1. Designation of Affected Source and the Definition of TPPU

Commenters expressed confusion about the definitions of "affected source" and "TPPU" in the proposed standards. The EPA reviewed both definitions and agreed that they needed clarification. In response, the EPA has revised the language describing "affected source" and "TPPU" for the final standards.

The definition of "affected source" included in § 63.502 of the proposed standards was revised and the definition now references § 63.1310(a) of the final rule, and § 63.1310(a) describes the affected source. The provisions in § 63.1310(a), which at proposal were in § 63.500(a) and defined applicability in terms of the existence of one or more TPPUs, have been revised to define applicability in terms of the affected source. As part of this revision, the provisions in proposed § 63.500(b), which described the affected source, were removed. [Note: In the proposed standards, the definition of TPPU attempted to describe all the equipment and operations that would be included in an affected source. In the final standards, the description of what the affected source includes is contained in § 63.1310(a).]

As discussed in section II, an existing affected source is defined as each group of one or more TPPUs that manufacture the same thermoplastic product as their primary product, and (1) are located at a major source plant site, (2) are not exempt, and (3) are not part of a new affected source. A new affected source can be a single TPPU located at major source plant site or a group of TPPUs that manufacture the same thermoplastic product as their primary product at a major source plant site. The situations when a new affected source are created are discussed under A.3 of this section.

The affected source also includes the following emission points and equipment that are associated with each group of TPPU: (1) each wastewater stream; (2) each wastewater operation; (3) each heat exchange system; (4) each process contact cooling tower used in the manufacture of PET that is associated with a new affected source; and (5) each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

For the final standards, the number of existing affected sources present at a plant site will equal the number of thermoplastic products manufactured at that plant site. A plant site manufacturing 3 different thermoplastic products has 3 existing affected sources.

Note: Each different thermoplastic product represents a different subcategory, and each subcategory comprises a separate existing affected source.

The number of existing affected sources at a plant site could range from 1 to 19.

The definition of TPPU was revised and now includes a list of the collection of equipment that comprises a TPPU. This equipment includes process vents from process vessels, storage vessels, and equipment subject to the equipment leaks provisions. Because wastewater streams, wastewater operations, heat exchange systems, and process contact cooling towers are equipment that are often used by more than one TPPU, these items are not included as part of the definition of TPPU. Instead, said items are included in the definition of affected source. Because the portion of each wastewater stream attributable to an individual TPPU can be determined, each wastewater stream can be associated with an affected source. On the other hand, wastewater operations may service wastewater streams associated with more than one affected source, just as heat exchange systems and PET process contact cooling towers could service multiple affected sources. Therefore, for wastewater operations, heat exchange systems, and PET process contact cooling towers, the final rule requires that said emission points and equipment are subject to all applicable requirements associated with each affected source that said emission points and equipment may service. In a simple example, a heat exchange system is associated with two affected sources that are both subject to the final rule. The owner or operator must comply with the provisions for heat exchange systems contained in the final rule. In a more complex example, a piece of wastewater operations equipment services wastewater streams from two affected sources subject to the final rule and from one source subject to the HON.

This piece of wastewater operations equipment must comply with both the final rule and the HON.

2. Definition of Organic HAP

Numerous commenters recommended that the EPA restrict the list of organic HAP in the final standards to those that are used or are present in significant quantities at TPPUs or those that are listed in the HON, subpart F. Table 2. The EPA agreed with the commenters suggestion that a table providing a listing of the specific organic HAP expected to be regulated for each subcategory covered by the standards should be added to the final standards. Therefore, the definition of organic HAP was revised to specify those organic HAP that are known to be used or present in significant quantities for each subcategory, thereby restricting the organic HAP regulated by the final standards. This list is provided in Table 2 of the final standards.

The revised definition of organic HAP was developed using available process description information received from industry and gathered from available literature. Because there may be additional organic HAP present at an affected source, the final standards require owners or operators to identify the presence of any additional organic HAP based on the following criteria: (1) the organic HAP is knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as Title V or the Emergency Planning and Community Right-To-Know Act (EPCRA) Section 311, 312, or 313; and (2) the organic HAP is listed in Table 2 of subpart F.

3. Determining New Source Status

The EPA received comments regarding the procedure for determining if new or existing source requirements would apply to a particular TPPU. In response to those comments, the EPA has revised the provisions in the final standards.

Under the final standards, new affected sources are created under each of the following four situations: (1) if a plant site with an existing affected source producing a thermoplastic product as its primary product constructs a new TPPU also producing the same thermoplastic product as its primary product, the new TPPU is a new affected source if the new TPPU has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of all HAP; (2) when a TPPU is constructed at a major source plant site where the thermoplastic product was not previously produced as the primary product of an existing affected source; (3) if a new TPPU is constructed at a new plant site (i.e., green field site) that will be a major source; and (4) when an existing affected source undergoes reconstruction, thus making the previously existing affected source subject to new source standards.

These revisions reflect the EPA's intent that new source requirements apply if the added TPPU has the potential to emit major quantities, as in the HON, or the added TPPU is a new affected source. The HON applied to only one source category, and it was not possible to add a process unit subject to the HON that was in a new source category. Therefore, the only differentiation to be made under the HON was between process units emitting major quantities of organic HAP and those not emitting major quantities of organic HAP. On the other hand, the thermoplastics standards apply to multiple source categories/subcategories, and it is possible to add a TPPU subject to the thermoplastics standards that is in a new source category/subcategory. For this reason, if a TPPU is added to an existing plant site and said TPPU manufactures a thermoplastic product as its primary product not previously produced at the plant site as the primary product of an existing affected source, that TPPU, regardless of emissions, is a new affected source at that plant site.

4. Solid State PET Processes

Commenters contended that all PET solid state polymerization units, including collocated units, should be exempted from regulation. They stated that PET solid state polymerization units are a vastly different technology than DMT and TPA processes and have different emission characteristics. The EPA has concluded that PET solid state processes are distinct from DMT or TPA processes. The EPA did not collect data on PET solid state processes, and it was not possible to conduct the required analyses for regulating PET solid state processes. Therefore, the final standards do not regulate these processes. However, these processes may be regulated in a future standard.

5. Flexible Operation Units

The flexible operation unit provisions included in the proposed standards, which were modelled after the HON, have been retained in the final standards. Under these provisions, an owner or operator of a process unit that is designed and operated as a flexible operation unit will commit to being subject to this rule or not being subject to this rule based on a five-year projection of products to be manufactured and production quantities.

These provisions were modified to provide clarification of the EPA's intent and flexibility in complying with the provisions. Under the final rule, once an owner or operator commits to being subject to this rule, there are two options for complying. Under the first option, an owner or operator shall determine the group status (i.e., Group 1 or Group 2) of each emission point based on the production of the expected primary product (i.e., the thermoplastic product that convinced the owner or operator to commit to being subject to this rule). Once the group status of each emission point is determined, the owner or operator shall comply with the applicable emission standards for the primary product at all times, regardless of what product is being manufactured. Under the second option, an owner or operator shall determine the group status of each emission point each time a different product is being manufactured, regardless of whether or not said product is a thermoplastic product. Then, for each Group 1 emission point, the owner or operator shall comply with the applicable standards for the primary product. The EPA recognizes that neither option is an ideal situation. Under the first option, an owner or operator may find themselves operating a control device to control a Group 1 emission point that has none to negligible emissions when a different product is being manufactured. Under the second option, an owner or operator may find themselves performing multiple group determinations. Again, the EPA recognizes that neither option is an ideal situation, but believes the tradeoff between these inconveniences and flipping in and out of separate MACT standards is worthwhile.

As part of demonstrating compliance with the rule, an owner or operator required to operate a control device must establish parameter monitoring levels and conduct monitoring. Under either compliance option discussed above an owner or operator must establish parameter monitoring levels to reflect the manufacture of different products. These provisions allow an owner or operator to demonstrate that the parameter monitoring levels established for the primary product are appropriate for the manufacture of other products. If this is not the case, the provisions require that unique parameter monitoring levels be established.

6. Coordination With Other Clean Air Act Requirements

At proposal, the EPA has proposed to amend subpart DDD of 40 CFR part 60 by removing all references to polystyrene and PET facilities. This action was being taken because the proposed thermoplastics standards would supersede the requirements in subpart DDD for polystyrene and PET affected sources after the compliance date of the thermoplastics standards. Commenters also suggested that subpart I of 40 CFR part 63 be amended by removing all references to MBS and MABS affected sources after the compliance date of the thermoplastics standards. Other commenters requested that the EPA further clarify that after the compliance date of the thermoplastics standards, affected sources will no longer be subject to certain NSPS, etc.

The EPA clarified the relationship between the thermoplastics standards and existing applicable standards in § 63.1311 of the final rule. The final rule was revised to state that affected sources subject to both the thermoplastics standards and another subpart are to comply with the provisions of the thermoplastic standards only after the compliance date for the thermoplastic standards, for those standards listed in § 63.1311 (g) through (l) of the final rule. Further, after the compliance date for these standards, these affected sources will no longer be subject to the other subparts. The EPA determined that a clear understanding can be provided in these standards without making modifications to other subparts. Thus, the proposed amendments to subpart DDD were not made as part of the final rulemaking, nor were the suggested amendments made to subpart I. For subpart DDD, the language in the final rule is more specific than for the other subparts. Because subpart DDD regulates multiple emission points (i.e., process vents, equipment leaks, and process contact cooling towers), the EPA needed to consider if it was desired or necessary to continue requiring portions of subpart DDD to apply. In fact, it is necessary to leave the provisions for controlling the ethylene glycol concentration in process contact cooling towers for the PET TPA continuous high viscosity multiple end finisher subcategory intact. This is because the provisions in the thermoplastics rule for the degree of control required for emissions from process contact cooling towers for this subcategory depend on whether or not an existing affected source is subject or becomes subject to subpart DDD for this emission point.

B. Continuous Process Vent Provisions

1. Reorganization of the Standards To Distinguish Between Continuous Process Vents Subject to Provisions From the HON and Continuous Process Vents Subject to Provisions Adapted From the Polymer Manufacturing NSPS

To better distinguish between the various requirements for continuous process vents, the proposed standards were reorganized. In the final standards, separate sections of the rule apply to the following subcategories: those required to comply with subpart G of the HON and those producing PET or polystyrene using a continuous process. In the final standards, § 63.1315 references subpart G; § 63.1316 through § 63.1320 apply to select continuous process vents at affected sources producing polystyrene and PET using a continuous process. Further, because not all process vents at affected sources producing polystyrene and PET using a continuous process are subject to § 63.1316 through § 63.1320, the provisions of § 63.1316 designate which process vents are subject to § 63.1316 through § 63.1320, which are subject to § 63.1315 (i.e., the HON), and which are subject to § 63.1321 (i.e., the batch process vent provisions). This reorganization is one way the EPA changed the standards to reduce complexity and eliminate potential confusion.

2. Applicability of the Polymer Manufacturing NSPS Adapted Provisions to the Collection of Process Sections at an Affected Source

Commenters stated that the regulatory construction of the proposed standards implied that the process vent emission limits adapted from the Polymer Manufacturing NSPS [proposed § 63.505 (b) and (c)] apply to each collection of material recovery sections, raw material preparation sections, and polymerization sections, respectively, within an affected source and not to each individual process section (e.g., material recovery section), as under the Polymer Manufacturing NSPS.

At proposal, the EPA has intended for each individual process section to meet the emission limits in proposed § 63.505 (b) and (c), as applicable. However, since proposal, the EPA has determined that revising the proposed standards to allow each collection of process sections within an affected source to meet the applicable emission limit would simplify compliance while achieving the same emission reductions. Therefore, the final standards apply the emission limits adapted from the Polymer Manufacturing NSPS to each collection of material recovery sections, raw material preparation sections, or polymerization reaction sections, as appropriate, within an affected source.

3. Clarification of Compliance Demonstration Provisions for Final Condenser Temperature Limits

Commenters suggested modifying the provisions adapted from the Polymer Manufacturing NSPS that provide for a demonstration of compliance by limiting the final condenser outlet temperature. Commenters explained that the reporting provisions in the Polymer Manufacturing NSPS state that the temperature limit is only exceeded when the average condenser outlet temperature for a 3-hour period is more than 6 °C above (i.e., warmer) the average operating temperature established during the most recent performance test at which compliance was demonstrated. Commenters requested that the final standards incorporate those monitoring, test method, and recordkeeping and reporting requirements from the Polymer Manufacturing NSPS that provide this flexibility (i.e, the six degree window).

The EPA intended for the proposed standards to be equivalent to the Polymer Manufacturing NSPS in this regard and have revised the final standards to provide the desired flexibility (i.e., the six degree window). In addition, the EPA has disassociated the six degree window from the results of the performance test and has instead associated it with the applicable temperature limit in the standard. The final standards allow all owners or operators complying with the final condenser operating temperature limits to be 6 °C warmer than the applicable temperature limit for the 3-hour averages. The EPA considered that the proposed provisions did not achieve an even-handed implementation of the requirements because some affected sources would be allowed to have 3-hour averages at warmer temperatures than others because their performance test results indicated a temperature closer to the applicable temperature limit.

C. Batch Process Vent Provisions

1. Exemption of Certain Batch Process Vents

Commenters supported the use of cutoffs for the group status determination for batch process vents as found in proposed § 63.506–2(d). Specifically, commenters agreed that low annual organic HAP emissions and low flow rate cutoffs are suitable. Commenters explained that batch

processes are, by nature, suited to low volume production and the manufacture of specialty products, and as such, low flow, low emitting process vents are likely in batch operations.

These provisions were retained in the final rule with one exception. The EPA removed the requirement to determine the volatility class (i.e., low, medium, or high) for batch process vents. As a result, there is a single minimum emission level cutoff in the final provisions of § 63.1323(d). In addition, the EPA chose to add a minimum emission level of 225 kilograms per year (kg/yr) to the definition of batch process vent. This modification made the batch process vent more consistent with the continuous process vent provisions which have a minimum organic HAP concentration level as part of the definition of continuous process vent. An emission point with emissions equal to or less than 225 kg/yr is not considered a batch process vent. At proposal, the 225 kg/yr level was part of the batch process vent group determination procedures; Group 2 batch process vents with annual emissions less than 225 kg/yr were subject to reporting requirements related to process changes.

2. Revisions to Group Determination Procedures

Commenters suggested changing the group determination provisions to only utilize emissions data from a TPPU's primary product. In addition, it was requested that batch process vent group determinations be performed on an annual basis instead of for every process change. Commenters stated that the proposed group determination provisions were considerably more complex than the continuous process vent group determination provisions. Commenters felt that, not only did the batch process vent group determination provisions require an owner or operator to obtain emissions data for every product that it manufactured, but even the most minor process changes (i.e., lengthening cycle times, altering process temperatures and pressures, etc.) triggered the need for a new group determination to be performed. Given the inherent process variability associated with batch operations, commenters contended that it would be very difficult to perform a group determination. Furthermore, because batch units often need to implement sudden process changes in response to customer demands, the proposed provisions could potentially require repeating the group determination exercise several times in a single year. Commenters explained that such a situation would not only serve to complicate a batch unit's compliance status, but could also adversely impact its ability to remain competitive in the marketplace.

Four issues related to the group determination procedures were reviewed by the EPA: (1) a request to perform the group determination on the primary product, (2) a request to perform the group determination on an annual basis, (3) an objection that the group determination procedures require a new group determination to be made whenever minor process changes occur, and (4) an objection to the requirement to perform the group determination when a sudden process change is required.

The EPA has considered the request to perform the group determination on the primary product and agrees that this would provide acceptable results from an environmental perspective while simplifying the compliance requirements for and improving the enforceability of the batch process vent standards. The final rule contains provisions allowing the owner or operator of an affected source to perform the group determination for batch process vents based on annualized production of a single product. To ensure protection to the environment, the final rule specifies that the highest organic HAP emitting product must be used when determining the group status based on a single product.

In addressing the request that the group determination be required on an annual basis instead of for every process change, the EPA believes the proposed rule was clear on this point. The proposed rule required that emissions and average flow rate be determined on an annual basis and describe how to account for the production of different products throughout the year. In this way, the group determination is done on an annual basis and can account for expected changes in the product being produced. The final rule does not reflect any changes related to this specific issue.

The third issue raised was an objection to the requirement that a new group determination be performed whenever minor process changes occur (e.g., lengthening cycle times, altering process temperatures and pressures, etc.). The proposed rule addressed the issue of minor process changes as they affect Group 2 batch process vents. If a process change affecting a Group 2 batch process vent occurs, a group determination must be made. However, the group determination provisions state that "changes that are within the range on which the original group determination was based" are not considered process changes. This allows an owner or operator to perform the initial group determination considering the potential for minor process changes. The EPA believes that the proposed provisions were clear that minor process changes (i.e., variations in operating conditions) do not require that a new group determination be performed. Addressing this concern as it relates to Group 1 batch process vents, the proposed provisions do not require a redetermination of group status for Group 1 batch process vents under any circumstances. Therefore, if minor process changes were to occur, the owner or operator would not be required to perform another group determination. The final rule does not reflect any changes related to this specific issue.

The fourth issue raised was an objection to the requirement to perform a new group determination when a sudden process change is required. In light of the third issue raised, EPA interpreted "sudden process change" to potentially mean (1) that a new product is being made, (2) that the same product is being made in a fundamentally different way (e.g., with different raw materials), or (3) that the same mix of products is being made but in a different proportion. In the first two cases, the EPA desires and intends that a new group determination be made. In the third case, the owner or operator has the flexibility to consider this situation when performing the initial group determination. If this situation was not considered, then a new group determination would be required. The EPA feels that these types of process changes warrant a new group determination to ensure that the emission standards are being met. The final rule does not reflect any changes related to this specific issue.

3. Emissions Testing and Performance Testing

Commenters requested that more flexibility should be allowed in designing an emissions testing scheme for batch process vents. Commenters cited an example, provided as part of the proposed definition of batch emission episode, where the charging of a vessel and the heating of the same vessel are considered two distinct batch emission episodes. In this example, the definition of batch emission episode would necessitate that separate emissions measurements be made for the charging and the heating of the vessel. This would require that a large number of samples be taken to characterize processes that have

multiple, short duration process steps. Commenters felt that the flexibility to test the emissions from several steps as a single batch emission episode would reduce testing costs without jeopardizing the quality of the emissions data. It was suggested that three or more batch cycles could be tested to obtain a representative average emission rate for the batch cycle.

After consideration of this comment, the EPA chose to leave the provisions related to emissions testing of batch process vents unchanged as they relate to this specific comment. The EPA felt adequate data were not presented to warrant changing these provisions. However, the emissions testing provisions in § 63.1323(b) and § 63.1325(c) have been modified to provide flexibility and reduce the burden of testing, while continuing to ensure that results are satisfactory for applicability determinations and performance tests. The final provisions allow an owner or operator to test just a portion of the batch emission episode selected to be controlled when the owner or operator can demonstrate that emissions during the period to be tested represent emissions for the entire batch emission episode or are greater than the average emission rate for the batch emission episode.

4. Flow Rate Estimation Procedures

Commenters asserted that the equations and test methods for calculating annual average flow rate in the proposed rule were not warranted. Commenters felt that the volumetric flow rate testing methods and the requirement to measure flow every 15 minutes specified in proposed § 63.506–2(e) were overly burdensome and would not always provide representative measurements. It was suggested that average flow rates for a batch emission episode are better defined by calculations of displacement volumes with respect to the durations of the displacement episodes or by other more simplified methods.

The EPA agrees that there are more simplified and potentially more accurate techniques for estimating flow rate for batch process vents. The final rule contains provisions that allow engineering assessment, as well as testing, to be used for estimating flow rate.

5. Emissions Estimation Procedures

Commenters recommended removing the emissions estimation equations in proposed § 63.506–2(b) from the rule. Commenters recommended that measurements or engineering estimates be allowed in place of the equations. It was felt the emissions estimation equations would not allow the flexibility necessary to account for differences in process technologies and operating methods.

Commenters also supported the provisions that allowed owners or operators to use direct measurement or engineering assessment to estimate emissions in cases where the emissions estimation equations are inappropriate for a particular type of operation or where, speaking to direct measurement, a more refined estimate of emissions is necessary. However, commenters objected to the requirement to demonstrate that the emissions estimation equations and direct measurement methods are not appropriate before engineering assessment can be used.

In response to the first issue raised, the emissions estimation equations have been retained in the final rule. The EPA found noting in the public comments that would warrant removing these procedures.

In response to the second issue, the EPA believes the data required to use the emissions estimation equations should be obtainable with reasonable effort. Further, specific comments regarding the inaccuracy or inappropriateness of the equations were not made. Given this, the EPA favors a more consistent estimation technique which is provided by the use of the emissions estimation equations, and the final rule requires the owner or operator to demonstrate that the emissions estimation equations are inappropriate before the use of engineering assessment is allowed.

However, independent of the comments provided, the EPA has concluded that direct measurement of emissions may prove to be difficult and may or may not provide an increased assurance of accuracy over the use of engineering assessment. Therefore, if an owner or operator can demonstrate that the emissions estimation equations are not appropriate, the final provisions allow the use of either direct measurement or engineering assessment.

6. Other Changes Resulting From EPA Review

In addition to changes made to the proposed rule as a result of public comment, changes were made as a result of EPA independently reviewing the rule between proposal and promulgation. Because the batch process vent provisions included in the rule are among the EPA's first attempts to regulate batch process vents, the EPA felt an ongoing, independent review of these provisions after proposal was warranted. Changes resulting from this review are listed below:

(1) Allow applicability determinations and compliance demonstrations (i.e., performance tests) to be based on TOC or organic HAP. Allow the use of Method 25A to compliment the use of TOC as a potential basis for applicability determinations and compliance demonstrations.

(2) Allow the establishment of parameter monitoring levels to be based on performance tests or a combination of performance tests and engineering assessment (discussed in more depth in Section H, Monitoring). To accommodate this change, modifications to the batch process vent testing provisions were required.

(3) Add provisions specifying how the batch cycle limitation is to be determined.

(4) Change the reporting requirement for batch cycle limitation records from quarterly to annually.

These changes are discussed in the paragraphs below.

In the final rule, the EPA has allowed the use of TOC as the basis for applicability and compliance demonstrations (i.e., performance tests) as an alternative to organic HAP. The EPA has done this to provide flexibility to the regulated community and to reduce the overall burden of the rule. The EPA considered the impacts of allowing TOC to serve as a surrogate for organic HAP in applicability and compliance demonstrations and did not find any negative impacts. Further, allowing the use of Method 25A as a complement to the use of TOC as a surrogate to organic HAP reduces the burden of implementing the final rule with little to no adverse impact on the measurement of pollutants in the regulated batch process vents. To the best of the EPA's knowledge, the batch process vents regulated by this rule are predominantly organic HAP. Also, with one exception (i.e., ethylene glycol), the regulated organic HAP, which are listed in the definition of organic HAP found in the final rule, have response factors to Method 25A adequate to ensure satisfactory measurement of TOC in the batch process vents. For certain emission points where the EPA considered the presence of ethylene glycol and its corresponding poor response factor to call into question the results that would be obtained using Method 25A, the use of Method 25A is not allowed. For all other emission points, the EPA has allowed the use of TOC for applicability and compliance demonstrations as an alternative to organic HAP in the final rule.

In the final rule, the EPA allows the establishment of parameter monitoring levels to be based on either performance tests, as in the proposed rule, or a combination of performance tests, engineering assessment, and manufacturer's recommendations. This change affects all emission points which are required to establish parameter monitoring levels, including batch process vents. The rationale for this change is discussed in detail in Section H, monitoring, of this document. For batch process vents, this change in the procedures for establishing parameter monitoring levels necessitated changes to the performance test provisions. When an owner or operator chooses to establish parameter monitoring levels based exclusively on performance tests, the final rule directs that the performance test must include the entire batch emission episode selected to be controlled. As discussed earlier, an owner or operator may choose to control just a portion of a batch emission episode; in such a scenario, the performance test must include the entire portion of the batch emission episode selected to be controlled. Alternatively, when an owner or operator chooses to establish parameter monitoring levels based on a combination of performance tests, engineering assessment, and manufacturer's recommendations, the final rule allows an owner or operator to test either the entire batch emission episode, or portion thereof, selected to be controlled or to test only the entire batch emission episode, or portion thereof, selected to be controlled.

Note: The flexibility to test a period of the batch emission episode that is less than the entire batch emission episode, or portion thereof, selected to be controlled is discussed earlier in this section.

The final rule includes provisions specifying how the batch cycle limitation, required for Group 2 batch process vents, is to be established. The EPA felt that the proposed rule was ambiguous concerning the establishment of the batch cycle limitation and added these provisions to make the rule complete. The added provisions provide additional description of the purpose of the batch cycle limitation and describe what documentation is required as part of establishing the batch cycle limitation.

In the final rule, the EPA changed the requirement for reporting the number and type of batch cycles accomplished for a Group 2 batch process vent from quarterly to annually. The EPA felt that quarterly reporting was unwarranted given that the compliance requirement (i.e., the batch cycle limitation) was on an annual basis.

D. Wastewater Provisions

1. Steam Stripping Styrene-Containing Wastewater Streams

Numerous commenters claimed that the selection of steam stripping as the basis of the standards for the treatment of styrene-containing wastewater streams was inappropriate due to polymerization problems. The EPA acknowledges that steam stripping styrene-containing wastewaters may prove to be impractical in some cases due to issues raised by the commenters. However, steam stripping is not required by the standards. Both the proposed and final wastewater provisions provide several options for complying with the standards. If the owner or operator judges steam stripping to be impractical for their process, one of the other wastewater compliance options may be used. The EPA considers one of these compliance options, the use of enclosed sewers to a biological treatment operation unit, a favorable option because styrene is highly biodegradable. Further, because the organic HAP emitted from the subcategories regulated by this rule are highly biodegradable, the EPA has determined that it is not necessary to require affected sources to demonstrate that 95 percent of the mass of organic HAP listed in Table 9 of the HON are removed when using a biological treatment unit, as required by the HON. Therefore, the final thermoplastic rule does not require an owner or operator to make this demonstration.

2. Elimination of Regulations Pertaining to Wastewater From Polystyrene Affected Sources

In addition to considering the comments made concerning the impracticality of steam stripping styrene-containing wastewaters, the EPA evaluated the need to regulate wastewater from polystyrene affected sources. Because the water solubility of styrene is limited to approximately 300 ppm and styrene is the only known organic HAP emitted during the production of polystyrene, it is not possible for a wastewater stream that only contains styrene to meet the Group 1 applicability criteria (i.e., 1,000 ppm minimum concentration). Therefore, because, to the best of EPA's knowledge, there can be no Group 1 wastewater streams at a polystyrene affected source, the final standards do not regulate wastewater from this subcategory.

E. Process Contact Cooling Tower Provisions

1. Ethylene Glycol Jet Retrofit for PET Existing Affected Sources

Commenters disagreed with the EPA's position that ethylene glycol jets are the vacuum systems technology of choice for a retrofit application and with the EPA determination that ethylene glycol jets are cost effective. Commenters contended that the EPA had failed to consider numerous costs factors and design considerations.

Note: While the proposed standards did not require the use of ethylene glycol jets, they were the technology on which the prohibition of process contact cooling towers was based.

Based on the data available at proposal, the costs and emission reductions achievable through the use of ethylene glycol jets in retrofit situations were acceptable. The EPA knew that the proposed standards for ethylene glycol jets were based on limited data and limited knowledge obtained from one manufacturer of PET. The EPA took special effort to make this clear and to solicit comments on the installation and operation of ethylene glycol jets in the preamble to the proposed standards (see pages 16104 and 16107 of the preamble). Based on the comments provided, the EPA agrees that ethylene glycol jets are not a suitable retrofit technology for existing affected sources, either technically or economically, for meeting the provisions of the proposed standards that prohibit the use of process contact cooling towers. These comments are presented and discussed in detail in the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996].

As explained in chapter 6.0 of the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996], steam jet vacuum systems can be used to create a vacuum on the process vessels, contact condensers can be used to condense steam, and the contact condenser effluent can be recirculated to the process contact cooling tower. In the process contact cooling tower, stripping and drift may occur, resulting in organic HAP emissions to the atmosphere. Volatilization of organic HAP from the vacuum system may also occur. The following paragraphs describe some of the public comments on this issue and the EPA's responses.

Given that the EPA was convinced by the commenters' arguments that ethylene glycol jets are not a suitable retrofit technology for existing affected sources, the EPA considered alternate

options for controlling emissions from the vacuum system. Both volatile organic HAP (VOHAP) and ethylene glycol are emitted from the vacuum system, and the EPA chose to approach each of these emissions separately.

To address VOHAP emissions from the vacuum system at existing sources, the final standards treat the contact condenser effluent as wastewater and apply the same provisions to it as are applied to process wastewater. Contact condenser effluent is considered process wastewater based on the proposed wastewater provisions, and without any special provisions or specific mention, the wastewater provisions will apply. The EPA judged that treating the contact condenser effluent prior to any significant opportunity for volatilization protects the environment. Further, the HON wastewater provisions, which are the basis for the wastewater provisions in the proposed and final standards, have been judged to be environmentally effective and cost effective overall. Therefore, it the wasetwater provisions deem a wasterwater stream to be Group 2 (i.e., not requiring control), that means it is not cost effective to control any VOHAP that may be contained in that wastewater stream.

Addressing emissions from the process contact cooling tower was more complex.

Note: The HON did not specifically address process contact cooling towers because they are not used extensively in the synthetic organic chemical manufacturing industry (SOCMI).

Given that the emissions of VOHAP would be dealt with through the use of the wastewater provisions at existing affected sources, the key issue related to cooling towers became the emissions of ethylene glycol. Between proposal and promulgation, the EPA spent considerable effort gathering information on PET vacuum systems and their emissions. Much of this effort focused on emissions from the cooling towers, specifically emissions of ethylene glycol. In addition to gathering information on emissions, the EPA investigated control options aimed at reducing emissions of ethylene glycol from cooling towers. Possible control options, not considering ethylene glycol jets, included treating a slipstream of the cooling tower water to reduce the concentration of ethylene glycol or installing a large heat exchanger to isolate the cooling tower from the process. None of these control options were shown to be cost effective. All of the factors discussed above have led the EPA to conclude that, with one exception discussed below, specific provisions for controlling emissions from process contact cooling towers are not warranted for existing affected sources. Instead, the EPA is requiring that the wastewater provisions be applied to all vacuum system wastewater.

The one exception where it was found to be cost effective to control emissions from existing process contact cooling towers was for affected sources manufacturing PET using a continuous TPA high viscosity multiple end finisher process. Based on industry reported emissions, total ethylene glycol emissions for all PET subcategories are approximately 340 Mg/yr, and approximately 230 Mg/yr are being emitted from the single plant site that is part of this subcategory. This subcategory is required to keep the concentration of ethylene glycol in the process contact cooling tower water to 4 percent by weight or less.

As at proposal, the final standards require that owners or operators of new affected sources manufacturing PET not send contact condenser effluent associated with a vacuum system to a process contact cooling tower.

2. Vacuum System Wastewater

Many commenters objected to the proposed provision designating all contact condenser effluent as Group 1 wastewater streams. Commenters stated that the EPA had not provided adequate rationale explaining why the standards for contact condenser effluent were more stringent than the standards for other wastewater streams. Because the automatic designation of contact condenser effluent as Group 1 wastewater was done in an effort to make the use of noncontact condensers within steam-based vacuum systems equivalent to ethylene glycol jets, and that need no longer exists for existing affected sources, there is no longer a need or justification to designate all contact condenser effluent from existing PET affected sources as Group 1 wastewater. As a result, the EPA has changed the final standards to implement the group determination procedure (i.e., Group 1 or Group 2) for contact condenser effluent from existing PET affected sources.

On the other hand, the final standards continue to prohibit the use of process contact cooling towers for new PET affected sources.

Note: This requirement is equivalent to the MACT floor.

However, the provisions designating all contact condenser effluent streams from new PET affected sources as Group 1 wastewater have been dropped from the final standards. Like existing PET affected sources, the final standards implement the group determination procedure for contact condenser effluent from new PET affected sources. As described earlier, the purpose for designating all contact condenser effluent streams as Group 1 wastewater was to ensure equivalency between the use of ethylene glycol jets and the use of noncontact condensers. At the time of proposal, the EPA considered ethylene glycol jets to be pollution free because there was no wastewater stream produced. The automatic designation of all contact condenser effluent as Group 1 wastewater was meant to address the absence of wastewater when ethylene glycol jet systems are used. Since proposal, the EPA has come to understand that the use of ethylene glycol jets does not eliminate emissions because the additional loading to the glycol recovery unit can create additional emissions from process vents or wastewater streams or both.

Realizing that ethylene glycol jets are not pollution free, the EPA considered the additional emissions at the glycol recovery unit when ethylene glycol jets are used and the emissions from the contact condenser effluent when noncontact condensers are used.

Note: The use of ethylene glycol jets would still achieve more control than using steam jets and subjecting the contact condenser effluent to the wastewater provisions.

In either case, an equivalent quantity of VOHAP is introduced to the vacuum system from the process. Process vents and wastewater streams at the glycol recovery unit are subject to the appropriate provisions of the standards. For example, a wastewater stream at the glycol recovery unit would be subject to a group determination and, based on the results, would be controlled if required. The EPA judged that to require the same action for the contact condenser effluent from noncontact condensers would ensure equivalency between a new affected source using ethylene glycol jets and one using noncontact condensers.

F. Equipment Leak Provisions

1. Polystyrene

A number of commenters stated that the EPA had overestimated the emissions from equipment leaks at polystyrene affected sources in general and, in particular, from components containing styrene as the organic HAP. The commenters claimed that the use of the average SOCMI emission factors to estimate emissions was inappropriate because the vapor pressure of styrene at typical operating conditions in

polystyrene affected sources equates to a concentration of less than 10,000 ppm and no leaks would be detected using a leak definition of 10,000 ppm. The commenters also stated that the effect of using the average SOCMI emission factors was to justify the HON equipment leak program (i.e., subpart H) and that, if the EPA used a more realistic estimate of emissions (e.g., the emission factor for components with concentrations less than 10,000 ppm), a re-evaluation of the costs and emission reductions would likely result in a conclusion that the HON is not cost effective. The commenters recommended that if any program was to be implemented for polystyrene affected sources and especially for components in styrene service, it should either be a visual-only program or, at most, a program based on a State Reasonably Achievable Control Technology (RACT) program.

In response to these comments, the EPA re-evaluated the analysis that served as the basis for proposing the equipment leak provisions from the HON for polystyrene and other styrene-based resin affected sources.

Note: The results of this re-evaluation are contained in Item IV–B–2, Docket A–92–45.

In re-evaluating that analysis, the EPA determined the MACT floor for each subcategory. Because a MACT floor was determined to exist and the Clean Air Act does not allow the EPA to set a standard less stringent than the MACT floor, the EPA determined that some standard must be set for these subcategories.

The EPA agrees with the commenters that the average SOCMI emission factors are likely to overestimate emissions from components containing or contacting styrene. Therefore, the EPA lowered the emission factors used to estimate the emissions from these components. The EPA also adjusted leak rate factors based on additional data and comments from the industry. Adjustments to the emission factors and leak rates had the effect of reducing both the overall emission estimates and the emission reductions associated with the current industry programs, the MACT floor programs, and the HON program.

In addition, the EPA re-evaluated the costing program used to estimate the costs for the various equipment leak programs. Errors were discovered in the costing program. The net effect of correcting these errors was to lower the estimated costs for all of the various equipment leak programs. The incremental differences between the various programs decreased as well, but not by as much as the overall costs.

To determine whether or not the subpart H provisions were cost effective, the EPA examined the incremental costs and emission reductions between the HON program and the MACT floor program for each of the subcategories.

[Note: In the original analysis, the EPA examined the cost between the HON program and each facility's specific current program.]

Based on the incremental differences between the HON and the MACT floor programs, the EPA determined that the HON requirements are cost effective for each of the styrene-based resin subcategories, including the three polystyrene subcategories. Therefore, the EPA has retained the HON requirements in the final rule.

2. PET

Many commenters objected to the imposition of the HON equipment leak requirements on PET affected sources, especially those using the TPA process. These commenters stated that, due to the preponderance of components in heavy liquid service, no program should be imposed or, if a program is required, it should simply be a visual-only program. Some of the commenters referred to the rationale in the development of the Polymer Manufacturing NSPS [40 CFR part 60, subpart DDD], which exempted PET affected sources using a continuous TPA process from equipment leak regulation.

As was done for the styrene-based resin subcategories, the EPA re-evaluated the emission estimates and cost estimates for all of the PET subcategories. The results of this re-evaluation are found in Item IV–B–3, Docket A–92–45. The following actions were taken as part of the re-evaluation. First, the EPA lowered the emission factors used to estimate emissions from components in heavy liquid service to take into account the properties of ethylene glycol. Second, the EPA limited the re-evaluation of costs and emission reductions to only those facilities that provided specific component profiles (i.e., component counts and types of service). The results of the re-evaluation showed that, except for one PET subcategory, the HON requirements are cost effective. Thus, the final rule retains, for the most part, the HON requirements for the PET subcategories.

Note: Modifications to the HON requirements are discussed below.

The re-evaluation of the proposed equipment leak provisions showed that the provisions were not cost effective for PET affected sources using a continuous TPA high viscosity multiple end finisher process. Thus, this subcategory, which currently contains only one affected source, is exempt from the equipment leak requirements in the final rule.

With regard to exempting PET affected sources altogether based on the exemption contained in the Polymer Manufacturing NSPS, the EPA does not agree with the commenters. During the development of the Polymer Manufacturing NSPS, information available to the EPA indicated that all components at PET TPA continuous facilities were in heavy liquid service. Information provided by the industry during the development of this rulemaking, however, shows the presence of components in gas/vapor service and in light liquid service at some PET TPA facilities. The decision to require an equipment leak program for this rulemaking is based on this newer information. However, the EPA continues to agree that, if a PET TPPU consists solely of components in heavy liquid service, or in vacuum service, then said TPPU should be exempt from the equipment leak standards. The final rule contains this provision.

Many commenters were concerned about the recordkeeping and reporting requirements, especially for PET TPA affected sources where the vast majority of components are in heavy liquid service. While the EPA believes the original requirements were the minimum required to ensure compliance with the overall program, the EPA has reduced the burden of the recordkeeping and reporting requirements for these subcategories in light of the preponderance of components in heavy liquid service. The most significant change is the elimination of the requirement to initially list the identification numbers of components in heavy liquid service.

Finally, several commenters expressed concern with the use of Method 21 to detect leaks from components in ethylene glycol (i.e., heavy liquid) service, stating in part that Method 21 would not detect an ethylene glycol leak based on the properties of ethylene glycol and the operating conditions of the process. The EPA agrees that Method 21 is inappropriate for determining ethylene glycol leaks where the leaking component is in heavy liquid service. However, § 63.169 of subpart H does not require the use of Method 21; it is one of two alternatives for determining the presence of leaks from components in heavy liquid service. The other alternative is to use a sensory-based detection method. The final rule has been revised to clarify that leaks are to be determined exclusively through the use of visual, audible,

olfactory, and any other detection methods; Method 21 is not to be used to determine leaks from components in heavy liquid service at PET facilities.

G. Emissions Averaging Provisions

1. Number of Emission Points Allowed in Emissions Averaging

Numerous commenters requested that the number of emission points allowed in an emissions average be increased to 20 points from the 5 points allowed at proposal. If pollution prevention measures are used, commenters requested that an additional 5 emission points be allowed from the 3 emission points allowed at proposal. The commenters stated that this would be consistent with the HON.

In response to comments and to be more consistent with the HON and the proposed Group I Polymers and Resins NESHAP, the number of emission points allowed in emissions averaging at a plant site has been increased to 20 points, with an additional 5 points allowed if pollution prevention measures are used. These values (i.e., 20/25) are the maximum allowed for all emissions averages at a plant site, regardless of the number of affected sources present at a plant site or the number of emissions averaging programs implemented.

2. Including Batch Process Vents in Emissions Averaging

Several commenters requested that batch process vents be included in the emissions averaging provisions. The EPA had not allowed emissions averaging of batch process vents at proposal. The proposal preamble stated that the accuracy and consistency of emissions estimates needed for emissions averaging were considered to be greater than those needed for applicability determinations. However, upon review, the EPA has determined that having the same procedures to estimate emissions for applicability determinations and emissions averaging is reasonable. The final standards allow emissions averaging of existing batch process vents as well as aggregate batch vent streams.

H. Compliance and Performance Test Provisions and Monitoring Requirements

1. Excused Excursions

Many commenters requested that the proposed standards allow excused excursions in the same way that the HON allows excused excursions. In the final standards, the EPA included provisions to excuse a certain number of excursions for each reporting period. These provisions are identical to the HON provisions. The decision to include excused excursion provisions was based on data and information presented in public comments received on the proposed standards and received during industry meetings held after proposal. The commenters contended that by not allowing excused excursions in these standards, the EPA has made these standards more stringent than the HON, which the proposed standards and the costs of the proposed standards were modelled after. The commenters requested that the EPA justify the increased cost of imposing the more stringent "no excused excursion" provisions. The EPA agreed with the commenters that not allowing excused excursions could impose significant additional capital and operating costs on the affected source for only negligible corresponding reductions in air emissions. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other federal requirements and could choose not to allow the excused excursion provisions contained in these standards.

The EPA considered the number of excused excursions that would be most appropriate for these standards and determined that the number of excursions allowed in the HON is reasonable. Therefore, the final standards allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, affected sources are allowed one excused excursion per semiannual reporting period.

2. Parameter Monitoring Levels

Commenters requested that more flexibility be permitted for establishing compliance levels for parameter monitoring. The commenters asked the EPA to allow the use of the HON range concept, which recognizes that a process or control device operates properly over a range of conditions.

The EPA revised the requirements for establishing parameter monitoring levels to incorporate the concepts included in the HON range concept.

Note: The final standards continue to use the term level.

Under the final rule, the owner or operator can choose between three procedures for establishing parameter monitoring levels. By providing the flexibility to establish parameter monitoring levels based on one of the three procedures, site-specific levels can be chosen which best accommodate variation in emission point characteristics and control device designs. These three procedures for establishing parameter monitoring levels are based on: (1) performance tests; (2) performance tests, engineering assessments, and/or manufacturer's recommendations; and (3) engineering assessments and/or manufacturer's recommendations. The establishment of a parameter monitoring level based solely on performance tests is preapproved by the Administrator; however, parameter monitoring values determined using the last two procedures, which may or may not use the results of performance tests, must be approved by the Administrator for each individual case.

3. Other Changes Resulting from EPA Review

In addition to changes made to the proposed rule as a result of public comment, changes were made as a result of EPA independently reviewing the rule between proposal and promulgation. In the final rule, the EPA has allowed the use of TOC, minus methane and ethane, as the basis for compliance demonstrations (i.e., performance tests) as an alternative to organic HAP for continuous process vents, batch process vents, storage vessels, and wastewater streams.

Note: The term "TOC," as used in the remainder of this discussion and as defined in the final rule, denotes "TOC, minus methane and ethane."

The final rule also allows the use of TOC as an alternate basis for applicability determinations for batch process vents; TOC is not allowed as an alternate basis for applicability determinations for continuous process vents. In addition, the final rule allows the use of Method 25A to measure TOC in these instances were TOC serves as an alternative basis for compliance demonstrations or applicability determinations.

These changes were made to provide flexibility to the regulated community and to reduce the overall burden of the rule. The EPA considered the impacts of allowing TOC to serve as a surrogate for organic HAP in compliance demonstrations and did not find any adverse impacts. Further, in allowing the use of Method 25A as a complement to the use of TOC as a surrogate to organic HAP, the EPA judged that the burden of implementing the final rule would be reduced with no adverse impacts.

As proposed, the provisions concerning applicability determinations and compliance demonstrations allowed an owner or operator to measure total organic HAP *or* TOC; however, the proposed rule required Method 18 for measurement of organic compounds in both cases. In light of this, the major difference between the proposed and final rule is the flexibility to use Method 25A in measuring TOC. In deciding to allow the use of Method 25A, the EPA considered the composition of the emission streams and considered provisions that could be implemented to safeguard against inappropriate uses of Method 25A. To the best of the EPA's knowledge, the emission streams regulated by this rule are predominantly organic HAP. Also, with one exception (i.e., ethylene glycol), the regulated organic HAP, which are listed in the definition of organic HAP found in the final rule, have response factors to Method 25A adequate to ensure satisfactory emissions measurements. To safeguard against inadequate emissions measurements that might result from the inappropriate use of Method 25A, the final rule specifies the calibration gas to be used (i.e., the organic HAP representing the largest percent by volume) and what is an acceptable response for the calibration gas (i.e., 20 times the standard deviation of the response from the zero calibration gas).

In considering the use of TOC as an alternate basis for applicability determinations, and the complementary use of Method 25A to measure TOC, the EPA evaluated applicability determinations for continuous process vents and batch process vents.

[Note: The applicability determination procedures for storage vessels and wastewater streams do not use airborne organic HAP concentration values. Therefore, the use of Method 25A for these emission points is not applicable.]

The applicability determination procedure for continuous process vents (i.e., the TRE equation) requires an owner or operator to estimate the concentration and emission rate for both organic HAP and TOC. Because both of these values are required and were the basis for the original TRE analysis, the EPA judged that it was inappropriate to use TOC as an alternate basis to organic HAP for the applicability determinations for continuous process vents. On the other hand, the original analysis for batch process vents (i.e., the Batch Processes ACT) was based on the control of TOC; thus, the EPA considered the use of TOC as an alternate basis for the applicability determinations for batch process vents to be satisfactory.

I. Recordkeeping and Reporting

Several commenters stated that the recordkeeping and reporting requirements of the proposed standards were extremely burdensome. These commenters requested that the EPA reduce unnecessary recordkeeping and reporting requirements in the final standards. Commenters requested that the frequency with which records must be retained be reduced. The commenters also contended that records should only be required if an excursion has occurred. The commenters contended that records showing compliance with the standards were unnecessary.

The EPA has made every effort to reduce the recordkeeping requirements of the final thermoplastics rule. The EPA recognizes that unnecessary recordkeeping and reporting requirements would burden both the affected source and EPA enforcement agencies.

The EPA reviewed the recordkeeping required by the proposed rule and has made reductions in the amount of information that is required to be recorded. The final rule has been changed to require recording and retention of hourly average values of continuously monitored values. The proposal required that 15-minute averages be calculated and recorded. Under the proposal, if the daily average value was above the minimum or below the maximum established parameter monitoring levels (i.e., excess emissions occurred), the 15-minute values had to be retained; if the daily average value did not exceed the established parameter monitoring level, the 15-minute values could be converted to hourly averages, and the hourly averages could be retained instead of the 15-minute averages. Upon reconsideration, the EPA found that hourly average values provide a sufficient record to support the calculation of the daily average value. Therefore, to reduce the recordkeeping burden, the rule has been changed to specify that only hourly averages must be calculated and recorded. The rule no longer requires calculating or recording of 15-minute average values.

For emission points where continuous parameter monitoring is required, the value of the parameter must still be measured at least once every 15 minutes, but only the hourly average must be calculated and recorded. Many facilities already have computerized systems and monitor parameters more frequently than once every 15 minutes for process control purposes. The 15-minute monitoring frequency is consistent with the General Provisions and previous NSPS and NESHAP for emission points from similar industries.

In addition, the EPA added provisions [§ 63.1335(h)] that allow an owner or operator to implement a reduced recordkeeping program provided that certain criteria related to the monitoring system and the performance of the process, as it relates to maintaining compliance with the monitoring provisions, are met. Under these provisions it is possible for an owner or operator to retain only daily average values or, after a period of 6 consecutive months without an excursion, to retain no daily records.

The EPA believes that the recordkeeping requirements of the final rule are necessary to show compliance. The EPA will continue to require owners or operators to keep records, regardless of whether there was an excursion or not. These records are necessary to prove compliance when no excursion has occurred and are used to determine the severity of a violation, and, thus, how much of a penalty should be assessed once an excursion has occurred.

The EPA has made every effort to reduce the reporting requirements of the final rule. The EPA reviewed each report required at proposal, and determined that two of these reports, the Initial Notification and the Implementation Plan, contained many requirements that were duplicative with the existing operating permit program. For this reason, the EPA has removed the requirements for the Initial Notification and Implementation Plan from the final rule.

The EPA considers the recordkeeping and reporting requirements of the final rule to be the minimum necessary to ensure compliance.

Upon further review, the EPA decided to add a new report, the Precompliance Report, to the final rule to allow the owner or operator of an affected source to request an extension of compliance or to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, or alternative controls. At proposal, these items were submitted in the Implementation Plan. Overall, these changes, deleting the Initial Notification and the Implementation Plan and adding the Precompliance Report, result in a reduction of the reporting burden for the affected source.

VI. Administration Requirements

A. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of the final standards. The principal purposes of the docket are:

(1) To allow interested parties to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process; and

(2) To serve as the record in case of judicial review, except for interagency review materials as provided for in section 307(d)(7)(A).

B. Executive Order 12866

Under Executive Order 12866 [58 FR 5173, October 4, 1993], the EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in standards that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect, in a material way, the economy, 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 entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(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 the Executive Order, the OMB has notified the EPA that it considers that a "significant regulatory action" within the meaning of the Executive Order. The EPA submitted this action to the OMB for review. Changes made in response to suggestions or recommendations from the OMB were documented and included in the public record.

C. Paperwork Reduction Act

The information collection requirements for this NESHAP have been submitted for approval to the OMB under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by the EPA (ICR. No. 1737.01), and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460, or by calling (202) 260–2740.

The public recordkeeping and reporting burden for this collection of information is estimated to average approximately 4,000 hours per respondent, at approximately 1,000 hours per response for 4 responses each, for each of the first 3 years following promulgation of the rule. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the reviewing the collection of information.

Sent comments regarding the recordkeeping and reporting burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., 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 (RFA) (Pub. L. 96–354, September 19, 1980) requires Federal agencies to give special consideration to the impact of regulation on small businesses. The RFA specifies that a final regulatory flexibility analysis must be prepared if a final regulation will have a significant economic impact on a substantial number of small entities. To determine whether a final RFA is required, a screening analysis, otherwise known as an initial RFA, is necessary.

Regulatory impacts are considered significant if:

(1) Annual compliance costs increase total costs of production by more than 5 percent, or

(2) Annual compliance costs as a percent of sales are at least 20 percent (percentage points) higher for small entities, or

(3) Capital cost of compliance represent a significant portion of capital available to small entities, or

(4) The requirements of the regulation are likely to result in closures of small entities.

A "substantial number" of small entities is generally considered to be more than 20 percent of the small entities in the affected industry.

Consistent with Small Business Administration (SBA) size standards, a thermoplastic producing firm is classified as a small entity if it has less than 750 employees and is unaffiliated with a larger entity. Based upon this criterion, only one firm, an MBS producer, employs less than 750 workers.

Data were available to examine two of the criteria; these were the potential for closure, and comparison of compliance costs as a percentage of sales.

For criterion one, the affected source is not expected to fall at risk of closure from the regulations, thus this criterion is not met. Also, the compliance costs were only 0.001 percent of total sales for the affected source, and this does not meet criterion two. Because the economics analysis lead to the conclusion that not MBS facilities at risk of closure, this criterion is not met.

In conclusion, and pursuant to section 605(b) of the RFA, the Administrator certifies that these standards will not have a significant economic impact on a substantial number of small entities. The basis for this certification is that the economic impacts for small entities do not meet or exceed the criteria in the Guidelines to the Regulatory Flexibility Act of 1980, as shown above. Further information on the initial RFA is available in the background information package (see **SUPPLEMENTARY INFORMATION** section).

E. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

The SBREFA Subtitle D requires more rigorous regulatory flexibility analyses. It also requires the EPA to undertake a small entity stakeholder process involving the Small Business Administration (SBA) and the OMB prior to proposing a rule for which a regulatory flexibility analysis is required. In addition, it subjects agency compliance with many aspects of the amended Regulatory Flexibility Act (RFA) to judicial rule. Subtitle D of the SBREFA takes effect to rulemakings proposed as of June 28, 1996. Therefore, it does not apply to this rulemaking.

Subtitle E of SBREFA establishes opportunity for Congress to review and potentially disapprove nonmajor rules promulgated on or after March 29, 1996. With limited exceptions, it provides that no rule promulgated on or after March 29, 1996, may take effect until it is submitted to Congress and the Comptroller General along with specified supporting documentation. Different requirements apply to major rules. This rule, which is nonmajor, is being submitted to Congress in accordance with these requirements.

F. Unfunded Mandates

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

The EPA has determined that the final standards do not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this section.

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 63

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

Dated: May 15, 1996.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, parts 9 and 63 of title 40, chapter I of the Code of Federal Regulations are 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, 1318, 1321, 1326, 1330, 1342, 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 the new entries to the table under the indicated heading in numerical order 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[3]	
63.1311	2060–0351
63.1314	2060–0351
63.1315	2060–0351
63.1319	2060–0351
63.1320	2060–0351
63.1325–1332	2060–0351
63.1335	2060–0351

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

* * * * *

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, *et seq.*

2. Part 63 is amended by adding subpart JJJ to read as follows:

Subpart JJJ—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

Secs.

63.1310 Applicability and designation of affected sources.
63.1311 Compliance schedule and relationship to existing applicable rules.
63.1312 Definitions.
63.1313 Emission standards.
63.1314 Storage vessel provisions.
63.1315 Continuous process vents provisions.
63.1316 PET and polystyrene continuous process affected sources—emissions control provisions.
63.1317 PET and polystyrene continuous process affected sources—monitoring provisions.
63.1318 PET and polystyrene continuous process affected sources—testing and compliance demonstration provisions.
63.1319 PET and polystyrene continuous process affected sources—recordkeeping provisions.
63.1320 PET and polystyrene continuous process affected sources—reporting provisions.
63.1321 Batch process vents provisions.
63.1322 Batch process vents—reference control technology.
63.1323 Batch process vents—methods and procedures for group determination.
63.1324 Batch process vents—monitoring provisions.
63.1325 Batch process vents—performance test methods and procedures to determine compliance.
63.1326 Batch process vents—recordkeeping provisions.
63.1327 Batch process vents—reporting provisions.
63.1328 Heat exchange systems provisions.
63.1329 Process contact cooling towers provisions.
63.1330 Wastewater provisions.
63.1331 Equipment leak provisions.
63.1332 Emissions averaging provisions.
63.1333 Additional test methods and procedures.
63.1334 Parameter monitoring levels and excursions.
63.1335 General recordkeeping and reporting provisions.

Subpart JJJ—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

§ 63.1310 Applicability and designation of affected sources.

(a) *Definition of affected source.* The provisions of this subpart apply to each affected source. An affected source is either an existing affected source or a new affected source. Existing affected source is defined in paragraph (a)(6) of this section, and new affected source is defined in paragraph (a)(7) of this section. The affected source also includes the emission points and equipment specified in paragraphs (a)(1) through (a)(5) of this section that are associated with each group of TPPU.

(1) Each wastewater stream.

(2) Each wastewater operation.

(3) Each heat exchange system.

(4) Each process contact cooling tower used in the manufacture of PET that is associated with a new affected source.

(5) Each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

(6) Except as specified in paragraphs (b) through (d) of this section, an existing affected source is defined as each group of one or more thermoplastic product process units (TPPUs) that is not part of a new affected source as defined in paragraph (a)(7) of this section, that is manufacturing the same primary product, where each TPPU uses as a reactant, or uses as a process solvent, or produces as a by-product or co-product any organic hazardous air pollutant (organic HAP), and that is located at a plant site that is a major source.

(7) Except as specified in paragraphs (b) through (d) of this section, a new affected source is defined as a source meeting the criteria of paragraph (a)(7)(i), (a)(7)(ii), or (a)(7)(iii) of this section:

(i) At a plant site previously without HAP emissions points, each group of one or more TPPUs manufacturing the same primary product that is part of a major source on which construction commenced after March 29, 1995;

(ii) A TPPU meeting the criteria in paragraph (i)(1)(i) of this section; or

(iii) A reconstructed affected source meeting the criteria in paragraph (i)(2)(i) of this section.

(b) *TPPUs exempted from the affected source.* For a TPPU to be excluded from the designation of affected source due to the fact that it does not use as a reactant, or use as a process solvent, or produce as a by-product or co-product any organic HAP, the owner or operator shall comply with the requirements of paragraph (b)(1) of this section and shall comply with the requirements of paragraph (b)(2) of this section if requested to do so by the Administrator.

(1) Retain information, data, and analysis used to document the basis for the determination that the TPPU does not use as a reactant or use as a process solvent, or manufacture as a by-product or a co-product any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, or engineering calculations.

(2) When requested by the Administrator, demonstrate that the TPPU does not use as a reactant, or use as a process solvent, or manufacture as a by-product or co-product any organic HAP.

(c) *Emission points exempted from the affected source.* The affected source does not include the emission points listed in paragraphs (c)(1) through (c)(6) of this section:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems in segregated sewers;

(3) Spills;

(4) Water from safety showers;

(5) Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only; and

(6) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year.

(d) *Processes exempted from the affected source.* The processes specified in paragraphs (d)(1) through (d)(5) of this section are exempted from the affected source:

(1) Research and development facilities;

(2) Polymerization processes occurring in a mold;

(3) Processes which manufacture binder systems containing a thermoplastic product for paints, coatings, or adhesives;

(4) Finishing processes including equipment such as compounding units, spinning units, drawing units, extruding units, and other finishing steps; and

(5) Solid state polymerization processes.

(e) *Applicability determination of nonthermoplastic equipment included in a TPPU producing a thermoplastic product.* If a polymer that is not subject to this subpart is produced within the equipment (i.e., collocated) making up a TPPU and at least 50 percent of said polymer is used in the production of a thermoplastic product manufactured by said TPPU, the unit operations involved in the production of said polymer are considered part of the TPPU and are subject to this rule except as specified in this paragraph (e). If said unit operations are subject to another MACT standard regulating the same emission points, said unit operations are not subject to this subpart.

(f) *Primary product determination and applicability.* The primary product of a process unit shall be determined according to the procedures specified in paragraphs (f)(1) through (f)(2) of this section. Paragraphs (f)(3) through (f)(4) of this section describe whether or not a process unit is subject to this subpart. Paragraphs (f)(5) through (f)(7) of this section discuss compliance for those TPPUs operated as flexible operation units, as specified in paragraph (f)(2) of this section.

(1) If a process unit only manufactures one product, then that product shall represent the primary product of the process unit.

(2) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraphs (f)(2)(i) or (f)(2)(ii) of this section based on the anticipated operations for the 5 years following September 12, 1996 for existing affected sources and for the first 5 years after initial start-up for new affected sources.

(i) If the flexible operation unit will manufacture one product for the greatest operating time over the five year period, then that product shall represent the primary product of the flexible operation unit.

(ii) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest production on a mass basis over the five year period shall represent the primary product of the flexible operation unit.

(3) If the primary product of a process unit is a thermoplastic product, then said process unit is considered a TPPU. If said TPPU meets all the criteria of paragraph (a) of this section, it is either an affected source or is part of an affected source comprised of other TPPU subject to this rule at the same plant site with the same primary product. The status of a process unit as a TPPU and as an affected source or part of an affected source shall not change regardless of what products are produced in the future by said TPPU, with the exception noted in paragraph (f)(3)(i) of this section.

(i) If a process unit terminates the production of all thermoplastic products and does not anticipate the production of any thermoplastic product in the future, the process unit is no longer a TPPU and is not subject to this rule after notification is made as specified in paragraph (f)(3)(ii) of this section.

(ii) The owner or operator of a process unit that wishes to remove the TPPU designation from the process unit, as specified in paragraph (f)(3)(i) of this section, shall notify the Administrator. This notification shall be accompanied by rationale for why it is anticipated that no thermoplastic products will be produced in the process unit in the future.

(iii) If a process unit meeting the criteria of paragraph (f)(3)(i) of this section begins the production of a thermoplastic product in the future, the owner or operator shall use the procedures in paragraph (f)(4)(i) of this section to determine if the process unit is re-designated as a TPPU.

(4) If the primary product of a process unit is not a thermoplastic product, then said process unit is not an affected source nor is it part of any affected source subject to this rule. Said process unit is not subject to this rule at any time, regardless of what product is being produced. The status of a process unit as not being a TPPU, and therefore not an affected source nor part of an affected source subject to this subpart, shall not change regardless of what products are produced in the future by said TPPU, with the exception noted in paragraph (f)(4)(i) of this section.

(i) If, at any time beginning September 12, 2001, the owner or operator determines that a thermoplastic product is the primary product for the process unit based on actual production data for any preceding consecutive five-year period, then the process unit shall be designated as a TPPU. If said TPPU meets all the criteria of paragraph (a) of this section and is not subject to another subpart of 40 CFR part 63, it is either an affected source or part of an affected source and shall be subject to this rule.

(ii) If a process unit meets the criteria of paragraph (f)(4)(i) of this section, the

owner or operator shall notify the Administrator within 6 months of making this determination. The TPPU, as the entire affected source or part of an affected source, shall be in compliance with the provisions of this rule within 3 years from the date of such notification.

(iii) If a process unit is re-designated as a TPPU but does not meet all the criteria of paragraph (a) of this section, the owner or operator shall notify the Administrator within 6 months of making this determination. Said notification shall include documentation justifying the TPPU's status as not being an affected source or not being part of an affected source.

(5) Once the primary product of a process unit has been determined to be a thermoplastic product and it has been determined that all the criteria of paragraph (a) of this section are met for said TPPU, the owner or operator of the affected source shall comply with the standards for the primary product. Owners or operators of flexible operation units shall comply with the standards for the primary product as specified in either paragraph (f)(5)(i) or (f)(5)(ii) of this section, except as specified in paragraph (f)(5)(iii) of this section.

(i) Each owner or operator shall determine the group status of each emission point that is part of said flexible operation unit based on emission point characteristics when the primary product is being manufactured. Based on this finding, the owner or operator shall comply with the applicable standards for the primary product for each emission point, as appropriate, at all times, regardless of what product is being produced.

(ii) Alternatively, each owner or operator shall determine the group status of each emission point that is part of said flexible operation unit based on the emission point characteristics when each product produced by the flexible operation unit is manufactured, regardless of whether said product is a thermoplastic product or not. Based on these findings, the owner or operator shall comply with the applicable standards for the primary product for each emission point, as appropriate, regardless of what product is being produced.

Note: Under this scenario it is possible that the group status, and therefore the requirement to achieve emission reductions, for an emission point may change depending on the product being produced.

(iii) Whenever a flexible operation unit manufactures a product that meets the criteria of paragraph (b) of this section (i.e., does not use or produce any organic HAP), all activities associated with the manufacture of said product shall be exempt from the requirements of this rule, to include the operation and monitoring of control or recovery devices.

(6) The determination of the primary product for a process unit, to include the determination of applicability of this subpart to process units that are designed and operated as flexible operation units, shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5) when the primary product is determined to be a thermoplastic product. The Notification of Compliance Status shall include the information specified in either paragraph (f)(6)(i) or (f)(6)(ii) of this section. If the primary product is determined to be something other than a thermoplastic product, the owner or operator shall retain information, data, and analysis used to document the basis for the determination that the primary product is not a thermoplastic product.

(i) If the TPPU manufactures only one thermoplastic product, identification of said thermoplastic product.

(ii) If the TPPU is designed and operated as a flexible operation unit, the information specified in paragraphs (f)(6)(ii)(A) through (f)(6)(ii)(C) of this section, as appropriate.

(A) Identification of the primary product.

(B) Information concerning operating time and/or production mass for each product that was used to make the determination of the primary product under paragraph (f)(2)(i) or (f)(2)(ii) of this section.

(C) Identification of which compliance option, either paragraph (f)(5)(i) or (f)(5)(ii) of this section, has been selected by the owner or operator.

(7) To demonstrate compliance with the rule during those periods when a flexible operation unit that is subject to this subpart is producing a product other than a thermoplastic product or is producing a thermoplastic product that is not the primary product, the owner or operator shall comply with either paragraphs (f)(7)(i) through (f)(7)(ii) or paragraph (f)(7)(iii) of this section.

(i) Establish parameter monitoring levels, as specified in § 63.1334, for those emission points designated as Group 1, as appropriate.

(ii) Submit the parameter monitoring levels developed under paragraph (f)(7)(i) of this section and the basis for them in the Notification of Compliance Status report as specified in § 63.1335(e)(5).

(iii) Demonstrate that the parameter monitoring levels established for the primary product are also appropriate for those periods when products other than the primary product are being produced. Material demonstrating this finding shall be submitted in the Notification of Compliance Status report as specified in § 63.1335(e)(5).

(g) *Storage vessel ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(8) of this section to determine to which process unit a storage vessel shall belong.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on September 12, 1996, said storage vessel shall belong to the process unit subject to the other subpart.

(2) If a storage vessel is dedicated to a single process unit, the storage vessel shall belong to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall belong to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., said process unit has the predominant use of the storage vessel).

(4) If predominant use cannot be determined for a storage vessel that is shared among process units and if one of those process units is a TPPU subject to this subpart, the storage vessel shall belong to said TPPU.

(5) If predominant use cannot be determined for a storage vessel that is shared among process units and if more than one of the process units are TPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the storage vessel to any one of the said TPPUs.

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 12, 1996 or based on the expected utilization for the 5 years following September 12, 1996 for existing affected sources, whichever is more representative of the expected operations for said storage vessel, and based on the first 5 years after initial start-up for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If the storage vessel begins receiving material from (or sending material to) another process unit; or ceasing to receive material from (or send material to) a process unit; or if the

applicability of this subpart to a storage vessel has been determined according to the provisions of paragraphs (g)(1) through (g)(6) of this section and there is a significant change in the use of the storage vessel that could reasonably change the predominant use, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(8) Where a storage vessel is located at a major source that includes one or more process units which place material into, or receive materials from the storage vessel, but the storage vessel is located in a tank farm, the applicability of this subpart shall be determined according to the provisions in paragraphs (g)(8)(i) through (g)(8)(iv) of this section.

(i) The storage vessel may only be assigned to a process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw materials, as appropriate). With respect to any process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, this subpart does not apply to the storage vessel.

(iii) If there is only one process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that process unit.

(iv) If there are two or more process units at the major source that meet the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraph (g)(7) of this section. The predominant use shall be determined among only those thermoplastic product process units that meet the criteria of paragraph (g)(8)(i) of this section.

(h) *Recovery operation equipment ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (h)(1) through (h)(7) of this section to determine to which process unit recovery operation equipment shall belong.

(1) If recovery operation equipment is already subject to another subpart of 40 CFR part 63 on September 12, 1996, said recovery operation equipment shall belong to the process unit subject to the other subpart.

(2) If recovery operation equipment is used exclusively by a single process unit, the recovery operation shall belong to that process unit.

(3) If recovery operation equipment is shared among process units, then the recovery operation equipment shall belong to that process unit located on the same plant site as the recovery operation equipment that has the greatest input into or output from the recovery operation equipment (i.e., said process unit has the predominant use of the recovery operation equipment).

(4) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if one of those process units is a TPPU subject to this subpart, the recovery operation equipment shall belong to said TPPU.

(5) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if more than one of the process units are TPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the recovery operation equipment to any one of said TPPUs.

(6) If the predominant use of recovery operation equipment varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 12, 1996 or based on the expected utilization for the 5 years following September 12, 1996 for existing affected sources, whichever is the more representative of the expected operations for said recovery operations equipment, and based on the first 5 years after initial start-up for new affected sources. This determination shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If there is an unexpected change in the utilization of recovery operation equipment that could reasonably change the predominant use, the owner or operator shall redetermine to which process unit the recovery operation belongs by reperforming the procedures specified in paragraphs (h)(2) through (h)(6) of this section.

(i) *Changes or additions to plant sites.* The provisions of paragraphs (i)(1) through (i)(4) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (i)(5) of this section provides examples of what are and are not considered process changes for purposes of paragraph (i) of this section.

(1) *Adding a TPPU to a plant site.* The provisions of paragraphs (i)(1)(i) through (i)(1)(ii) of this section apply to owners or operators that add TPPUs to a plant site.

(i) If a TPPU is added to a plant site, said addition shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by September 12, 1996, whichever is later, if said addition meets the criteria specified in paragraphs (i)(1)(i)(A) through (i)(1)(i)(B) and either (i)(1)(i)(C) or (i)(1)(i)(D) of this section:

(A) Said addition meets the definition of construction in § 63.2;

(B) Such construction commenced after March 29, 1995; and

(C) Said 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, and the primary product of said addition is currently produced at the plant site as the primary product of an affected source; or

(D) The primary product of said addition is not currently produced at the plant site as the primary product of an affected source and the plant site meets, or after the addition is completed will meet, the definition of major source.

(ii) If a TPPU is added to a plant site, said addition shall be subject to the requirements for an existing affected source in this subpart upon initial start-up or by 3 years after September 12, 1996, whichever is later, if said addition does not meet the criteria specified in paragraph (i)(1)(i) of this section and the plant site meets, or after the addition is completed will meet, the definition of major source.

(2) *Adding emission points or making process changes to existing affected sources.* The provisions of paragraphs (i)(2)(i) through (i)(2)(ii) of this section apply to owners or operators that add emission points or make process changes to an existing affected source.

(i) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source, said affected source shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by September 12, 1996, whichever is later, if said process change or addition meets the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section:

(A) Said process change or addition meets the definition of reconstruction in § 63.2; and

(B) Such reconstruction commenced after March 29, 1995.

(ii) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source and said process change or addition does not meet the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section, the resulting emission point(s) shall be subject to the requirements for an existing affected source in this subpart. Said emission point(s) shall be in compliance upon initial start-up or by 3 years after September 12, 1996, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making said process change or addition. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(iii) To establish a compliance date for an emission point or points specified in paragraph (i)(2)(ii) of this section, the procedures specified in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section shall be followed.

(A) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(B) The compliance schedule shall be submitted within 180 days after the process change or addition is made or the information regarding said change or addition is known to the owner or operator, unless the compliance schedule has been previously submitted to the permitting authority. The compliance schedule may be submitted in the next Periodic Report if the process change or addition is made after the date the Notification of Compliance Status report is due.

(C) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(3) *Existing source requirements for Group 2 emission points that become Group 1 emission points.* If a process change or addition that does not meet the criteria in paragraph (i)(1) or (i)(2) of this section is made to an existing plant site or existing affected source, and the change causes a Group 2 emission point to become a Group 1 emission point, for said emission point, the owner or operator shall comply with the requirements of this subpart for existing Group 1 emission points. Compliance shall be achieved as expeditiously as practicable, but in no event later than 3 years after said emission point becomes a Group 1 emission point.

(4) *Existing source requirements for some emission points that become subject to the requirements of subpart H of this part.* If a compressor becomes subject to § 63.164, the owner or operator shall be in compliance upon initial start-up or by 3 years after September 12, 1996, whichever is later, 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 (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(5) *Determining what are and are not process changes.* For purposes of paragraph (i) of this section, examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is a replacement, removal, or the addition of recovery equipment. For purposes of paragraph (i) 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 report required by § 63.1335(e)(5).

(j) *Applicability of this subpart except during periods of start-up, shutdown, and malfunction.* Each provision set forth in this subpart or referred to in this subpart shall apply at all times except during periods of start-up, shutdown, and malfunction if the start-up, shutdown, or malfunction precludes the ability of a particular emission point of an affected source to comply with one or more specific provisions to which it is subject. Start-up, shutdown, and malfunction is defined in § 63.1312 for all emission points except equipment leaks subject to subpart H of this part, which shall follow the provisions for periods of start-up, malfunction, and process unit shutdown, as defined in § 63.161. Only then shall an emission point not be required to comply with all applicable provisions of this subpart.

§ 63.1311 Compliance schedule and relationship to existing applicable rules.

(a) Affected sources are required to achieve compliance on or before the dates specified in paragraphs (b) through (d) of this section. Paragraph (e) of this section provides information on requesting compliance extensions. Paragraphs (f) through (l) of this section discuss the relationship of this subpart to subpart A of this part and to other applicable rules. Where an override of another authority of the Act is indicated in this subpart, only compliance with the provisions of this subpart is required. Paragraph (m) of this section specifies the meaning of time periods.

(b) New affected sources that commence construction or reconstruction after March 29, 1995 shall be in compliance with this subpart upon initial start-up or September 12, 1996, whichever is later, as provided in § 63.6(b).

(c) Existing affected sources shall be in compliance with this subpart (except for § 63.1331 for which compliance is covered by paragraph (d) of this section) no later than 3 years after September 12, 1996, as provided in § 63.6(c), unless an extension has been granted as specified in paragraph (e) of this section.

(d) Except as provided for in paragraphs (d)(1) through (d)(5) of this section, existing affected sources shall be in compliance with § 63.1331 no later than March 12, 1997 unless a request for a compliance extension is granted pursuant to Section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6).

(1) Compliance with the compressor provisions of § 63.164 shall occur no later than September 12, 1997 for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iii) of this section if the work can be accomplished without a process unit shutdown, as defined in § 63.161:

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed; or

(iii) A new barrier fluid will be utilized which requires changes to the existing barrier fluid system.

(2) Compliance with the compressor provisions of § 63.164 shall occur no later than February 12, 1998 for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(ii) of this section:

(i) The compressor meets one or more of the criteria specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(B) of this section:

(A) The work can be accomplished without a process unit shutdown as defined in § 63.161; or

(B) The additional time is actually necessary due to the unavailability of parts beyond the control of the owner or operator.

(ii) The owner or operator submits the request for a compliance extension to the Environmental Protection Agency

(EPA) Regional Office at the addresses listed in § 63.13 no later than 45 calendar days before March 12, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i) (A), (B), and (D). Unless the EPA Regional Office objects to the request for a compliance extension within 30 calendar days after receipt of the request, the request shall be deemed approved.

(3) If compliance with the compressor provisions of § 63.164 cannot reasonably be achieved without a process unit shutdown, as defined in § 63.161, the owner or operator shall achieve compliance no later than September 14, 1998. The owner or operator who elects to use this provision shall submit a request for a compliance extension in accordance with the requirements of paragraph (d)(2)(ii) of this section.

(4) If compliance with the compressor provisions of § 63.164 cannot be achieved without replacing the compressor or recasting the distance piece, the owner or operator shall achieve compliance no later than September 13, 1999. The owner or operator who elects to use this provision shall submit a request for a compliance extension in accordance with the requirements of paragraph (d)(2)(ii) of this section.

(5) Compliance with the provisions of § 63.170 shall occur no later than September 13, 1999.

(e) 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. 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 or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than the date the Precompliance Report is required to be submitted in § 63.1335(e)(3)(i). The dates specified in § 63.6(i) for submittal of requests for extensions shall not apply to this subpart.

(1) A request for an extension of compliance shall include the data described in § 63.6(i)(6)(i) (A),(B), and (D).

(2) The requirements in § 63.6(i)(8) through § 63.6(i)(14) shall govern the review and approval of requests for extensions of compliance with this subpart.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(g)(1) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of subpart I of this part, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said affected source shall no longer be subject to subpart I of this part.

(2) Said affected sources that elected to comply with subpart I of this part through a quality improvement program, as specified in § 63.175 or § 63.176 or both, may elect to continue these programs without interruption as a means of complying with this subpart. In other words, becoming subject to this subpart does not restart or reset the "compliance clock" as it relates to reduced burden earned through a quality improvement program.

(h) After the compliance dates specified in this section, a storage vessel that belongs to an affected source subject to this subpart 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. After the compliance dates specified in this section, said storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(i)(1) Except as provided in paragraph (i)(2) of this section, after the compliance dates specified in this section, affected sources producing PET using a continuous terephthalic acid process, producing PET using a continuous dimethyl terephthalate process, or producing polystyrene resin using a continuous process subject to this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, are required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said sources shall no longer be subject to 40 CFR part 60, subpart DDD.

(2) Existing affected sources producing PET using a continuous terephthalic acid high viscosity multiple end finisher process shall continue to be subject to 40 CFR 60.562–1(c)(2)(ii)(C). Once said affected source becomes subject to and achieves compliance with § 63.1329(c) of this subpart, said affected source is no longer subject to the provisions of 40 CFR part 60, subpart DDD.

(j) Affected sources subject to this subpart that are also subject to the provisions of subpart Q of this part shall comply with both subparts.

(k) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart VV, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said source shall no longer be subject to 40 CFR part 60, subpart VV.

(l) After the compliance dates specified in this section, a distillation operation that belongs to an affected source subject to this subpart 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. After the compliance dates specified in this section, said distillation operation shall no longer be subject to 40 CFR part 60, subpart NNN.

(m) All terms in this subpart that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods.

(1) Notwithstanding time periods specified in this subpart for completion of required tasks, such time periods may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(2) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraphs (m)(i) or (m)(ii) of this section, as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(3) In all instances where a provision of this subpart requires completion of a task during each multiple successive period, an owner or operator may perform the required task at any time during the specified period, provided

that the task is conducted at a reasonable interval after completion of the task during the previous period.

§ 63.1312 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in §.63.2, § 63.101, § 63.111, and § 63.161 as specified after each term:

Act (§ 63.2)
Administrator (§ 63.2)
Automated monitoring and recording system (§ 63.111)
Average concentration (§ 63.111)
Boiler (§ 63.111)
Bottoms receiver (§ 63.161)
By compound (§ 63.111)
By-product (§ 63.101)
Car-seal (§ 63.111)
Chemical manufacturing process unit (§ 63.101)
Closed-vent system (§ 63.111)
Co-product (§ 63.101)
Combustion device (§ 63.111)
Commenced (§ 63.2)
Compliance date (§ 63.2)
Compliance schedule (§ 63.2)
Connector (§ 63.161)
Construction (§ 63.2)
Continuous monitoring system (§ 63.2)
Continuous record (§ 63.111)
Continuous recorder (§ 63.111)
Cover (§ 63.111)
Distillation unit (§ 63.111)
Emission standard (§ 63.2)
Emissions averaging (§ 63.2)
EPA (§ 63.2)
Equipment (§ 63.161)
Equipment leak (§ 63.101)
Existing source (§ 63.2)
External floating roof (§ 63.111)
Fill (§ 63.111)
Fixed roof (§ 63.111)
Flame zone (§ 63.111)
Flexible operation unit (§ 63.101)
Floating roof (§ 63.111)
Flow indicator (§ 63.111)
Group 1 wastewater streams (§ 63.111)
Group 2 wastewater streams (§ 63.111)
Halogens and hydrogen halides (§ 63.111)
Hazardous air pollutant (§ 63.2)
Impurity (§ 63.101)
In organic hazardous air pollutant service (§ 63.161)
Incinerator (§ 63.111)
Instrumentation system (§ 63.161)
Internal floating roof (§ 63.111)
Lesser quantity (§ 63.2)
Major source (§ 63.2)
Malfunction (§ 63.2)
Mass flow rate (§ 63.111)
Maximum true vapor pressure (§ 63.111)
New source (§ 63.2)
Open-ended valve or line (§ 63.161)
Operating permit (§ 63.101)
Organic HAP service (§ 63.161)
Organic monitoring device (§ 63.111)
Owner or operator (§ 63.2)
Performance evaluation (§ 63.2)
Performance test (§ 63.2)
Permitting authority (§ 63.2)
Plant site (§ 63.101)
Point of generation (§ 63.111)
Potential to emit (§ 63.2)
Primary fuel (§ 63.111)
Process heater (§ 63.111)
Process unit shutdown (§ 63.161)
Process wastewater (§ 63.101)
Process wastewater stream (§ 63.111)
Product separator (§ 63.111)
Reactor (§ 63.111)
Reconstruction (§ 63.2)
Recovery device (§ 63.111)
Reference control technology for process vents (§ 63.111)
Reference control technology for storage vessels (§ 63.111)
Reference control technology for wastewater (§ 63.111)
Relief valve (§ 63.111)
Research and development facility (§ 63.101)
Residual (§ 63.111)
Run (§ 63.2)
Secondary fuel (§ 63.111)
Sensor (§ 63.161)
Shutdown (§ 63.2)
Specific gravity monitoring device (§ 63.111)
Start-up (§ 63.2)
Start-up, shutdown, and malfunction plan (§ 63.101)
State (§ 63.2)
Surge control vessel (§ 63.161)
Temperature monitoring device (§ 63.111)
Test method (§ 63.2)
Total resource effectiveness index value (§ 63.111)
Treatment process (§ 63.111)
Unit operation (§ 63.101)
Visible emission (§ 63.2)
Waste management unit (§ 63.111)
Wastewater (§ 63.101)
Wastewater stream (§ 63.111)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in §§ 63.2, 63.101, 63.111, or 63.161 and in this section, it shall have the meaning given in this section for purposes of this subpart.

Acrylonitrile butadiene styrene latex resin (ABS latex) means ABS produced through an emulsion process, however the product is not coagulated or dried as typically occurs in an emulsion process.

Acrylonitrile butadiene styrene resin (ABS) means styrenic terpolymers consisting primarily of acrylonitrile, 1,3-butadiene, and styrene monomer units. ABS is usually composed of a styrene-acrylonitrile copolymer continuous phase with dispersed butadiene derived rubber.

Acrylonitrile styrene acrylate resin (ASA) means a resin formed using acrylic ester-based elastomers to impact-modify styrene acrylonitrile resin matrices.

Aggregate batch vent stream means a gaseous emission stream containing only the exhausts from two or more batch process vents that are ducted together before being routed to a control device that is in continuous operation.

Affected source is defined in § 63.1310(a).

Alpha methyl styrene acrylonitrile resin (AMSAN) means copolymers consisting primarily of alpha methyl styrene and acrylonitrile.

Average flow rate, as used in conjunction with wastewater provisions, is determined by the specifications in § 63.144(c); or, as used in conjunction with batch process vent provisions, is determined by the specifications in § 63.1323(e).

Batch cycle means the operational step or steps, from start to finish, that occur as part of a batch unit operation. Batch cycle limitation means an enforceable restriction on the number of batch cycles that can be performed in a year for an individual batch process vent.

Batch emission episode means a discrete emission venting episode associated with a single batch unit operation. Multiple batch emission episodes may occur from a single batch unit operation.

Batch process means a discontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of the process vary with time. Addition of raw material and withdrawal of product do not typically occur simultaneously in a batch process. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Batch process vent means a point of emission from a batch unit operation having a gaseous emission stream with annual organic HAP emissions greater than 225 kilograms per year. Batch process vents exclude relief valve discharges and leaks from equipment regulated under § 63.1331.

Batch unit operation means a unit operation operated in a batch process mode.

Compounding unit means a unit operation which blends, melts, and resolidifies solid polymers for the purpose of incorporating additives, colorants, or stabilizers into the final thermoplastic product. A unit operation whose primary purpose is to remove residual monomers from polymers is not a compounding unit.

Continuous process means a process where the inputs and outputs flow continuously through sequential manufacturing steps throughout the duration of the process. Continuous processes typically approach steady-state conditions. Continuous processes typically involve the simultaneous addition of raw material and withdrawal of product. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Continuous process vent means a point of emission from a continuous unit operation within an affected source having a gaseous emission stream containing greater than 0.005 weight percent total organic HAP. Continuous process vents exclude relief valve discharges and leaks from equipment regulated under § 63.1331.

Continuous unit operation means a unit operation operated in a continuous process mode.

Control device is defined in § 63.111, except that the term "process vents" shall be replaced with the term "continuous process vents subject to § 63.1315" for the purpose of this subpart.

Drawing unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then pulling it through an orifice to create a continuously extruded product.

Emission point means an individual continuous process vent, batch process vent, storage vessel, wastewater stream, equipment leak, heat exchange system, or process contact cooling tower.

Emulsion process means a process carried out with the reactants in an emulsified form (e.g., polymerization reaction).

Expandable polystyrene resin (EPS) means a polystyrene bead to which a blowing agent has been added using either an in-situ suspension process or a post-impregnation suspension process.

Extruding unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then forcing it through an orifice to create a continuously extruded product.

Group 1 batch process vent means a batch process vent releasing annual organic HAP emissions greater than the level specified in § 63.1323(d) and with a cutoff flow rate, calculated in accordance with § 63.1323(f), greater than or equal to the annual average flow rate.

Group 2 batch process vent means a batch process vent that does not fall within the definition of a Group 1 batch process vent.

Group 1 continuous process vent means a continuous process vent releasing a gaseous emission stream that has a total resource effectiveness index value, calculated according to § 63.115, less than or equal to 1.0 unless the continuous process vent is associated with existing thermoplastic product process units that produce methyl methacrylate butadiene styrene resin, then said vent falls within the Group 1 definition if the released emission stream has a total resource effectiveness index value less than or equal to 3.7.

Group 2 continuous process vent means a continuous process vent that does not fall within the definition of a Group 1 continuous process vent.

Group 1 storage vessel means a storage vessel at an existing affected source that meets the applicability criteria specified in Table 2 or Table 3 of this subpart, or a storage vessel at a new affected source that meets the applicability criteria specified in Table 4 or Table 5 of this subpart.

Group 2 storage vessel means a storage vessel that does not fall within the definition of a Group 1 storage vessel.

Halogenated aggregate batch vent stream means an aggregate batch vent stream determined to have a total mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated batch process vent means a batch process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated continuous process vent means a continuous process vent 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 specified in § 63.115(d)(2)(v).

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water) designed and operated to not allow contact between the cooling medium and process fluid or gases (i.e., a noncontact system). A heat exchange system can include more than one heat exchanger and can include recirculating or once-through cooling systems.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the TPPU 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 wastewater include descaling of heat exchanger tubing bundles, cleaning distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, reactor and equipment washdown, and draining of portions of the TPPU for repair.

Mass process means a process carried out through the use of thermal energy (e.g., polymerization reaction). Mass processes do not utilize emulsifying or suspending agents, but can utilize catalysts or other additives.

Material recovery section means the equipment that recovers unreacted or by-product materials from any process section for return to the TPPU, off-site purification or treatment, or sale. Equipment used to store recovered materials are not included. Equipment designed to separate unreacted or by-product material from the polymer product are to be included in this process section, provided that at the time of initial compliance some of the material is recovered for reuse in the process, off-site purification or treatment, or sale. Otherwise, such equipment are to be assigned to one of the other process sections, as appropriate. If equipment are used to recover unreacted or by-product material and return it directly to the same piece of process equipment from which it was emitted, then said recovery equipment are considered part of the process section that contains the process equipment. On the other hand, if equipment are used to recover unreacted or by-product material and return it to a different piece of process equipment in the same process section, said recovery equipment are considered part of a material recovery section. Equipment that treats recovered materials are to be included in this process section, but equipment that also treats raw materials are not to be included in this process section. The latter equipment are to be included in the raw materials preparation section. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are not included in the material recovery section; they are to be included in the polymerization reaction section. Equipment used for the on-site recovery of ethylene glycol *and* other materials (e.g., methanol) from PET plants are not included in the material recovery section; these equipment are to be included in the polymerization reaction section.

Methyl methacrylate acrylonitrile butadiene styrene resin (MABS) means

styrenic polymers containing methyl methacrylate, acrylonitrile, butadiene, and styrene. MABS is 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 resin (MBS) means styrenic polymers containing methyl methacrylate, butadiene, and styrene. Production of MBS is achieved using an emulsion process in which methyl methacrylate and styrene are grafted onto a styrene-butadiene rubber.

Nitrile resin means a resin produced through the polymerization of acrylonitrile, methyl acrylate, and butadiene latex using an emulsion process.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 6 of this subpart or any other chemical which is:

(1) Knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as Title V or the Emergency Planning and Community Right-To-Know Act section 311, 312, or 313; and

(2) Listed in Table 2 of subpart F of this part.

PET using a dimethyl terephthalate process means the manufacturing of PET based on the esterification of dimethyl terephthalate with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

PET using a terephthalic acid process means the manufacturing of PET based on the esterification reaction of terephthalic acid with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

Poly(ethylene terephthalate) resin (PET) means a polymer or copolymer comprised of at least 50 percent bis-(2-hydroxyethyl)-terephthalate by weight.

Polymerization reaction section means the equipment designed to cause monomer(s) to react to form polymers, including equipment designed primarily to cause the formation of short polymer chains (e.g., oligomers or low polymers), but not including equipment designed to prepare raw materials for polymerization (e.g., esterification vessels). For the purposes of these standards, the polymerization reaction section begins with the equipment used to transfer the materials from the raw materials preparation section and ends with the last vessel in which polymerization occurs. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are included in this process section, rather than in the material recovery process section.

Polystyrene resin means a thermoplastic polymer or copolymer comprised of at least 80 percent styrene or para-methylstyrene by weight.

Primary product is defined in and determined by the procedures specified in § 63.1310(f).

Process contact cooling tower system means a cooling tower system that is designed and operated to allow contact between the cooling medium and process fluid or gases.

Process section means the equipment designed to accomplish a general but well-defined task in polymers production. Process sections include, but are not limited to, raw materials preparation, polymerization reaction, and material recovery. A process section may be dedicated to a single TPPU or common to more than one TPPU.

Process unit means a collection of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture a product.

Process vent means a point of emission from a unit operation having a gaseous emission stream. Typical process vents include condenser vents, dryer vents, vacuum pumps, steam ejectors, and atmospheric vents from reactors and other process vessels, but do not include pressure relief valves.

Product means a compound or material which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Raw materials preparation section means the equipment at a polymer manufacturing plant designed to prepare raw materials, such as monomers and solvents, for polymerization. For the purposes of these standards, this process section begins with the equipment used to transfer raw materials from storage and/or the equipment used to transfer recovered material from the material recovery process sections, and ends with the last piece of equipment that prepares the material for polymerization. The raw materials preparation section may include equipment that is used to purify, dry, or otherwise treat raw materials or raw and recovered materials together; to activate catalysts; and to promote esterification including the formation of some short polymer chains (oligomers). The raw materials preparation section does not include equipment that is designed primarily to accomplish the formation of oligomers, the treatment of recovered materials alone, or the storage of raw materials.

Recovery operations equipment means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation unit, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

Solid state polymerization unit means a unit operation which, through the application of heat, furthers the polymerization (i.e., increases the intrinsic viscosity) of polymer chips.

Steady-state conditions means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values can occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP and that has been assigned, according to the procedures in § 63.1310(g), to a TPPU that is subject to this subpart. Storage vessels do 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 breathing or working losses to the atmosphere;

(3) vessels with capacities smaller than 38 cubic meters;

(4) vessels and equipment storing and/or handling material that contains no organic HAP and/or organic HAP as impurities only; and

(5) wastewater storage tanks.

Styrene acrylonitrile resin (SAN) means copolymers consisting primarily of styrene and acrylonitrile monomer units.

Suspension process means a process carried out with the reactants in a state of suspension, typically achieved through the use of water and/or suspending agents (e.g., polymerization reaction).

Thermoplastic product means one of the following types of products:

(1) ABS latex;

(2) ABS using a batch emulsion process;

(3) ABS using a batch suspension process;

(4) ABS using a continuous emulsion process;

(5) ABS using a continuous mass process;

(6) ASA/AMSAN;

(7) EPS;

(8) MABS;

(9) MBS;

(10) nitrile resin;
(11) PET using a batch dimethyl terephthalate process;
(12) PET using a batch terephthalic acid process;
(13) PET using a continuous dimethyl terephthalate process;
(14) PET using a continuous terephthalic acid process;
(15) PET using a continuous terephthalic acid high viscosity multiple end finisher process;
(16) polystyrene resin using a batch process;
(17) polystyrene resin using a continuous process;
(18) SAN using a batch process; or
(19) SAN using a continuous process.

Thermoplastic product process unit (TPPU) means a collection of equipment assembled and connected by process pipes or ducts, excluding gas, sanitary sewage, water (i.e., not wastewater), and steam connections, used to process raw materials and to manufacture a thermoplastic product as its primary product. This collection of equipment includes process vents from process vessels; storage vessels, as determined in § 63.1310(g); and the equipment (i.e., pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are associated with the thermoplastic product process unit) that are subject to the equipment leak provisions as specified in § 63.1331.

Total organic compounds (TOC) means those compounds excluding methane and ethane measured according to the procedures of Method 18 or Method 25A, 40 CFR part 60, appendix A.

Year means any consecutive 12-month period or 365 rolling days. For the purposes of emissions averaging, the term year applies to any 12-month period selected by the facility and defined in its Emissions Averaging Plan. For the purposes of batch cycle limitations, the term year applies to the 12-month period defined by the facility in its Notification of Compliance Status.

§ 63.1313 Emission standards.

(a) Except as allowed under paragraphs (b) and (c) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:
(1) Section 63.1314 for storage vessels;
(2) Sections 63.1315 or 63.1316 through 63.1320, as appropriate, for continuous process vents;
(3) Section 63.1321 for batch process vents;
(4) Section 63.1328 for heat exchange systems;
(5) Section 63.1329 for process contact cooling towers;
(6) Section 63.1330 for wastewater;
(7) Section 63.1331 for equipment leaks;
(8) Section 63.1333 for additional test methods and procedures;
(9) Section 63.1334 for parameter monitoring levels and excursions; and
(10) Section 63.1335 for general recordkeeping and reporting requirements.

(b) Instead of complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, batch process vents, continuous process vents, and wastewater streams within the affected source to different levels using an emissions averaging compliance approach that uses the procedures specified in § 63.1332. An owner or operator electing to use emissions averaging must still comply with the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330 for affected source emission points not included in the emissions average.

(c) A State may decide not to allow the use of the emissions averaging compliance approach specified in paragraph (b) of this section.

§ 63.1314 Storage vessel provisions.

(a) This section applies to each storage vessel that belongs to an affected source, as determined by § 63.1310(g). Except as provided in paragraphs (b) through (d) of this section, the owner or operator of said storage vessels shall comply with the requirements of §§ 63.119 through 63.123 and 63.148, with the differences noted in paragraphs (a)(1) through (a)(16) of this section for the purposes of this subpart.

(1) When the term "storage vessel" is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(2) When the term "Group 1 storage vessel" is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(3) When the term "Group 2 storage vessel" is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(4) When the emissions averaging provisions of § 63.150 are referred to in §§ 63.119 and 63.123, the emissions averaging provisions contained in § 63.1332 shall apply for the purposes of this subpart.

(5) When December 31, 1992, is referred to in § 63.119, March 29, 1995 shall apply instead, for the purposes of this subpart.

(6) When April 22, 1994, is referred to in § 63.119, September 12, 1996 shall apply instead, for the purposes of this subpart.

(7) Each owner or operator shall comply with this paragraph (a)(7) instead of § 63.120(d)(1)(ii) for the purposes of this subpart. If the control device used to comply with this section is also used to comply with §§ 63.1315 through 63.1330, the performance test required for these sections is acceptable for demonstrating compliance with § 63.119(e) for the purposes of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in § 63.120(d)(1)(i) for the purposes of this subpart if the performance test meets the criteria specified in § 63.120 (d)(1)(ii)(A) and (d)(1)(ii)(B).

(8) When the term "operating range" is used in § 63.120(d)(3), the term "level" shall apply instead, for the purposes of this subpart. This level shall be established using the procedures specified in § 63.1334.

(9) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.120, 63.122, and 63.123, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(10) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.120, 63.122, and 63.123, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(11) When other reports as required in § 63.152(d) are referred to in § 63.122, the reporting requirements contained in § 63.1335(e)(7) shall apply for the purposes of this subpart.

(12) When the Implementation Plan requirements contained in § 63.151(c) are referred to in § 63.120 and § 63.122, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(13) When the Initial Notification Plan requirements contained in § 63.151(b) are referred to in § 63.122, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(14) When the determination of equivalence criteria in § 63.102(b) is referred to in § 63.121(a), the provisions in § 63.6(g) shall apply for the purposes of this subpart.

(15) When a performance test is required under the provisions of § 63.120(d)(1)(ii), the use of Method 18 or Method 25A, 40 CFR part 60, appendix A is allowed for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(15)(i) and (a)(15)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(16) The compliance date for storage vessels at affected sources subject to the provisions of this section is specified in § 63.1311.

(b) Owners or operators of Group 1 storage vessels that belong to a new affected source producing SAN using a continuous process shall control emissions to the levels indicated in paragraphs (b)(1) and (b)(2) of this section.

(1) For storage vessels with capacities greater than or equal to 2,271 cubic meters (m^3) containing a liquid mixture having a vapor pressure greater than or equal to 0.5 kilopascal (kPa) but less than 0.7 kPa, emissions shall be controlled by at least 90 percent relative to uncontrolled emissions.

(2) For storage vessels with capacities less than 151 m^3 containing a liquid mixture having a vapor pressure greater than or equal to 10 kPa, emissions shall be controlled by at least 98 percent relative to uncontrolled emissions.

(c) Owners or operators of Group 1 storage vessels that belong to a new or existing affected source producing ASA/AMSAN shall control emissions by at least 98 percent relative to uncontrolled emissions.

(d) The provisions of this subpart do not apply to storage vessels containing ethylene glycol at existing or new affected sources and storage vessels containing styrene at existing affected sources.

§ 63.1315 Continuous process vents. provisions.

(a) Except as provided in paragraphs (b) through (d) of this section, the owner or operator of continuous process vents shall comply with the requirements of §§ 63.113 through 63.118, with the differences noted in paragraphs (a)(1) through (a)(15) of this section for the purposes of this subpart.

(1) When the term "process vent" is used in §§ 63.113 through 63.118, apply the term "continuous process vent," and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(2) When the term "Group 1 process vent" is used in §§ 63.113 through 63.118, apply the term "Group 1 continuous process vent," and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(3) When the term "Group 2 process vent" is used in §§ 63.113 through 63.118, apply the term "Group 2 continuous process vent," and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(4) When December 31, 1992, (i.e., subpart G of this part proposal date) is referred to in § 63.113, apply the date March 29, 1995 (i.e., proposal date for this subpart) for the purposes of this subpart.

(5) When § 63.151(f), alternative monitoring parameters, and § 63.152(e), submission of an operating permit, are referred to in §§ 63.114(c) and 63.117(e), § 63.1335(f), alternative monitoring parameters, and § 63.1335(e)(8), submission of an operating permit, respectively, shall apply for the purposes of this subpart.

(6) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.114, 63.117, and 63.118, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(7) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.117 and 63.118, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(8) When the definition of excursion in § 63.152(c)(2)(ii)(A) is referred to in § 63.118(f)(2), the definition of excursion in § 63.1334(f) of this subpart shall apply for the purposes of this subpart.

(9) Owners and operators shall comply with § 63.1334, parameter monitoring levels and excursions, instead of § 63.114(e) for the purposes of this subpart. When the term "range" is used in §§ 63.117 and 63.118, the term "level" shall be used instead for the purposes of this subpart. This level is determined in accordance with § 63.1334.

(10) If a batch process vent is combined with a continuous process vent prior to being routed to a control device, the combined vent stream shall comply with either paragraph (a)(10)(i) or (a)(10)(ii) of this section, as appropriate.

(i) If the continuous process vent is a Group 1 continuous process vent, the combined vent stream shall comply with all requirements for a Group 1 continuous process vent stream in §§ 63.113 through 63.118, with the differences noted in paragraphs (a)(1) through (a)(9) of this section, for the purposes of this subpart.

(ii) If the continuous process vent is a Group 2 continuous process vent, the total resource effectiveness (TRE) index value for the combined vent stream shall be calculated at the exit of any recovery device and prior to the control device at maximum representative operating conditions. For combined vent streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the control device, resulting in the highest concentration of organic HAP in the combined vent stream.

(11) If a batch process vent is combined with a continuous process vent prior to being routed to a recovery device, the TRE index value for the combined vent stream shall be calculated at the exit of the recovery device at maximum representative operating conditions for the purposes of this subpart. For combined vent streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the recovery device, resulting in the highest concentration of organic HAP in the combined vent stream.

(12) When reports of process changes are required under § 63.118 (g), (h), (i), and (j), paragraphs (a)(12)(i) through (a)(12)(iv) of this section shall apply for the purposes of this subpart.

(i) For the purposes of this subpart, whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent to become a Group 1 continuous process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(2). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(2).

(ii) Whenever a process change, as defined in § 63.115(e), 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 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(iii) Whenever a process change, as defined in § 63.115(e), 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 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(iv) Whenever a process change, as defined in § 63.115(e), 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 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(13) When the provisions of § 63.116 (c)(3) and (c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(13)(i) and (a)(13)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(14) When the provisions of § 63.116(b) identify conditions under which a performance test is not required, for purposes of this subpart, the exemption in paragraph (a)(14)(i) shall also apply. Further, if a performance test meeting the conditions specified in paragraph (a)(14)(ii) of this section has been conducted by the owner or operator, the results of said performance test may be submitted and a performance test, as required by this section, is not required.

(i) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(ii) Performance tests done for other subparts in 40 CFR part 60 or part 63 where total organic HAP or TOC was measured, provided the owner or operator can demonstrate that operating conditions for the process and control or recovery device during the performance test are representative of current operating conditions.

(15) The compliance date for continuous process vents subject to the provisions of this section is specified in § 63.1311.

(b) Existing affected sources producing MBS shall comply with either paragraph (b)(1) or (b)(2) of this section.

(1) Comply with paragraph (a) of this section, as specified in paragraphs (b)(1)(i) and (b)(1)(ii).

(i) As specified in § 63.1312, Group 1 continuous process vents at MBS existing affected sources are those with a total resource effectiveness value less than or equal to 3.7.

(ii) When complying with this paragraph (b), the term "TRE of 4.0", or related terms indicating a TRE value of 4.0, referred to in § 63.113 through § 63.118 shall be replaced with "TRE of 6.7," for the purposes of this subpart. The TRE range of 3.7 to 6.7 for continuous process vents at existing affected sources producing MBS corresponds to the TRE range of 1.0 to 4.0 for other continuous process vents, as it applies to monitoring, recordkeeping, and reporting.

(2) Not allow organic HAP emissions from the collection of continuous process vents at the affected source to be greater than 0.000590 kg organic HAP/Mg of product. Compliance with this paragraph (b)(2) shall be determined using the procedures specified in § 63.1333(b).

(c) New affected sources producing SAN using a batch process shall comply with the applicable requirements in § 63.1321.

(d) Affected sources producing PET or polystyrene using a continuous process are subject to the emissions control provisions of § 63.1316, the monitoring provisions of § 63.1317, the testing and compliance demonstration provisions of § 63.1318, the recordkeeping provisions of § 63.1319, and the reporting provisions of § 63.1320.

§ 63.1316 PET and polystyrene continuous process affected sources—emissions control provisions.

(a) The owner or operator of an affected source producing PET using a continuous process shall comply with paragraph (b) of this section. The owner or operator of an affected source producing polystyrene using a continuous process shall comply with paragraph (c) of this section.

(b) Each owner or operator of an affected source producing PET using a continuous process shall comply with the requirements specified in paragraphs (b)(1) or (b)(2) of this section, as appropriate, and not with any of the requirements specified in 40 CFR part 60, subpart DDD. Compliance can be based on either organic HAP or TOC.

(1) Each owner or operator of an affected source producing PET using a continuous dimethyl terephthalate process shall comply with paragraphs (b)(1)(i) through (b)(1)(iv) of this section.

(i) For existing affected sources with organic HAP emissions from continuous process vents in the collection of material recovery sections (i.e., methanol recovery) within the affected source greater than 0.12 kg organic HAP/Mg of product, as determined by the procedure specified in § 63.1318(b) and for all new affected sources, limit organic HAP emissions from continuous process vents in the collection of material recovery sections within the affected source by complying with one of the following:

(A) Not allow emissions to be greater than 0.018 kg organic HAP/Mg of product; or

(B) Not allow the outlet gas stream temperature from each final condenser in a material recovery section to exceed +3° C (+37° F).

(ii) Limit organic HAP emissions from the continuous process vents in the collection of polymerization reaction sections within the affected source (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) to 0.02 kg organic HAP/Mg of product or less.

(iii) Limit organic HAP emissions from continuous process vents not included in a material recovery section, as specified in paragraph (b)(1)(i) of this section, or not included in a polymerization reaction section, as specified in paragraph (b)(1)(ii) of this section, by complying with § 63.1315.

(iv) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

(2) Each owner or operator of an affected source producing PET using a continuous terephthalic acid process shall comply with paragraphs (b)(2)(i) through (b)(2)(iv) of this section.

(i) Limit organic HAP emissions from the continuous process vents associated with the esterification vessels in the collection of raw materials preparation sections within the affected source to 0.04 kg organic HAP/Mg of product or less. Limit organic HAP emissions associated with other continuous process vents in the collection of raw materials preparation sections within the affected source by complying with § 63.1315.

(ii) Limit organic HAP emissions from the continuous process vents in the collection of polymerization reaction sections within the affected source (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) to 0.02 kg organic HAP/Mg of product or less.

(iii) Limit organic HAP emissions from continuous process vents not included in a raw materials preparation section, as specified in paragraphs (b)(2)(i) of this section, or not included in a polymerization reaction section, as specified in paragraph (b)(2)(ii) of this section, by complying with § 63.1315.

(iv) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

(c) Each owner or operator of an affected source producing polystyrene resin using a continuous process shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section, as appropriate, and not with any of the requirements specified in 40 CFR part 60, subpart DDD. Compliance can be based on either organic HAP or TOC.

(1) Limit organic HAP emissions from continuous process vents in the collection of material recovery sections within the affected source by complying with one of the following:

(i) Not allow emissions to be greater than 0.0036 kg organic HAP/Mg of product;

(ii) Not allow the outlet gas stream temperature from each final condenser in a material recovery section to exceed −25°C (−13°F); or

(iii) Comply with one of the following:

(A) Reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If an owner or operator elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions;

(B) Combust the emissions in a boiler or process heater with a design heat input capacity of 150 million Btu/hr or greater by introducing the emissions into the flame zone of the boiler or process heater; or

(C) Combust the emissions in a flare that complies with the requirements of § 63.11(b).

(2) Limit organic HAP emissions from continuous process vents not included in a material recovery section, as specified in paragraph (c)(1)(i) of this section, by complying with § 63.1315.

(3) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

§ 63.1317 PET and polystyrene continuous process affected sources—monitoring provisions.

Continuous process vents using a control or recovery device to comply with § 63.1316 shall comply with the applicable monitoring provisions specified for continuous process vents in § 63.1315(a), except as specified in paragraphs (a) and (b) of this section.

(a) For the purposes of paragraph (a) of this section, owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) The monitoring period for condenser exit temperature when complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall be each consecutive 3-hour continuous period (e.g., 6 am to 9 am, 9 am to 12 pm). Each owner or operator shall designate said monitoring period in the Notification of Compliance Status required by § 63.1335(e)(5).

§ 63.1318 PET and polystyrene continuous process affected sources—testing and compliance demonstration provisions.

(a) Except as specified in paragraphs (b) through (d) of this section, continuous process vents using a control or recovery device to comply with § 63.1316 shall comply with the applicable testing and compliance provisions for continuous process vents specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determination (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *PET Affected Sources Using a Dimethyl Terephthalate Process—Applicability Determination Procedure.* Owners or operators shall calculate organic HAP emissions from the collection of material recovery sections at an existing affected source producing PET using a continuous dimethyl terephthalate process to determine whether § 63.1316(a)(1)(i) is applicable using the procedures specified in either paragraph (b)(1) or (b)(2) of this section.

(1) Use Equation 1 of this subpart to determine mass emissions per mass product as specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

$$ER = \sum_{i=1}^{n} \frac{E_i}{\left(0.001\ P_p\right)} \quad \text{[Eq. 1]}$$

where:

ER=Emission rate of total organic HAP or TOC, kg/Mg product.

E_i=Emission rate of total organic HAP or TOC in continuous process vent i, kg/hr.

P_p=The rate of polymer produced, kg/hr.

n=Number of continuous process vents in the collection of material recovery sections at the affected source.

0.001=Conversion factor, kg to Mg.

(i) The mass emission rate for each continuous process vent, E_i, shall be determined according to the procedures specified in § 63.116(c)(4). The sampling site for determining whether § 63.1316(a)(1)(i) is applicable shall be before any add-on control devices (i.e., those required by regulation) and after those recovery devices installed as part of operating the material recovery section. When the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of

Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) of this section.

(A) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(B) The use of Method 25A, 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.

(ii) The rate of polymer produced, P_p (kg/hr), shall be determined by dividing the weight (kg) of polymer pulled from the process line during the performance test by the number of hours taken to perform the performance test. The weight of polymer pulled shall be determined by direct measurement or by an alternate methodology, such as materials balance. If an alternate methodology is used, a description of the methodology, including all procedures, data, and assumptions shall be submitted as part of the Notification of Compliance Status required by § 63.1335(e)(5).

(2) Use engineering assessment, as described in § 63.1323(b)(6)(i), to demonstrate that mass emissions per mass product are less than or equal to 0.07 kg organic HAP/Mg product. If engineering assessment shows that mass emissions per mass product are greater than 0.07 kg organic HAP/Mg product and the owner or operator wishes to demonstrate that mass emissions per mass product are less than the threshold emission rate of 0.12 kg organic HAP/Mg product, the owner or operator shall use the procedures specified in paragraph (b)(1) of this section.

(c) *Compliance with Mass Emissions per Mass Product Standards.* Owners or operators complying with § 63.1316 (b)(1)(i)(A), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), and (c)(1)(i) shall demonstrate compliance with the mass emissions per mass product requirements using the procedures specified in paragraph (b)(1) of this section, except that the sampling site specified in paragraph (b)(1)(i) of this section shall be at the outlet of the last control or recovery device.

(d) *Compliance with Temperature Limits for Final Condensers.* Owners or operators complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall perform an initial performance test as specified in paragraph (d)(1) of this section to demonstrate initial compliance with the temperature limit requirements and shall demonstrate continuous compliance as specified in paragraph (d)(2) of this section.

(1) Using the temperature monitoring device specified by the applicable monitoring provisions specified for continuous process vents in § 63.1315, an average exit temperature shall be determined based on the average exit temperature for three performance tests. The average exit temperature for each 3-hour performance test shall be based on measurements taken at least every 15 minutes for 3 hours of continuous operation under maximum representative operating conditions for the process. For emissions streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the control device resulting in the highest concentration of organic HAP in the emissions stream.

(2) As specified in § 63.1317(b), continuous compliance shall be determined based on an average exit temperature determined for each consecutive 3-hour continuous period. Each 3-hour period where the average exit temperature is more than 6 °C (10 °F) above the applicable specified temperature limit shall be considered an exceedance of the monitoring provisions.

§ 63.1319 PET and polystyrene continuous process affected sources—recordkeeping provisions.

(a) Except as specified in paragraphs (b) and (c) of this section, owners or operators using a control or recovery device to comply with § 63.1316 shall comply with the applicable recordkeeping provisions specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *Records Demonstrating Compliance With the Applicability Determination Procedure for PET Affected Sources Using a Dimethyl Terephthalate Process.* Each owner or operator, as appropriate, shall keep the following data, as appropriate, up-to-date and readily accessible:

(1) Results of the mass emissions per mass product calculation specified in § 63.1318(b).

(2) If complying with § 63.1316 by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(a)(1)(i), the information specified in paragraphs (b)(2)(i) and (b)(2)(ii) of this section.

(i) Each process operation variable (e.g., pressure, temperature, type of catalyst) that may result in an increase in the mass emissions per mass product should said variable be changed.

(ii) Records of any change in process operation that increases the mass emissions per mass product.

(c) *Records Demonstrating Compliance with Temperature Limits for Final Condensers.* Owners or operators of continuous process vents complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall keep the following data, as appropriate, up-to-date and readily accessible:

(1) Records of monitoring data as specified in § 63.1315, except that the monitoring period shall be each consecutive 3-hour continuous period.

(2) Results of the performance test specified in § 63.1318(d)(1) and any other performance test that may be subsequently required.

§ 63.1320 PET and polystyrene continuous process affected sources—reporting provisions.

(a) Except as specified in paragraphs (b) and (c) of this section, owners and operators using a control or recovery device to comply with § 63.1316 shall comply with the applicable reporting provisions specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *Reporting for PET Affected Sources Using a Dimethyl Terephthalate Process.* Each owner or operator complying with § 63.1316 by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(a)(1)(i) shall comply with paragraphs (b)(1) through (b)(3) of this section.

(1) Include the information specified in § 63.1319(b)(2)(ii) in each Periodic Report, required by § 63.1335(e)(6), as appropriate.

(2) Include the information specified in § 63.1319 (b)(1) or (b)(2) in the Notification of Compliance Status, required by § 63.1335(e)(5), for the initial determination and in the appropriate Periodic Report, required by § 63.1335(e)(6), for any subsequent determinations that may be required.

(3) Whenever a process change, as defined in § 63.115(e), is made that causes emissions from continuous process vents in the collection of material recovery sections (i.e., methanol recovery) within the affected source to be greater than 0.12 kg organic HAP/Mg of product, the owner or operator shall submit a report within

180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report as specified in § 63.1335(e)(6)(iii)(D)(2). The following information shall be submitted:

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii(D)(2).

(c) *Reporting for Affected Sources Complying With Temperature Limits for Final Condensers.* Each owner or operator complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall comply with paragraphs (c)(1) and (c)(2) of this section.

(1) Report periods when the 3-hour average exit temperature is more than 6° C (10° F) above the applicable specified temperature limit in each Periodic Report, required by § 63.1335(e)(6), as appropriate.

(2) Include the information specified in § 63.1319(c)(2) in the Notification of Compliance Status, required by § 63.1335(e)(5), for the initial performance test and in the appropriate Periodic Report, required by § 63.1335(e)(6), for any subsequent performance tests that may be required.

(3) Include the information specified in § 63.1317(b) in the Notification of Compliance Status, required by § 63.1335(e)(5).

§ 63.1321 Batch process vents provisions.

(a) *Batch process vents.* Except as specified in paragraphs (b) and (c) of this section, owners and operators of new and existing affected sources with batch process vents shall comply with the requirements in §§ 63.1322 through 63.1327. The batch process vent group status shall be determined in accordance with § 63.1323. Batch process vents classified as Group 1 shall comply with the reference control technology requirements for Group 1 batch process vents in § 63.1322, the monitoring requirements in § 63.1324, the performance test methods and procedures to determine compliance requirements in § 63.1325, the recordkeeping requirements in § 63.1326, and the reporting requirements in § 63.1327. All Group 2 batch process vents shall comply with the applicable reference control technology requirements in § 63.1322, the recordkeeping requirements in § 63.1326, and the reporting requirements in § 63.1327.

(b) *New SAN batch affected sources.* Owners and operators of new SAN affected sources using a batch process shall comply with the requirements of § 63.1322 through § 63.1327 for batch process vents and aggregate batch vent streams except as specified in paragraphs (b)(1) through (b)(2) of this section. For continuous process vents, owners and operators shall comply with the requirements of § 63.1322 through § 63.1327 except as specified in paragraph (b)(3) of this section.

(1) For batch process vents, the determination of group status (i.e., Group 1/Group 2) under § 63.1323 is not required.

(2) For batch process vents and aggregate batch vent streams, the control requirements for individual batch process vents or aggregate batch vent streams (e.g., 90 percent emission reduction) as specified in § 63.1322(a)(1), (a)(2), (b)(1), and (b)(2) shall not apply.

(3) Continuous process vents using a control or recovery device to comply with § 63.1322(a)(3) are subject to the applicable requirements in § 63.1315(a), as appropriate, except as specified in paragraphs (b)(3)(i) and (b)(3)(ii) of this section.

(i) Said continuous process vents are not subject to the group determination procedures of § 63.115 for the purposes of this subpart.

(ii) Said continuous process vents are not subject to the reference control technology provisions of § 63.113 for the purposes of this subpart.

(c) *Aggregate batch vent streams.* Aggregate batch vent streams, as defined in § 63.1312, are subject to the control requirements for individual batch process vents, as specified in § 63.1322(b), as well as the monitoring, testing, recordkeeping, and reporting requirements specified in § 63.1324 through § 63.1327.

§ 63.1322 Batch process vents—reference control technology.

(a) *Batch process vents.* The owner or operator of a Group 1 batch process vent, as determined using the procedures in § 63.1323, shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section, except as provided for in paragraph (a)(3) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each batch process vent, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b).

(ii) Halogenated batch process vents, as defined in § 63.1312, shall not be vented to a flare.

(2) For each batch process vent, reduce organic HAP emissions for the batch cycle by 90 weight percent using a control device. Owners or operators may achieve compliance with this paragraph (a)(2) through the control of selected batch emission episodes or the control of portions of selected batch emission episodes. Documentation demonstrating how the 90 weight percent emission reduction is achieved is required by § 63.1325(c)(2).

(3) The owner or operator of a new affected source producing SAN using a batch process shall reduce organic HAP emissions from the collection of batch process vents, aggregate batch vent streams, and continuous process vents by 84 weight percent. Compliance with this paragraph (a)(3) shall be demonstrated using the procedures specified in § 63.1333(c).

(b) *Aggregate batch vent streams.* The owner or operator of an aggregate batch vent stream that contains one or more Group 1 batch process vents shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section, except as provided for in paragraph (b)(3) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each aggregate batch vent stream, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b).

(ii) Halogenated aggregate batch vent streams, as defined in § 63.1312, shall not be vented to a flare.

(2) For each aggregate batch vent stream, reduce organic HAP emissions by 90 weight percent on a continuous basis using a control device.

(3) The owner or operator of a new affected source producing SAN using a batch process shall comply with paragraph (a)(3) of this section.

(c) *Halogenated emissions.* Halogenated Group 1 batch process vents, halogenated aggregate batch vent streams, and halogenated continuous process vents that are combusted as part of complying with paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section, as appropriate, shall be controlled according to either paragraph (c)(1) or (c)(2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section for a halogenated batch process vent, halogenated aggregate batch vent stream, or halogenated continuous process vent, said emissions shall be ducted from the combustion device to an additional control device that reduces overall emissions of hydrogen halides and halogens by 99 percent before said emissions are discharged to the atmosphere.

(2) A control device may be used to reduce the halogen atom mass emission

rate of said emissions to less than 3,750 kg/yr for batch process vents or aggregate batch vent streams and to less than 0.45 kilograms per hour for continuous process vents prior to venting to any combustion control device, and thus make the batch process vent, aggregate batch vent stream, or continuous process vent nonhalogenated. The nonhalogenated batch process vent, aggregate batch vent stream, or continuous process vent must then comply with the requirements of either paragraph (a) or (b) of this section, as appropriate.

(d) If a boiler or process heater is used to comply with the percent reduction requirement specified in paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section, the batch process vent, aggregate batch vent stream, or continuous process vent shall be introduced into the flame zone of such a device.

(e) *Combination of batch process vents or aggregate batch vent streams with continuous process vents.* A batch process vent or aggregate batch vent stream combined with a continuous process vent is not subject to the provisions of §§ 63.1323 through 63.1327, providing the requirements of paragraphs (e)(1), (e)(2), and either (e)(3) or (e)(4) of this section are met.

(1) The batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to routing the continuous process vent to a control or recovery device. In this paragraph (e)(1), the definitions of control device and recovery device as they relate to continuous process vents shall be used.

(2) The only emissions to the atmosphere from the batch process vent or aggregate batch vent stream prior to being combined with the continuous process vent are from equipment subject to and in compliance with § 63.1331.

(3) If the batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to being routed to a control device, the combined vent stream shall comply with the requirements in § 63.1315(a)(10). In this paragraph (e)(3), the definition of control device as it relates to continuous process vents shall be used.

(4) If the batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to being routed to a recovery device, the combined vent stream shall comply with the requirements in § 63.1315(a)(11). In this paragraph (e)(4), the definition of recovery device as it relates to continuous process vents shall be used.

(f) *Group 2 batch process vents with annual emissions greater than or equal to the level specified in § 63.1323(d).* The owner or operator of a Group 2 batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d) shall comply with the provisions of (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures the Group 2 batch process vent does not become a Group 1 batch process vent.

(2) Comply with the recordkeeping requirements in § 63.1326(d)(2), and the reporting requirements in § 63.1327 (a)(3) and (b).

(g) *Group 2 batch process vents with annual emissions less than the level specified in § 63.1323(d).* The owner or operator of a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) shall comply with either paragraphs (g)(1) and (g)(2) of this section or with paragraphs (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures emissions do not exceed the level specified in § 63.1323(d).

(2) Comply with the recordkeeping requirements in § 63.1326(d)(1), and the reporting requirements in § 63.1327 (a)(2), (b), and (c).

§ 63.1323 Batch process vents—methods and procedures for group determination.

(a) *General requirements.* Except as provided in paragraph (a)(3) of this section and in § 63.1321(b)(1), the owner or operator of batch process vents at affected sources shall determine the group status of each batch process vent in accordance with the provisions of this section. This determination may be based on either organic HAP or TOC emissions.

(1) The procedures specified in paragraphs (b) through (h) of this section shall be followed for the expected mix of products for a given batch process vent, as specified in paragraph (a)(1)(i) of this section, or for the worst-case HAP emitting product, as specified in paragraphs (a)(1)(ii) through (a)(1)(iv) of this section. "Worst-case HAP emitting product" is defined in paragraph (a)(1)(iii) of this section.

(i) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (h) of this section for the expected mix of products, an identification of the different products and the number of batch cycles accomplished for each is required as part of the group determination documentation, as specified in § 63.1326(a)(1).

(ii) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (h) of this section for the worst-case HAP emitting product, documentation identifying the worst-case HAP emitting product is required as part of the group determination documentation, as specified in § 63.1326(a)(1).

(iii) Except as specified in paragraph (a)(1)(iii)(B) of this section, the worst-case HAP emitting product is as defined in paragraph (a)(1)(iii)(A) of this section.

(A) The worst-case HAP emitting product is the one with the highest mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle.

(B) Alternatively, when one product is produced more than 75 percent of the time, accounts for more than 75 percent of the annual mass of product, and the owner or operator can show that the mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle can reasonably be expected to be similar to the mass emission rate for other products having emissions from the same batch process vent, said product may be considered the worst-case HAP emitting product.

(C) An owner or operator shall determine the worst-case HAP emitting product for a batch process vent as specified in paragraphs (a)(1)(iii)(C)(*1*) through (a)(1)(iii)(C)(*3*) of this section.

(*1*) The emissions per batch emission episode shall be determined using any of the procedures specified in paragraph (b) of this section. The mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle shall be determined by summing the emissions for each batch emission episode making up a complete batch cycle and dividing by the total duration in hours of the batch cycle.

(*2*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(A) of this section, the mass emission rate for each product shall be determined and compared.

(*3*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(B) of this section, the mass emission rate for the product meeting the time and mass criteria of paragraph (a)(1)(iii)(B) of this section shall be determined, and the owner or operator shall provide adequate information to demonstrate that the mass emission rate for said product is similar to the mass emission rates for the other products having emissions from the same batch process vent. In addition, the owner or operator shall provide information demonstrating that the selected product meets the time and

mass criteria of paragraph (a)(1)(iii)(B) of this section.

(iv) The annual production of the worst-case HAP emitting product shall be determined by ratioing the production time of said product up to a 12 month period of actual production. It is not necessary to ratio up to a maximum production rate (i.e., 8,760 hours per year at maximum design production).

(2) The annual uncontrolled organic HAP or TOC emissions and average flow rate shall be determined at the exit from the batch unit operation. For the purposes of these determinations, the primary condenser operating as a reflux condenser on a distillation column, the primary condenser recovering monomer or solvent from a batch stripping operation, and the primary condenser recovering monomer or solvent from a batch distillation operation shall be considered part of the batch unit operation. All other devices that recover or oxidize organic HAP or TOC vapors shall be considered control devices as defined in § 63.1312.

(3) The owner or operator of a batch process vent complying with the flare provisions in § 63.1322(a)(1) or § 63.1322(b)(1) or routing the batch process vent to a control device to comply with the requirements in § 63.1322(a)(2) or § 63.1322(b)(2) is not required to perform the batch process vent group determination described in this section, but shall comply with all requirements applicable to Group 1 batch process vents for said batch process vent.

(b) *Determination of annual emissions.* The owner or operator shall calculate annual uncontrolled TOC or organic HAP emissions for each batch process vent using the methods described in paragraphs (b)(1) through (b)(8) of this section. Paragraphs (b)(1) through (b)(4) of this section present procedures that can be used to calculate the emissions from individual batch emission episodes. Emissions from batch processes involving multicomponent systems are to be calculated using the procedures in paragraphs (b)(1) through (b)(4) of this section. Individual HAP partial pressures in multicomponent systems shall be determined by the following methods: If the components are miscible in one another, use Raoult's law to calculate the partial pressures; if the solution is a dilute aqueous mixture use Henry's law constants to calculate partial pressures; if Raoult's law or Henry's law are not appropriate (or available) use experimentally obtained activity coefficients, Henry's law constants, or solubility data; if Raoult's law or Henry's law are not appropriate use models, such as the group-contribution models, to predict activity coefficients; and if Raoult's law or Henry's law are not appropriate assume the components of the system behave independently and use the summation of all vapor pressures from the HAP's as the total HAP partial pressure. Chemical property data can be obtained from standard reference texts. Paragraph (b)(5) of this section describes how direct measurement can be used to estimate emissions. If the owner or operator can demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions from a batch emission episode, emissions may be estimated using engineering assessment, as described in paragraph (b)(6) of this section. Owners or operators are not required to demonstrate that direct measurement is not appropriate before utilizing engineering assessment. Paragraph (b)(6)(ii) of this section describes how an owner or operator shall demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate. Emissions from a batch cycle shall be calculated in accordance with paragraph (b)(7) of this section, and annual emissions from the batch process vent shall be calculated in accordance with paragraph (b)(8) of this section.

(1) TOC or organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 2 of this subpart. Equation 2 of this subpart does not take into account evaporation of any residual liquid in the vessel.

$$E_{episode} = \frac{(V_{ves})(P)(MW_{wavg})}{RT}\left(1-0.37^{m}\right) \qquad \text{[Eq. 2]}$$

where:

$E_{episode}$=Emissions, kg/episode.

V_{ves}=Volume of vessel, m^3.

P=TOC or total organic HAP partial pressure, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

m=Number of volumes of purge gas used.

(2) TOC or organic HAP emissions from the purging of a filled vessel shall be calculated using Equation 3 of this subpart.

$$E_{episode} = \frac{(y)(V_{dr})(P^2)(MW_{wavg})}{RT\left(P-\sum_{i=1}^{n}P_i x_i\right)}(T_m) \qquad \text{[Eq. 3]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V_{dr}=Volumetric gas displacement rate, m^3/min.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

P_i=Vapor pressure of TOC or individual organic HAP i, kPa.

x_i=Mole fraction of TOC or organic HAP i in the liquid.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated.

T_m=Minutes/episode.

(3) Emissions from vapor displacement due to transfer of material into or out of a vessel shall be calculated using Equation 4 of this subpart.

$$E_{episode} = \frac{(y)(V)(P)(MW_{wavg})}{RT} \quad \text{[Eq. 4]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V=Volume of gas displaced from the vessel, m^3.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

(4) Emissions caused by the heating of a vessel shall be calculated using the procedures in either paragraphs (b)(4)(i), (b)(4)(ii), or (b)(4)(iii) of this section, as appropriate.

(i) If the final temperature to which the vessel contents is heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using the equations in paragraphs (b)(4)(i)(A) through (b)(4)(i)(D) of this section.

(A) Emissions caused by heating of a vessel shall be calculated using Equation 5 of this subpart. The assumptions made for this calculation are atmospheric pressure of 760 millimeters of mercury (mm Hg) and the displaced gas is always saturated with volatile organic compounds (VOC) vapor in equilibrium with the liquid mixture.

$$E_{episode} = \left[\frac{\sum_{i=1}^{n}(P_i)_{T1}}{101.325-\sum_{i=1}^{n}(P_i)_{T1}} + \frac{\sum_{i=1}^{n}(P_i)_{T2}}{101.325-\sum_{i=1}^{n}(P_i)_{T2}}}{2}\right](\Delta^n)(MW_{wavg}) \quad \text{[Eq. 5]}$$

where:

$E_{episode}$=Emissions, kg/episode.

$(P_i)T1$, $(P_i)T2$=Partial pressure (kPa) of TOC or each organic HAP i in the vessel headspace at initial (T1) and final (T2) temperature.

n=Number of organic HAP in stream. Note: Summation not required if TOC emissions are being estimated.

Δ^n=Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (b)(4)(i)(B) of this section.

101.325=Constant, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.

(B) The moles of gas displaced, Δ^n, is calculated using Equation 6 of this subpart.

$$\Delta^n = \frac{V_{fs}}{R}\left[\left(\frac{Pa_1}{T_1}\right)-\left(\frac{Pa_2}{T_2}\right)\right] \quad \text{[Eq. 6]}$$

where:

Δ^n=Number of kg-moles of gas displaced.

V_{fs}=Volume of free space in the vessel, m^3.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

Pa_1=Initial noncondensible gas pressure in the vessel, kPa.

Pa_2=Final noncondensible gas pressure, kPa.

T_1=Initial temperature of vessel, K.

T_2=Final temperature of vessel, K.

(C) The initial and final pressure of the noncondensible gas in the vessel shall be calculated using Equation 7 of this subpart.

$$Pa = 101.325 - \sum_{i=1}^{n}(P_i)_T \quad \text{[Eq. 7]}$$

where:

Pa=Initial or final partial pressure of noncondensible gas in the vessel headspace, kPa.

101.325=Constant, kPa.

$(P_i)T$=Partial pressure of TOC or each organic HAP i in the vessel headspace, kPa, at the initial or final temperature (T1 or T2).

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated.

(D) The weighted average molecular weight of TOC or organic HAP in the displaced gas, MW_{wavg}, shall be calculated using Equation 8 of this subpart.

$$MW_{wavg} = \frac{\sum_{i=1}^{n}(\text{mass of C})_i\,(\text{molecular weight of C})_i}{\sum_{i=1}^{n}(\text{mass of C})_i} \quad \text{[Eq. 8]}$$

where:

C=TOC or organic HAP component

n=Number of TOC or organic HAP components in stream.

(ii) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from

the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (b)(4)(ii)(A) and (b)(4)(ii)(B) of this section.

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 5 of this subpart, where T_2 is the temperature 50 K below the boiling point.

(B) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emissions for each increment shall be calculated using Equation 5 of this subpart.

(*1*) If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature for the heatup, even if the last increment is less than 5 K.

(*2*) If the final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(*3*) If the vessel contents are heated to the boiling point and the vessel is not operating with a condenser, the final temperature for the final increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(iii) If the vessel is operating with a condenser, and the vessel contents are heated to the boiling point, the primary condenser, as specified in paragraph (a)(2) of this section, is considered part of the process. Emissions shall be calculated as the sum of emissions calculated using Equation 5 of this subpart, which calculates emissions due to heating the vessel contents to the temperature of the gas existing the condenser, and emissions calculated using Equation 4 of this subpart, which calculates emissions due to the displacement of the remaining saturated noncondensible gas in the vessel. The final temperature in Equation 5 of this subpart shall be set equal to the exit gas temperature of the condenser. Equation 4 of this subpart shall be used as written below in Equation 4a of this subpart, using free space volume, and T is set equal to the condenser exit gas temperature.

$$E_{episode} = \frac{(y)(V_{fs})(P)(MW_{wavg})}{RT} \quad \text{[Eq. 4a]}$$

where:

$E_{episode}$=Emissions, kg/episode.
y=Saturated mole fraction of all TOC or organic HAP in vapor phase.
V_{fs}=Volume of the free space in the vessel, m^3.
P=Pressure in vessel vapor space, kPa.
MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.
R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.
T=Temperature of condenser exit stream, K.

(5) The owner or operator may estimate annual emissions for a batch emission episode by direct measurement. If direct measurement is used, the owner or operator shall either perform a test for the duration of a representative batch emission episode or perform a test during only those periods of the batch emission episode for which the emission rate for the entire episode can be determined or for which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions. Performance tests shall follow the procedures specified in paragraphs (b)(5)(i) through (b)(5)(iii) of this section. The procedures in either paragraph (b)(5)(iv) or (b)(5)(v) of this section shall be used to calculate the emissions per batch emission episode.

(i) Method 1 or 1A, 40 CFR part 60, appendix A as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in paragraph (e) of this section.

(iii) Method 18 or Method 25A, 40 CFR part 60, appendix A, shall be used to determine the concentration of TOC or organic HAP, as appropriate. 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 use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (b)(5)(iii)(A) and (b)(5)(iii)(B) of this section.

(A) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(B) The use of Method 25A, 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.

(iv) If an integrated sample is taken over the entire batch emission episode to determine TOC or average total organic HAP concentration, emissions shall be calculated using Equation 9 of this subpart.

$$E_{episode} = K\left[\sum_{j=1}^{n}(C_j)(M_j)\right]AFR(T_h) \quad \text{[Eq. 9]}$$

where:

$E_{episode}$=Emissions, kg/episode.
K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.
C_j=Average concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.
M_j=Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.
AFR=Average flow rate of gas stream, dry basis, scmm.
T_h=Hours/episode.
n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(v) If grab samples are taken to determine TOC or average total organic HAP concentration, emissions shall be calculated according to paragraphs (b)(5)(v)(A) and (b)(5)(v)(B) of this section.

(A) For each measurement point, the emission rate shall be calculated using Equation 10 of this subpart.

$$E_{point} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR \qquad [Eq. 10]$$

where:

E_{point}=Emission rate for individual measurement point, kg/hr.

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

C_j=Concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j=Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

FR=Flow rate of gas stream for the measurement point, dry basis, scmm.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equation 11 of this subpart.

$$E_{episode} = (DUR)\left[\sum_{i=1}^{n} \frac{E_i}{n}\right] \qquad [Eq. 11]$$

where:

$E_{episode}$=Emissions, kg/episode.

DUR=Duration of the batch emission episode, hr/episode.

E_i=Emissions for measurement point i, kg/hr.

n=Number of measurements.

(6) If the owner or operator can demonstrate that the methods in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions for a batch emissions episode, the owner or operator may use engineering assessment to estimate emissions as specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section. All data, assumptions, and procedures used in an engineering assessment shall be documented.

(i) Engineering assessment includes, but is not limited to, the following:

(A) Previous test results, provided the tests are representative of current operating practices;

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions;

(C) Flow rate, TOC emission rate, or organic HAP emission rate specified or implied within a permit limit applicable to the batch process vent; and

(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;

(*2*) Estimation of flow rate based on physical equipment design such as pump or blower capacities; and

(*3*) Estimation of TOC or organic HAP concentrations based on saturation conditions.

(ii) The emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section shall be considered inappropriate for estimating emissions for a given batch emissions episode if one or more of the criteria in paragraphs (b)(6)(ii)(A) through (b)(6)(ii)(B) of this section are met.

(A) Previous test data are available that show a greater than 20 percent discrepancy between the test value and the estimated value.

(B) The owner or operator can demonstrate to the Administrator that the emissions estimation equations are not appropriate for a given batch emissions episode.

(C) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(A) of this section shall be reported in the Notification of Compliance Status, as required in § 63.1335(e)(5).

(D) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(B) of this section shall be reported in the Precompliance Report, as required in § 63.1335(e)(3).

(7) For each batch process vent, the TOC or organic HAP emissions associated with a single batch cycle shall be calculated using Equation 12 of this subpart.

$$E_{cycle} = \sum_{i=1}^{n} E_{episode_i} \qquad [Eq. 12]$$

where:

where:

E_{cycle}=Emissions for an individual batch cycle, kg/batch cycle

$E_{episode_i}$=Emissions from batch emission episode i, kg/episode

n=Number of batch emission episodes for the batch cycle

(8) Annual TOC or organic HAP emissions from a batch process vent shall be calculated using Equation 13 of this subpart.

$$AE = \sum_{i=1}^{n} (N_i)(E_{cycle_i}) \qquad [Eq. 13]$$

where:

AE=Annual emissions from a batch process vent, kg/yr.

N_i=Number of type i batch cycles performed annually, cycles/year

E_{cycle_i}=Emissions from the batch process vent associated with a single type i batch cycle, as determined in paragraph (b)(7) of this section, kg/batch cycle

n=Number of different types of batch cycles that cause the emission of TOC or organic HAP from the batch process vent

(c) (Reserved)

(d) *Minimum emission level exemption.* A batch process vent with annual emissions less than 11,800 kg/yr is considered a Group 2 batch process vent and the owner or operator of said batch process vent shall comply with the requirements in § 63.1322 (f) or (g). The owner or operator of said batch process vent is not required to comply with the provisions in paragraphs (e) through (g) of this section.

(e) *Determination of average flow rate.* The owner or operator shall determine the average flow rate for each batch emission episode in accordance with one of the procedures provided in paragraphs (e)(1) through (e)(2) of this section. The annual average flow rate for a batch process vent shall be calculated as specified in paragraph (e)(3) of this section.

(1) Determination of the average flow rate for a batch emission episode by direct measurement shall be made using the procedures specified in paragraphs (e)(1)(i) through (e)(1)(iii) of this section.

(i) The volumetric flow rate for a batch emission episode, in standard cubic meters per minute (scmm) at 20° C, shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

(ii) The volumetric flow rate of a representative batch emission episode shall be measured every 15 minutes.

(iii) The average flow rate for a batch emission episode shall be calculated using Equation 14 of this subpart.

$$AFR_{episode} = \frac{\sum_{i=1}^{n} FR_i}{n} \quad [Eq. 14]$$

where:

$AFR_{episode}$ = Average flow rate for the batch emission episode, scmm.

FR_i = Flow rate for individual measurement i, scmm.

n = Number of flow rate measurements taken during the batch emission episode.

(2) The average flow rate for a batch emission episode may be determined by engineering assessment, as defined in paragraph (b)(6)(i) of this section. All data, assumptions, and procedures used shall be documented.

(3) The annual average flow rate for a batch process vent shall be calculated using Equation 15 of this subpart.

$$AFR = \frac{\sum_{i=1}^{n} (DUR_i)(AFR_{episode,i})}{\sum_{i=1}^{n} (DUR_i)} \quad [Eq. 15]$$

where:

AFR = Annual average flow rate for the batch process vent, scmm.

DUR_i = Duration of type i batch emission episodes annually, hrs/yr.

$AFR_{episode,\ i}$ = Average flow rate for type i batch emission episode, scmm.

n = Number of types of batch emission episodes venting from the batch process vent.

(f) *Determination of cutoff flow rate.* For each batch process vent, the owner or operator shall calculate the cutoff flow rate using Equation 16 of this subpart.

$$CFR = (0.00437)(AE) - 51.6 \quad [Eq. 16]$$

where:

CFR = Cutoff flow rate, scmm.

AE = Annual TOC or organic HAP emissions, as determined in paragraph (b)(8) of this section, kg/yr.

(g) *Group 1/Group 2 status determination.* The owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (f) of this section, with the annual average flow rate, determined in accordance with paragraph (e)(4) of this section. The group determination status for each batch process vent shall be made using the criteria specified in paragraphs (g)(1) and (g)(2) of this section.

(1) If the cutoff flow rate is greater than or equal to the annual average flow rate of the stream, the batch process vent is classified as a Group 1 batch process vent.

(2) If the cutoff flow rate is less than the annual average flow rate of the stream, the batch process vent is classified as a Group 2 batch process vent.

(h) *Determination of halogenation status.* To determine whether a batch process vent or an aggregate batch vent stream is halogenated, the annual mass emission rate of halogen atoms contained in organic compounds shall be calculated using the procedures specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The concentration of each organic compound containing halogen atoms (ppmv, by compound) for each batch emission episode shall be determined based on any one of the following procedures:

(i) Process knowledge that no halogens or hydrogen halides are present in the process may be used to demonstrate that a batch emission episode is nonhalogenated. Halogens or hydrogen halides that are unintentionally introduced into the process shall not be considered in making a finding that a batch emission episode is nonhalogenated.

(ii) Engineering assessment as discussed in paragraph (b)(6)(i) of this section.

(iii) Concentration of organic compounds containing halogens and hydrogen halides as measured by Method 26 or 26A, 40 CFR part 60, appendix A.

(iv) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(2) The annual mass emissions of halogen atoms for a batch process vent shall be calculated using Equation 17 of this subpart.

$$E_{halogen} = K\left[\sum_{j=1}^{n}\sum_{i=1}^{m}(C_{avgj})(L_{j,i})(M_{j,i})\right]AFR \quad [Eq. 17]$$

where:

$E_{halogen}$ = Mass of halogen atoms, dry basis, kg/yr.

K = Constant, 0.022 $(ppmv)^{-1}$ (kg-mole per scm) (minute/yr), where standard temperature is 20°C.

AFR = Annual average flow rate of the batch process vent, determined according to paragraph (e) of this section, scmm.

$M_{j,\ i}$ = Molecular weight of halogen atom i in compound j, kg/kg-mole.

$L_{j,\ i}$ = Number of atoms of halogen i in compound j.

n = Number of halogenated compounds j in the batch process vent.

m = Number of different halogens i in each compound j of the batch process vent.

C_{avgj} = Average annual concentration of halogenated compound j in the batch process vent as determined by using Equation 18 of this subpart, dry basis, ppmv.

$$C_{avg_j} = \frac{\sum_{i=1}^{n} (DUR_i)(C_i)}{\sum_{i=1}^{n} (DUR_i)} \quad [Eq. 18]$$

where:

DUR_i = Duration of type i batch emission episodes annually, hrs/yr.

C_i = Average concentration of halogenated compound j in type i batch emission episode, ppmv.

n = Number of types of batch emission episodes venting from the batch process vent.

(3) The annual mass emissions of halogen atoms for an aggregate batch vent stream shall be the sum of the annual mass emissions of halogen atoms for all batch process vents included in the aggregate batch vent stream.

(i) *Process changes affecting Group 2 batch process vents.* Whenever process changes, as described in paragraph (i)(1)

of this section, are made that affect one or more Group 2 batch process vents, the owner or operator shall comply with paragraphs (i) (2) and (3) of this section.

(1) 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 modification of recovery equipment considered part of the batch unit operation as specified in paragraph (a)(2) of this section. An increase in the annual number of batch cycles beyond the batch cycle limitation constitutes a process change. For purposes of this paragraph (i), process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the margin of variation on which the original group determination was based.

(2) For each batch process vent affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (g) of this section, as applicable; alternatively, engineering assessment, as described in paragraph (b)(6)(i) of this section, can be used to determine the effects of the process change.

(3) Based on the results from paragraph (i)(2) of this section, owners or operators shall comply with either paragraph (i)(3) (i), (ii), or (iii) of this section.

(i) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent has become a Group 1 batch process vent as a result of the process change, the owner or operator shall submit a report as specified in § 63.1327(b) and shall comply with the Group 1 provisions in § 63.1322 through § 63.1327 in accordance with the compliance schedule described in § 63.1335(e)(6)(iii)(D)(*2*).

(ii) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent with annual emissions less than the level specified in paragraph (d) of this section, that is in compliance with § 63.1322(g), now has annual emissions greater than or equal to the level specified in paragraph (d) of this section but remains a Group 2 batch process vent, the owner or operator shall submit a report as specified in § 63.1327(c) and shall comply with § 63.1322(f) in accordance with the compliance schedule required by § 63.1335(e)(6)(iii)(D)(*2*).

(iii) If the redetermination described in paragraph (i)(2) of this section indicates no change in group status or no change in the relation of annual emissions to the levels specified in paragraph (d) of this section, the owner or operator is not required to submit a report, as described in § 63.1327(e).

(j) *Process changes to new SAN affected sources using a batch process.* Whenever process changes, as described in paragraph (j)(1) of this section, are made to a new affected source producing SAN using a batch process, the owner or operator shall comply with paragraphs (j) (2) and (3) of this section.

(1) Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type; replacement, removal, or addition of recovery equipment considered part of a batch unit operation, as specified in paragraph (a)(1) of this section; replacement, removal, or addition of control equipment associated with a continuous or batch process vent or an aggregate batch vent stream. For purposes of this paragraph (j)(1), process changes do not include process upsets or unintentional, temporary process changes.

(2) The owner or operator shall redetermine the percent emission reduction achieved using the procedures specified in § 63.1333(c). If engineering assessment, as described in paragraph (b)(6)(i) of this section, can demonstrate that the process change did not cause the percent emission reduction to decrease, it may be used in lieu of redetermining the percent reduction using the procedures specified in § 63.1333(c).

(3) Where the redetermined percent reduction is less than 84 percent, the owner or operator shall submit a report as specified in § 63.1327(d) and shall comply with § 63.1322(a)(3) and all associated provisions in accordance with the compliance schedule described in § 63.1335(e)(6)(iii)(D)(*2*).

§ 63.1324 Batch process vents—monitoring provisions.

(a) *General requirements.* Each owner or operator of a batch process vent or aggregate batch vent stream that uses a control device to comply with the requirements in § 63.1322(a) or § 63.1322(b), shall install the monitoring equipment specified in paragraph (c) of this section.

(1) This monitoring equipment shall be in operation at all times when batch emission episodes, or portions thereof, that the owner or operator has selected to control are vented to the control device, or at all times when an aggregate batch vent stream is vented to the control device.

(2) The owner or operator shall operate control devices such that monitored parameters remain above the minimum level or below the maximum level, as appropriate, established as specified in paragraph (f) of this section.

(b) *Continuous process vents.* Each owner or operator of a continuous process vent that uses a control device or recovery device to comply with the requirements in § 63.1322(a)(3) shall comply with the applicable requirements of § 63.1315(a) as specified in § 63.1321(b).

(c) *Batch process vent and aggregate batch vent stream monitoring parameters.* The monitoring equipment specified in paragraphs (c)(1) through (c)(8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 7 of this subpart.

(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, the 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, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all batch process vents or aggregate batch 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 concert with the combustion of halogenated batch process vents or halogenated aggregate batch vent streams, the following monitoring equipment is required for the scrubber.

(i) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent.

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent to monitor the scrubber liquid flow rate.

(5) Where an absorber is used, a scrubbing liquid temperature

monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(6) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is required.

(7) 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 carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(8) As an alternate to paragraphs (c)(5) through (c)(7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(d) *Alternative monitoring parameters.* An owner or operator of a batch process vent or aggregate batch vent stream may request approval to monitor parameters other than those required by paragraph (c) of this section. The request shall be submitted according to the procedures specified in § 63.1335(f). Approval shall be requested if the owner or operator:

(1) Uses a control device other than those included in paragraph (c) of this section; or

(2) Uses one of the control devices included in paragraph (c) of this section, but seeks to monitor a parameter other than those specified in Table 7 of this subpart and paragraph (c) of this section.

(e) *Monitoring of bypass lines.* Owners or operators of a batch process vent or aggregate batch vent stream using a vent system that contains bypass lines that could divert emissions away from a control device used to comply with § 63.1322(a) or § 63.1322(b) shall comply with either paragraph (d)(1), (d)(2), or (d)(3) 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 (e).

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.1326(e)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device and to the atmosphere; or

(2) Secure the bypass line valve in the non-diverting 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 non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.1326(e)(4).

(3) Continuously monitor the bypass line valve position using computer monitoring and record any periods when the position of the bypass line valve has changed as specified in § 63.1326(e)(4).

(f) *Establishment of parameter monitoring levels.* Parameter monitoring levels for batch process vents and aggregate batch vent streams shall be established as specified in paragraphs (f)(1) through (f)(3) of this section. For continuous process vents complying with § 63.1322(a)(3), parameter monitoring levels shall be established as specified in § 63.1315(a), except as specified in paragraph (f)(4) of this section.

(1) For each parameter monitored under paragraph (c) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 8 of this subpart, that indicates proper operation of the control device. The level shall be established in accordance with the procedures specified in § 63.1334.

(i) For batch process vents using a control device to comply with § 63.1322(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with § 63.1322(b)(2), the established level shall reflect the control efficiency requirement specified in § 63.1322(b)(2).

(iii) For batch process vents and aggregate batch vent streams using a control device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

(2) The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application as required in § 63.1335(e)(5) or § 63.1335(e)(8), respectively.

(3) The operating day shall be defined as part of establishing the parameter monitoring level and shall be submitted with the information in paragraph (f)(2) of this section. The definition of operating day shall specify the times at which an operating day begins and ends. The operating day shall not exceed 24 hours.

(4) For continuous process vents using a control or recovery device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

§ 63.1325 Batch process vents—performance test methods and procedures to determine compliance.

(a) *Use of a flare.* When a flare is used to comply with §§ 63.1322 (a)(1), (a)(3), (b)(1), or (b)(3), the owner or operator shall comply with the flare provisions in § 63.11(b).

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a control device specified in paragraphs (b)(1) through (b)(5) of this section is used to comply with § 63.1322 (a)(2) or (a)(3). Further, if a performance test meeting the conditions specified in paragraph (b)(6) of this section has been conducted by the owner or operator, the results of said performance test may be submitted and a performance test, as required by this section, is not required.

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater where the 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 a New Source Performance Standard (NSPS) and the test was conducted using the same procedures specified in this section and no process changes have been made since the test. Recovery devices used for controlling emissions from continuous process vents complying with § 63.1322(a)(3) are also eligible for the exemption described in this paragraph (b)(3).

(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.

(5) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(6) Performance tests done for other subparts in 40 CFR part 60 or part 63 where total organic HAP or TOC was measured, provided the owner or

operator can demonstrate that operating conditions for the process and control device during the performance test are representative of current operating conditions.

(c) *Batch process vent testing and procedures for compliance with § 63.1322(a)(2).* Except as provided in paragraph (b) of this section, an owner or operator using a control device to comply with § 63.1322(a)(2) shall conduct a performance test using the procedures specified in paragraph (c)(1) of this section in order to determine the control efficiency of the control device. An owner or operator shall determine the percent reduction for the batch cycle using the control efficiency of the control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section and the procedures specified in paragraph (c)(2) of this section. Compliance may be based on either total organic HAP or TOC. For purposes of this paragraph (c) and all paragraphs that are part of this paragraph (c), the term "batch emission episode" shall have the meaning "period of the batch emission episode selected for control," which may be the entire batch emission episode or may only be a portion of the batch emission episode.

(1) Performance tests shall be conducted as specified in paragraphs (c)(1)(i) through (c)(1)(v) of this section.

(i) Except as specified in paragraph (c)(1)(i)(A) of this section, a test shall be performed for the entire period of each batch emission episode in the batch cycle that the owner or operator selects to control as part of achieving the required 90 percent emission reduction for the batch cycle specified in § 63.1322(a)(2). Only one test is required for each batch emission episode selected by the owner or operator for control. The owner or operator shall follow the procedures listed in paragraphs (c)(1)(i)(B) through (c)(1)(i)(D) of this section.

(A) Alternatively, an owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire episode can be determined or during which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions.

(B) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate. Inlet sampling sites shall be located as specified in paragraphs (c)(1)(i)(B)(*1*) and (c)(1)(i)(B)(*2*) of this section. Outlet sampling sites shall be located at the outlet of the control device prior to release to the atmosphere.

(*1*) The control device inlet sampling site shall be located at the exit from the batch unit operation before any control device. § 63.1323(a)(2) describes those recovery devices considered part of the unit operation. Inlet sampling sites would be after these specified recovery devices.

(*2*) If a batch process vent 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 batch process vents and primary and secondary fuels introduced into the boiler or process heater.

(C) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.1323(e).

(D) Method 18 or Method 25A, 40 CFR part 60, appendix A shall be used to determine the concentration of organic HAP or TOC, as appropriate. 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 use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (c)(1)(i)(D)(*1*) and (c)(1)(i)(D)(*2*) of this section.

(*1*) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(*2*) The use of Method 25A, 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.

(ii) If an integrated sample is taken over the entire test period to determine TOC or average total organic HAP concentration, emissions per batch emission episode shall be calculated using Equations 19 and 20 of this subpart.

$$E_{episode,inlet} = K\left[\sum_{j=1}^{n}\left(C_{j,inlet}\right)\left(M_j\right)\right]\left(AFR_{inlet}\right)\left(T_h\right) \quad \text{[Eq. 19]}$$

$$E_{episode,outlet} = K\left[\sum_{j=1}^{n}\left(C_{j,outlet}\right)\left(M_j\right)\right]\left(AFR_{outlet}\right)\left(T_h\right) \quad \text{[Eq. 20]}$$

where:

$E_{episode}$ = Inlet or outlet emissions, kg/episode.

K = Constant, 2.494×10^{-6} (ppmv)$^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j = Average inlet or outlet concentration of TOC or sample component j of the gas stream for the batch emission episode, dry basis, ppmv.

M_j = Molecular weight of TOC or sample component j of the gas stream, gm/gm-mole.

AFR = Average inlet or outlet flow rate of gas stream for the batch emission episode, dry basis, scmm.

T_h = Hours/episode

n = Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(iii) If grab samples are taken to determine TOC or total organic HAP concentration, emissions shall be calculated according to paragraphs (c)(1)(iii) (A) and (B) of this section.

(A) For each measurement point, the emission rates shall be calculated using Equations 21 and 22 of this subpart.

$$E_{point,inlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{inlet} \quad [Eq. 21]$$

$$E_{point,outlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{outlet} \quad [Eq. 22]$$

where:

E_{point} = Inlet or outlet emission rate for the measurement point, kg/hr.

K = Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j = Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j = Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

FR = Inlet or outlet flow rate of gas stream for the measurement point, dry basis, scmm.

n = Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equations 23 and 24 of this subpart.

$$E_{episode,inlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,inlet,i}}{n}\right] \quad [Eq. 23]$$

$$E_{episode,outlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,outlet,i}}{n}\right] \quad [Eq. 24]$$

where:

$E_{episode}$ = Inlet or outlet emissions, kg/episode.

DUR = Duration of the batch emission episode, hr/episode.

$E_{point,\ i}$ = Inlet or outlet emissions for measurement point i, kg/hr.

n = Number of measurements.

(iv) The control efficiency for the control device shall be calculated using Equation 25 of this subpart.

$$R = \frac{\sum_{i=1}^{n} E_{inlet,i} - \sum_{i=1}^{n} E_{outlet,i}}{\sum_{i=1}^{n} E_{inlet,i}}(100) \quad [Eq. 25]$$

where:

R = Control efficiency of control device, percent.

E_{inlet} = Mass rate of TOC or total organic HAP for batch emission episode i at the inlet to the control device as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

E_{outlet} = Mass rate of TOC or total organic HAP for batch emission episode i at the outlet of the control device, as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

n = Number of batch emission episodes in the batch cycle selected to be controlled.

(v) If the batch process vent 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 across the device shall be determined by comparing the TOC or total organic HAP

in all combusted batch process vents and primary and secondary fuels with the TOC or total organic HAP exiting the combustion device, respectively.

(2) The percent reduction for the batch cycle shall be determined using Equation 26 of this subpart and the control device efficiencies specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section. All information used to calculate the batch cycle percent reduction, including a definition of the batch cycle identifying all batch emission episodes, must be recorded as specified in § 63.1326(b)(2). This information shall include identification of those batch emission episodes, or portions thereof, selected for control.

$$PR = \frac{\sum_{i=1}^{n} E_{unc} \sum_{i=1}^{n} E_{inlet,con} - (1-R) \sum_{i=1}^{n} E_{inlet,con}}{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con}} (100) \quad \text{[Eq. 26]}$$

where:

PR = Percent reduction

E_{unc} = Mass rate of TOC or total organic HAP for uncontrolled batch emission episode i, kg/hr.

$E_{inlet,con}$ = Mass rate of TOC or total organic HAP for controlled batch emission episode i at the inlet to the control device, kg/hr.

R = Control efficiency of control device as specified in paragraphs (c)(2) (i) through (c) (2)(iii) of this section.

n = Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of n is not necessarily the same for these three items.

(i) If a performance test is required by paragraph (c) of this section, the control efficiency of the control device shall be as determined in paragraph (c)(1)(iv) of this section.

(ii) If a performance test is not required by paragraph (c) of this section for a combustion control device, as specified in paragraph (b) of this section, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(iii) If a performance test is not required by paragraph (c) of this section for a noncombustion control device, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(d) *Batch process vent and aggregate batch vent stream testing for compliance with § 63.1322(c) [halogenated emission streams].* An owner or operator controlling halogenated emissions in compliance with § 63.1322(c) shall conduct a performance test to determine compliance with the control efficiency specified in § 63.1322(c)(1) or the emission limit specified in § 63.1322(c)(2) for hydrogen halides and halogens.

(1) Sampling sites shall be located at the inlet and outlet of the scrubber or other control device used to reduce halogen emissions in complying with § 63.1322(c)(1) or at the outlet of the control device used to reduce halogen emissions in complying with § 63.1322(c)(2).

(2) The mass emissions of each hydrogen halide and halogen compound for the batch cycle or aggregate batch vent stream shall be calculated from the measured concentrations and the gas stream flow rate(s) determined by the procedures specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section except as specified in paragraph (d)(5) of this section.

(i) Method 26 or Method 26A, 40 CFR part 60, appendix A, shall be used to determine the concentration, in Mg per dry scm, of total hydrogen halides and halogens present in the emissions stream.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.1323(e).

(3) To determine compliance with the percent reduction specified in § 63.1322(c)(1), 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 any hydrogen halides or halogens present at the outlet of the scrubber or other control device shall be summed together. Percent reduction shall be determined by subtracting the outlet mass emissions from the inlet mass emissions and then dividing the result by the inlet mass emissions.

(4) To determine compliance with the emission limit specified in § 63.1322(c)(2), the annual mass emissions for any hydrogen halides and halogens present at the outlet of the control device and prior to any combustion device shall be summed together and compared to the emission limit specified in § 63.1322(c)(2).

(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) *Aggregate batch vent stream testing for compliance with § 63.1322 (b)(2) or (b)(3).* Owners or operators of aggregate batch vent streams complying with § 63.1322 (b)(2) or (b)(3) shall conduct a performance test using the performance testing procedures for continuous process vents in § 63.116(c). For the purposes of this subpart, when the provisions of § 63.116(c) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (e)(1) and (e)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(2) The use of Method 25A, 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.

(f) *Compliance with § 63.1322(a)(3) [new SAN batch affected sources].* Except as provided in paragraph (b) of this section, an owner or operator using a control or recovery device to comply with the percent reduction requirement in § 63.1322(a)(3) shall conduct performance tests as specified in either paragraph (f)(1), (f)(2), or (f)(3) of this section, as applicable. Compliance with § 63.1322(a)(3) shall be determined as specified in paragraph (f)(4) of this section.

(1) For batch process vents, performance tests shall be conducted using the procedures specified in paragraph (c) of this section, except that the owner or operator is not required to determine the percent reduction for the batch cycle as specified in paragraph (c)(2) of this section.

(2) For continuous process vents, performance tests shall be conducted as required by the applicable requirements

of § 63.1315(a) as specified in § 63.1321(b).

(3) For aggregate batch vent streams, performance tests shall be conducted as specified in paragraph (e) of this section.

(4) Compliance with the percent reduction requirement of § 63.1322(a)(3) shall be demonstrated using the procedures specified in § 63.1333(c) and the control device efficiencies specified in either paragraph (f)(4)(i) or (f)(4)(ii) of this section. Emissions for uncontrolled continuous process vents and aggregate batch vent streams shall be determined based on the direct measurement procedures specified in paragraph (f)(2) and (f)(3) of this section, respectively, or based on engineering assessment, as specified in § 63.1323(b)(6)(i). At the discretion of the owner or operator, emissions for uncontrolled batch process vents shall be determined based on any of the procedures in § 63.1323(b).

(i) For noncombustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required by paragraph (c) of this section, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(ii) For combustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(g) *Batch cycle limitation.* The batch cycle limitation required by § 63.1322 (f) and (g) shall be established as specified in paragraph (g)(1) of this section and shall include the elements specified in paragraph (g)(2) of this section.

(1) The batch cycle limitation shall be determined by the owner or operator such that annual emissions for the batch process vent remain less than the level specified in § 63.1323(d) when complying with § 63.1322(g). Alternatively, when complying with § 63.1322(f), the batch cycle limitation shall ensure that annual emissions remain at a level such that said batch process vent remains a Group 2 batch process vent, given the actual annual flow rate for said batch process vent determined according to the procedures specified in § 63.1323(e). The batch cycle limitation shall be determined using the same basis, as described in § 63.1323(a)(1), used to make the group determination (i.e., expected mix of products or worst-case HAP emitting product). The establishment of the batch cycle limitation is not dependent upon any past production or activity level.

(i) If the expected mix of products serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that any foreseeable combination of products which the owner or operator desires the flexibility to manufacture shall be allowed. Combinations of products not accounted for in the documentation required by paragraph (g)(2)(iv) of this section shall not be allowed within the restrictions of the batch cycle limitation.

(ii) If, for a batch process vent with more than one product, a single worst-case HAP emitting product serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that the maximum number of batch cycles the owner or operator desires the flexibility to accomplish, using the worst-case HAP emitting product and ensuring that the batch process vent remains a Group 2 batch process vent or that emissions remain less than the level specified in § 63.1323(d), shall be allowed. This value shall be the total number of batch cycles allowed within the restrictions of the batch cycle limitation regardless of which products are manufactured.

(2) Documentation supporting the establishment of the batch cycle limitation shall include the information specified in paragraphs (g)(2)(i) through (g)(2)(v) of this section, as appropriate.

(i) Identification that the purpose of the batch cycle limitation is to comply with § 63.1322 (f)(1) or (g)(1).

(ii) Identification that the batch cycle limitation is based on a single worst-case HAP emitting product or on the expected mix of products for said batch process vent as allowed under § 63.1323(a)(1).

(iii) Definition of operating year for purposes of determining compliance with the batch cycle limitation.

(iv) If the batch cycle limitation is based on a single worst-case HAP emitting product, documentation specified in § 63.1323 (a)(1)(ii) through (a)(1)(iv), as appropriate, describing how the single product meets the requirements for worst-case HAP emitting product and the number of batch cycles allowed under the batch cycle limitation.

(v) If the batch cycle limitation is based on the expected mix of products, the owner or operator shall provide documentation that describes as many scenarios for differing mixes of products (i.e., how many batch cycles for each product) that the owner or operator desires the flexibility to accomplish. Alternatively, the owner or operator shall provide a description of the relationship among the mix of products that will allow a determination of compliance with the batch cycle limitation under an infinite number of scenarios. For example, if a batch process vent has two products, each product has the same flow rate and emits for the same amount of time, and product No. 1 has twice the emissions as product No. 2, the relationship describing an infinite number of scenarios would be that the owner or operator can accomplish two batch cycles of product No. 2 for each batch cycle of product No. 1 within the restriction of the batch cycle limitation.

§ 63.1326 Batch process vents—recordkeeping provisions.

(a) *Group determination records for batch process vents.* Except as provided in paragraphs (a)(7) through (a)(9) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (a)(1) through (a)(6) of this section for each batch process vent subject to the group determination procedures of § 63.1323. Except for paragraph (a)(1) of this section, the records required by this paragraph (a) are restricted to the information developed and used to make the group determination under § 63.1323(b) through § 63.1323(g), as appropriate. The information required by paragraph (a)(1) of this section is required for all batch process vents subject to the group determination procedures of § 63.1323. If an owner or operator did not need to develop certain information (e.g., annual average flow rate) to determine the group status, this paragraph (a) does not require that additional information be developed.

(1) An identification of each unique product that has emissions from one or more batch emission episodes venting from the batch process vent.

(2) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle for each unique product identified in paragraph (a)(1) of this section that was considered in making the group determination under § 63.1323.

(3) Total annual uncontrolled TOC or organic HAP emissions, determined at the exit from the batch unit operation before any control device, determined in accordance with § 63.1323(b).

(i) For Group 2 batch process vents, said emissions shall be determined at the batch cycle limitation.

(ii) For Group 1 batch process vents, said emissions shall be those used to determine the group status of the batch process vent.

(4) The annual average flow rate for the batch process vent, determined in accordance with § 63.1323(e).

(5) The cutoff flow rate, determined in accordance with § 63.1323(f).

(6) The results of the batch process vent group determination, conducted in accordance with § 63.1323(g).

(7) If a batch process vent is in compliance with § 63.1322 (a) or (b) and the control device is operating at all times when batch emission episodes are venting from the batch process vent, none of the records in paragraphs (a)(1) through (a)(6) of this section are required.

(8) If a batch process vent is in compliance with § 63.1322 (a) or (b), but the control device is operated only during selected batch emission episodes, only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(9) If the total annual emissions from the batch process vent are less than the appropriate level specified in § 63.1323(d), only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(b) *Compliance demonstration records.* Each owner or operator of a batch process vent or aggregate batch vent stream complying with § 63.1322 (a) or (b), shall keep the following records, as applicable, up-to-date and readily accessible:

(1) The annual mass emissions of halogen atoms in the batch process vent or aggregate batch vent stream determined according to the procedures specified in § 63.1323(h);

(2) If a batch process vent is in compliance with § 63.1322(a)(2), records documenting the batch cycle percent reduction as specified in § 63.1325(c)(2); and

(3) When using a flare to comply with § 63.1322 (a)(1), (a)(3), (b)(1), or (b)(3):

(i) The 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 § 63.1325(a); and

(iii) All periods during the compliance determination required by § 63.1325(a) when the pilot flame is absent.

(4) The following information when using a control device to achieve compliance with § 63.1322 (a)(2), (a)(3), (b)(2), or (b)(3):

(i) For an incinerator or non-combustion control device, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams;

(ii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater;

(iii) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the 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 achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams; and

(iv) For a scrubber or other control device following a combustion device to control halogenated batch process vents or halogenated aggregate batch vent streams, the percent reduction of total hydrogen halides and halogens as determined under § 63.1325(d)(3) or the emission limit determined under § 63.1325(d)(4).

(c) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.1324(c) and Table 7 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.1327(f) as allowed under § 63.1324(d), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.1324(f) for parameters specified in § 63.1324(c) and as required by § 63.1335(e) for alternate parameters. Said documentation shall include the parameter monitoring data used to establish the level.

(d) *Group 2 batch process vent continuous compliance records.* The owner or operator of a Group 2 batch process vent shall comply with either paragraph (d)(1) or (d)(2) of this section, as appropriate.

(1) The owner or operator of a Group 2 batch process vent complying with § 63.1322(g) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.1322(g)(1) and specified in § 63.1325(g).

(ii) Records specifying the number and type of batch cycles accomplished for each three month period.

(2) The owner or operator of a Group 2 batch process vent complying with § 63.1322(f) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.1322(f)(1) and specified in § 63.1325(g).

(ii) Records specifying the number and type of batch cycles accomplished for each three month period.

(e) *Controlled batch process vent continuous compliance records.* Each owner or operator of a batch process vent that uses a control device to comply with § 63.1322(a) shall keep the following records, as applicable, up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.1324(c) as applicable, and listed in Table 7 of this subpart, or specified by the Administrator in accordance with § 63.1327(f) as allowed under § 63.1324(d). Said records shall be kept as specified under § 63.1335(d), except as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For flares, the records specified in Table 7 of this subpart shall be kept rather than averages.

(ii) For carbon adsorbers, the records specified in Table 7 of this subpart shall be kept rather than averages.

(2) Records of the batch cycle daily average value of each continuously monitored parameter, except as provided in paragraph (e)(2)(iii) of this section, as calculated using the procedures specified in paragraphs (e)(2)(i) through (e)(2)(ii) of this section.

(i) The batch cycle daily average shall be calculated as the average of all parameter values measured for an operating day during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control.

(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 batch cycle daily averages.

(iii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum level established in accordance with § 63.1324(f), the owner or operator may record that all values were above the minimum or below the maximum level established rather than calculating and recording a batch cycle daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified in § 63.1324(e)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the times of all periods when the vent is diverted from the control device or the flow indicator specified in § 63.1324(e)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.1324(e)(2) or where computer monitoring of the position of the bypass valve is used to comply with § 63.1324(e)(3), hourly records of flow are not required.

(i) For compliance with § 63.1324(e)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence 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 configuration has been checked out, and records of any car-seal that has broken.

(ii) For compliance with § 63.1324(e)(3), the owner or operator shall record the times of all periods when the bypass line valve position has changed.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(f) *Aggregate batch vent stream continuous compliance records.* In addition to the records specified in paragraphs (b) and (c) of this section, each owner or operator of an aggregate batch vent stream using a control device to comply with § 63.1322(b) shall keep records in accordance with the requirements for continuous process vents in § 63.118 (a) and (b), as applicable and as appropriate, except that when complying with § 63.118(b), owners or operators shall disregard statements concerning TRE index values for the purposes of this subpart.

§ 63.1327 - Batch process vents—reporting requirements.

(a) The owner or operator of a batch process vent or aggregate batch vent stream at an affected source shall submit the information specified in paragraphs (a)(1) through (a)(4) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1335(e)(5).

(1) For each batch process vent complying § 63.1322(a) and each aggregate batch vent stream complying § 63.1322(b), the information specified in § 63.1326 (b) and (c), as applicable.

(2) For each Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d), the information specified in § 63.1326(d)(1)(i).

(3) For each Group 2 batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d), the information specified in § 63.1326(d)(2)(i).

(4) For each batch process vent subject to the group determination procedures, the information specified in § 63.1326(a), as appropriate.

(b) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent to become a Group 1 batch process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(2). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.1322 (a) or (b), as appropriate, as required under § 63.1335(e)(6)(iii)(D)(2).

(c) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) that is in compliance with § 63.1322(g) to have annual emissions greater than or equal to the level specified in § 63.1323(d) but remains a Group 2 batch process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(2). The following information shall be submitted:

(1) A description of the process change;

(2) The results of the redetermination of the annual emissions, average flow rate, and cutoff flow rate required under § 63.1323(i) and recorded under § 63.1326 (a)(3) through (a)(5); and

(3) The batch cycle limitation determined in accordance with § 63.1322(f)(1).

(d) Whenever a process change, as defined in § 63.1323(j)(1), is made that causes the percent reduction for all process vents at a new SAN affected source using a batch process to be less than 84 percent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(2). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.1322(a)(3), as required under § 63.1335(e)(6)(iii)(D)(2).

(e) The owner or operator is not required to submit a report of a process change if one of the conditions specified in paragraphs (e)(1) and (e)(2) of this section is met.

(1) The process change does not meet the description of a process change in § 63.1323 (i) or (j).

(2) The redetermined group status remains Group 2 for an individual batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d), a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) complying with § 63.1322(g) continues to have emissions less than the level specified in § 63.1323(d), or the achieved emission reduction remains at 84 percent or greater for new SAN affected sources using a batch process.

(f) If an owner or operator uses a control device other than those specified in § 63.1324(c) and listed in Table 7 of this subpart or requests approval to monitor a parameter other than those specified § 63.1324(c) and listed in Table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.1335(f), as part of the Precompliance Report required under § 63.1335(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

(g) Owners or operators complying with § 63.1324(e), shall comply with paragraph (g)(1) or (g)(2) of this section, as appropriate.

(1) Reports of the times of all periods recorded under § 63.1326(e)(3) when the batch process vent is diverted from the control device through a bypass line.

(2) Reports of all occurrences recorded under § 63.1326(e)(4) 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.

§ 63.1328 Heat exchange systems provisions.

(a) This section applies to each affected source with the exception of each process contact cooling tower that is associated with an affected source manufacturing PET. The owner or operator of said affected source shall comply with § 63.104, with the differences noted in paragraphs (b)

through (d) of this section, for the purposes of this subpart.

(b) When the Periodic Report requirements contained in § 63.152(c) are referred to in § 63.104(b), the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(c) When an owner or operator invokes the delay of repair provisions as specified in § 63.104(b)(3), the information required by § 63.104 (b)(4)(i) through (b)(4)(v) shall be included in the next semi-annual Periodic Report required under § 63.1335(e)(6), for the purposes of this subpart. If the leak remains unrepaired, the information shall also be submitted in each subsequent Periodic Report, until the repair of the leak is reported.

(d) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.1311.

§ 63.1329 Process contact cooling towers provisions.

(a) This section applies to each new affected source that manufactures PET and each existing affected source that manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process. The owner or operator a new affected source shall comply with paragraph (b) of this section. The owner or operator of an existing affected source that manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process shall comply with paragraph (c) of this section. The compliance data for process contact cooling towers subject to the provisions of this section is specified in § 63.1311.

(b) *New affected source requirements.* The owner or operator of a new affected source subject to this section shall comply with paragraphs (b)(1) through (b)(2) of this section.

(1) The owner or operator of a new affected source subject to this section shall not send contact condenser effluent associated with a vacuum system to a process contact cooling tower.

(2) The owner or operator of a new affected source subject to this section shall indicate in the Notification of Compliance Status, as required in § 63.1335(e)(5), that contact condenser effluent associated with vacuum systems is not sent to process contact cooling towers.

(c) *Existing affected source requirements.* The owner or operator of an existing affected source subject to this section who manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process, and who is subject or becomes subject to 40 CFR part 60, subpart DDD, shall maintain an ethylene glycol concentration in the cooling tower at or below 4.0 percent by weight averaged on a daily basis over a rolling 14-day period of operating days. Compliance with this paragraph (c) shall be determined as specified in paragraphs (c)(1) through (c)(4) of this section.

(1) To determine the ethylene glycol concentration, owners or operators shall follow the procedures specified in 40 CFR 60.564(j)(1), except as provided in paragraph (c)(2) of this section.

(i) At least one sample per operating day shall be collected using the procedures specified in 40 CFR 60.564(j)(1)(i). An average ethylene glycol concentration by weight shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average ethylene glycol concentration so calculated constitutes a performance test. Exceedance of the standard during the reduced testing program specified in paragraph (b)(1)(ii) of this section is a violation of these standards.

(ii) The owner or operator may elect to reduce the sampling program to any 14 consecutive day period once every two calendar months, if at least seventeen consecutive 14-day rolling average concentrations immediately preceding the reduced sampling program are each less than 1.2 weight percent ethylene glycol. If the average concentration obtained over the 14 day sampling during the reduced test period exceeds the upper 95 percent confidence interval calculated from the most recent test results in which no one 14-day average exceeded 1.2 weight percent ethylene glycol, then the owner or operator shall reinstitute a daily sampling program. The 95 percent confidence interval shall be calculated as specified in paragraph (b)(1)(iii) of this section. A reduced program may be reinstituted if the requirements specified in this paragraph (c)(1)(ii) are met.

(iii) The upper 95 percent confidence interval shall be calculated using the Equation 27 of this subpart:

$$CI_{95} = \frac{\sum_{i=1}^{n} X_i}{n} + 2\sqrt{\frac{n\sum x^2 - \left(\sum x\right)^2}{n(n-1)}} \qquad \text{[Eq. 27]}$$

where:

X_i = daily ethylene glycol concentration for each day used to calculate each 14-day rolling average used in test results to justify implementing the reduced testing program.

n = number of ethylene glycol concentrations.

(2) Measuring an alternative parameter, such as carbon oxygen demand or biological oxygen demand, that is demonstrated to be directly proportional to the ethylene glycol concentration shall be allowed. Such parameter shall be measured during the initial 14-day performance test during which the facility is shown to be in compliance with the ethylene glycol concentration standard whereby the ethylene glycol concentration is determined using the procedures described in paragraph (b)(1) of this section. The alternative parameter shall be measured on a daily basis and the average value of the alternative parameter shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average value of the alternative parameter constitutes a performance test.

(3) During each performance test, daily measurement and daily average 14-day rolling averages of the ethylene glycol concentration in the cooling tower water shall be recorded. For the initial performance test, these records shall be submitted in the Notification of Compliance Status report.

(4) All periods when the 14-day rolling average exceeds the standard shall be reported in the Periodic Report.

§ 63.1330 Wastewater provisions.

(a) The owner or operator of each affected source shall comply with the requirements of §§ 63.131 through 63.148, with the differences noted in paragraphs (a)(1) through (a)(12) of this section for the purposes of this subpart.

(1) When the determination of equivalence criteria in § 63.102(b) is referred to in §§ 63.132, 63.133, and 63.137, the provisions in § 63.6(g) shall apply.

(2) When the storage tank requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.148, §§ 63.119 through 63.123 are applicable, with the exception of the differences referred to in § 63.1314, for the purposes of this subpart.

(3) When the owner or operator requests to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions referred to in § 63.151(g), or the owner or operator submits an operating permit application instead of an Implementation Plan as specified in § 63.152(e), as referred to in § 63.146(a)(3), § 63.1335(g) and § 63.1335(e)(8), respectively, shall apply for the purposes of this subpart.

(4) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.146 and 63.147, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(5) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.146 and 63.147, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(6) When the Initial Notification Plan requirements in § 63.151(b) are referred to in § 63.146, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(7) When the Implementation Plan requirements contained in § 63.151 are referred to in § 63.146, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(8) When the term "range" is used in § 63.143(f), the term "level" shall be used instead for the purposes of this subpart. This level shall be determined using the procedures specified in § 63.1334.

(9) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(e)(2) which specify that owners or operators shall demonstrate that 95 percent of the mass of HAP, as listed in Table 9 of subpart G of this part, is removed from the wastewater stream or combination of wastewater streams by the procedure specified in § 63.145(i) for a biological treatment unit.

(10) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(j)(3) which specify that owners or operators shall use the procedures specified in appendix C of this part to demonstrate compliance when using a biological treatment unit.

(11) When the provisions of § 63.139(c)(1)(ii) or the provisions of § 63.145(e)(2)(ii)(B) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (a)(11)(i) and (a)(11)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(12) The compliance date for the affected source subject to the provisions of this section is specified in § 63.1311.

(b) For each affected source, the owner or operator shall comply with the requirements for maintenance wastewater in § 63.105, except that when § 63.105(a) refers to "organic HAPs," the definition of organic HAP in § 63.1312 shall apply for the purposes of this subpart.

§ 63.1331 Equipment leak provisions.

(a) Except as provided for in paragraphs (b) and (c) of this section, the owner or operator of each affected source shall comply with the requirements of subpart H of this part, with the differences noted in paragraphs (a)(1) through (a)(9) of this section.

(1) For an affected source producing polystyrene resin, the indications of liquids dripping, as defined in subpart H of this part, from bleed ports in pumps and agitator seals in light liquid service shall not be considered to be a leak. For purposes of this subpart, a "bleed port" is a technologically-required feature of the pump or seal whereby polymer fluid used to provide lubrication and/or cooling of the pump or agitator shaft exits the pump, thereby resulting in a visible dripping of fluid.

(2) The compliance date for the equipment leak provisions contained in this section is provided in § 63.1311.

(3) Owners and operators of an affected source subject to this subpart are not required to submit the Initial Notification required by § 63.182(a)(1) and § 63.182(b).

(4) The Notification of Compliance Status required by paragraphs § 63.182(a)(2) and § 63.182(c) shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in § 63.1311 for the equipment leak provisions. Said notification can be submitted as part of the Notification of Compliance Status required by § 63.1335(e)(5).

(5) The Periodic Reports required by § 63.182(a)(3) and § 63.182(d) may be submitted as part of the Periodic Reports required by § 63.1335(e)(6).

(6) For an affected source producing PET, an owner or operator shall comply with the requirements of paragraphs (a)(6)(i) and (a)(6)(ii) of this section instead of with the requirements of § 63.169 for pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems.

(i) A leak is determined to be detected if there is evidence of a potential leak found by visual, audible, olfactory, or any other detection method except that Method 21, 40 CFR part 60, appendix A shall not be used to determine if a leak is detected.

(ii)(A) 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.

(B) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(C) 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.

(7) For each affected source producing PET, an owner or operator is not required to develop an initial list of identification numbers for the equipment identified in paragraph (a)(6) of this section (i.e., pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems) as would otherwise be required under § 63.181(b)(1)(i).

(8) When the provisions of subpart H of this part specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (a)(8)(i) and (a)(8)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(9) For purposes of this subpart, bottoms receivers and surge control vessels are not considered equipment for purposes of this section and are not subject to the requirements of subpart H of this part.

(b) The provisions of this section do not apply to each TPPU producing PET using a process other than a continuous terephthalic acid (TPA) high viscosity multiple end finisher process that is part of an affected source if all of the components in the TPPU are either in vacuum service or in heavy liquid service.

(1) Owners and operators of a TPPU exempted under paragraph (b) of this section shall retain at the facility information, data, and analyses used to demonstrate that all of the components in the exempted TPPU are either in vacuum service or in heavy liquid service. Such documentation shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid service" or "in gas or vapor 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.

(2) If changes occur at a TPPU exempted under paragraph (b) of this section such that all of the components in the TPPU are no longer either in vacuum service or in heavy liquid service (e.g., by either process changes or the addition of new components), the owner or operator shall comply with the provisions of this section for all of the components at the TPPU. The owner or operator shall submit a report within 180 days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in paragraph (a)(5) of this section. The following information shall be submitted:

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of § 63.1331(a), as specified in paragraphs (b)(2)(ii)(A) and (b)(2)(ii)(B) of this section.

(A) The owner or operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

(B) The Administrator shall approve the compliance schedule or request changes within 120 operating days of receipt of the compliance schedule and justification.

(c) The provisions of this section do not apply to each affected source producing PET using a continuous TPA high viscosity multiple end finisher process.

§ 63.1332 Emissions averaging provisions.

(a) This section applies to owners or operators of existing affected sources who seek to comply with § 63.1313(b) by using emissions averaging rather than following the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(1) The following emission point limitations apply to the use of these provisions:

(i) All emission points included in an emissions average shall be from the same affected source. There may be an emissions average for each affected source located at a plant site.

(ii)(A) If a plant site has only one affected source for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions average for said affected source is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions average.

(B) If a plant site has two or more affected sources for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions averages for said affected sources is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions averages.

(2) Compliance with the provisions of this section can be based on either organic HAP or TOC.

(3) For the purposes of these provisions, whenever Method 18, 40 CFR part 60, appendix A is specified within the paragraphs of this section or is specified by reference through provisions outside this section, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all of the information required in § 63.1335(e)(4) for all emission points to be included in an emissions average.

(c) Paragraphs (c)(1) through (c)(5) of this section describe the emission points that 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. Paragraph (c)(6) of this section discusses the use of pollution prevention in generating emissions averaging credits.

(1) Storage vessels, batch process vents, aggregate batch vent streams, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 2 emission points. The term "continuous process vents subject to § 63.1315" includes continuous process vents subject to § 63.1316 (b)(1)(iii), (b)(2)(iii), and (c)(2), which reference § 63.1315.

(2) Continuous process vents located in the collection of material recovery sections within the affected source at an existing affected source producing PET using a continuous dimethyl terephthalate process subject to § 63.1316(b)(1)(i) where the uncontrolled organic HAP emissions from said continuous process vents are equal to or less than 0.12 kg organic HAP per Mg of product. These continuous process vents shall be considered Group 2 emission points for the purposes of this section.

(3) Storage vessels, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 1 emission points and 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.

(4) Batch process vents and aggregat batch vent streams that are determined to be Group 1 emission points and that

paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

No credits would be assigned to the debit-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 applicable reference control technology or standard and the emissions allowed for the Group 1 emission point. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Debits shall be calculated as follows:

(1) Source-wide debits shall be calculated using Equation 28 of this subpart. Debits and all terms of Equation 28 of this subpart are in units of megagrams per month.

$$\text{Debits} = \sum_{i=1}^{n}\left(ECPV_{iACTUAL} - (0.02)ECPV_{iu}\right) + \sum_{j=1}^{n}\left(ECPVS_{jACTUAL} - ECPVS_{jSTD}\right) + \sum_{i=1}^{n}\left(ES_{iACTUAL} - (b)ES_{iu}\right) + \sum_{i=1}^{n}\left(EWW_{iACTUAL} - EWW_{ic}\right) + \sum_{i=1}^{n}\left(EBPV_{iACTUAL} - (0.10)EBPV_{iu}\right) + \sum_{i=1}^{n}\left(EABV_{iACTUAL} - (0.10)EABV_{iu}\right) \quad \text{[Eq. 28]}$$

where:

$ECPV_{iACTUAL}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $ECPV_{iACTUAL}$ is calculated according to paragraph (g)(2) of this section.

$(0.02)ECPV_{iu}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions. $ECPV_{iu}$ is calculated according to paragraph (g)(2) of this section.

$ECPVS_{jACTUAL}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source that are uncontrolled or controlled to a level less stringent than the applicable standard. $ECPVS_{jACTUAL}$ is calculated according to paragraph (g)(3) of this section.

$ECPVS_{jSTD}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions. $ECPVS_{jSTD}$ is calculated according to paragraph (g)(3) 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 applicable reference control technology or standard. $ES_{iACTUAL}$ is calculated according to paragraph (g)(4) of this section.

$(BL)ES_{iu}$=Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. ES_{iu} is calculated according to paragraph (g)(4) of this section. For calculating emissions, BL=0.05 for each Group 1 storage vessel i subject to § 63.1314(a); and BL=0.02 for each storage vessel i subject to § 63.1314(c).

$EWW_{iACTUAL}$=Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EWW_{iACTUAL}$ is calculated according to paragraph (g)(5) of this section.

EWW_{ic}=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. EWW_{ic} is calculated according to paragraph (g)(5) of this section.

$EBPV_{iACTUAL}$=Emissions from each Group 1 batch process vent i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EBPVi_{iACTUAL}$ is calculated according to paragraph (g)(6) of this section.

$(0.10)EBPV_{iu}$=Emissions from each Group 1 batch process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV_{iu}$ is calculated according to paragraph (g)(6) of this section.

$EABV_{iACTUAL}$=Emissions from each Group 1 aggregate batch vent stream i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EBPVi_{iACTUAL}$ is calculated according to paragraph (g)(7) of this section.

$(0.10)EABV_{iu}$=Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV_{iu}$ is calculated according to paragraph (g)(7) of this section.

n=The number of emission points being included in the emissions average.

(2) Emissions from continuous process vents subject to § 63.1315 shall be calculated as follows:

(i) For purposes of determining continuous 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 continuous process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere. Method 1 or 1A, 40 CFR

are controlled to a level more stringent than the applicable standard.

(5) Continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source, as specified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section. The continuous process vents identified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section shall be considered to be Group 1 emission points for the purposes of this section.

(i) Continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source where the uncontrolled organic HAP emissions for said continuous process vents are greater than 0.12 kg organic HAP per Mg of product and said continuous process vents are controlled to a level more stringent than the applicable standard.

(ii) Continuous process vents subject to § 63.1316(b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source where the uncontrolled organic HAP emissions from said continuous process vents are controlled to a level more stringent than the applicable standard.

(6) The percent reduction for any storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, and process wastewater stream from which emissions are reduced by pollution prevention measures shall be determined using the procedures specified in paragraph (j) of this section.

(i) For a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure must reduce emissions more than if the applicable reference control technology or standard had been applied to the emission point instead of the pollution prevention measure, except as provided in paragraph (c)(6)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure alone does not have to reduce emissions more than the applicable reference control technology or standard, but the combination of the pollution prevention measure and other controls must reduce emissions more than if the applicable reference control technology or standard had been applied instead of the pollution prevention measure.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, cannot be used to generate credits unless the level of control is increased after November 15, 1990. In this case, credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points, identified in paragraph (c)(3) of this section, that are controlled by a reference control technology cannot be used to generate credits 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.

(3) Emission points for nonoperating TPPU cannot be used to generate credits. TPPU that are shutdown cannot be used to generate credits or debits.

(4) Maintenance wastewater cannot be used to generate credits. Wastewater streams treated in biological treatment units cannot be used to generate credits. 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 cannot be used to generate credits, unless the level of control has been increased after November 15, 1990, to a level 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 emission point is subsequently made subject to a State or Federal rule other than this subpart, the emission point can continue to generate emissions averaging credit for the purpose of complying with the previously approved emissions average.

(e) For all emission points included in an emissions average, the owner or operator shall perform the following tasks:

(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 or standard for those emission points. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 and Group 2 emission points that are over-control to compensate for the debits. Equatic 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 emissions average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Emissions Averaging 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 d 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 sha be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credit allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Period Reports as specified in § 63.1335(e)(6). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provision as required by § 63.1335(e)(6)(vi)(D)(2).

(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 during the following periods

(1) Emissions during periods of start-up, shutdown, and malfunction, as described in the Start-up, Shutdown, and Malfunction Plan.

(2) Emissions during periods of monitoring excursions, as defined in § 63.1334(d). For these periods, th calculation of monthly credits and debits shall be adjusted as specified in

part 60, appendix A, shall be used for selection of the sampling site.

(ii) $ECPV_{iu}$ for each continuous process vent i shall be calculated using Equation 29 of this subpart.

$$ECPV_{iu} = \left(2.494 \times 10^{-9}\right) Q h \left(\sum_{j=1}^{n} C_j M_j\right) \qquad [Eq. 29]$$

where:

$ECPV_{iu}$=Uncontrolled continuous process vent emission rate from continuous 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, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the continuous process vent, hours per month.

Cj=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

Mj=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in stream.

(A) The values of Q and Cj shall be determined during a performance test conducted under representative operating conditions. The values of Q and Cj 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 and Cj are no longer representative, a new performance test shall be conducted to determine new representative values of Q and Cj. 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 $ECPV_{iACTUAL}$:

(A) If the continuous process vent is not controlled by a control device or pollution prevention measure, $ECPV_{iACTUAL}=ECPV_{iu}$, where $ECPV_{iu}$ is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent is controlled using a control device or a pollution prevention measure achieving less than 98 percent reduction, calculate $ECPV_{iACTUAL}$ using Equation 30 of this subpart.

$$ECPV_{iACTUAL} = ECPV_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \qquad [Eq. 30]$$

(*1*) The percent reduction shall be measured according to the procedures in § 63.116 if a combustion control device is used. For a flare meeting the criteria in § 63.116(a), or a boiler or process heater meeting the criteria in § 63.116(b), the percent reduction shall be 98 percent. If a noncombustion 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 continuous process vents, product recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating $ECPV_{iACTUAL}$. The sampling site for measurement of uncontrolled emissions is after the final product recovery device. However, as provided in § 63.113(a)(3), a Group 1 continuous process vent may add sufficient product recovery to raise the TRE index value above 1.0 or, for Group 1 continuous process vents at an existing affected source producing MBS, above 3.7, thereby becoming a Group 2 continuous process vent. Such a continuous process vent would not be a Group 1 continuous process vent and would, therefore, not be included in determining debits under this paragraph (g)(2)(iii)(B)(*2*).

(*3*) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from continuous process vents located in the collection of process sections within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be calculated as follows:

(i) The total organic HAP emissions from continuous process vents located in the collection of process sections j within the affected source, $ECPVS_{jACTUAL}$, shall be calculated as follows. The procedures in paragraph (g)(2)(iii) of this section shall be used to determine the organic HAP emissions for each individual continuous process vent, except that paragraph (g)(2)(iii)(B)(*2*) of this section shall not apply and the sampling site shall be after those recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed to determine $ECPVS_{jACTUAL}$.

(ii)(A) ECPVSjstd shall be calculated using Equation 31 of this subpart.

$$ECPVS_{jstd} = \left(EF_{std}\right)\left(PP_j\right) \qquad [Eq. 31]$$

where:

$ECPVS_{jstd}$=Emissions if the applicable standard had been applied to the uncontrolled emissions, megagrams per month.

EF_{std}=0.000018 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(1)(i).

=0.00002 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316 (b)(1)(ii) or (b)(2)(ii).

=0.00004 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(2)(i).

=0.0000036 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(c)(1).

PPj=Polymer produced, Mg/month, for the collection of process sections j within the affected source, as calculated according to paragraph (g)(3)(ii)(B) of this section.

(B) The amount of polymer produced, Mg per month, for the collection of process sections j within the affected source shall be determined by determining the weight of polymer pulled from the process line(s) during a 30-day period. The polymer produced shall be determined by direct measurement or by an alternate methodology, such as materials balance. If an alternate methodology is used, a description of the methodology, including all procedures, data, and assumptions shall be submitted as part of the Emissions Averaging Plan required by § 63.1335(e)(4).

(C) Alternatively, $ECPVS_{jstd}$ for continuous process vents located in the collection of process sections within the affected source subject to § 63.1316(c)(1) may be calculated using the procedures in paragraph (g)(2)(i) and (g)(2)(ii) of this section to determine the organic HAP emissions for each individual continuous process vent, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed and multiplied by 0.02 to determine $ECPVS_{jstd}$.

(4) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(g)(3).

(5) Emissions from wastewater streams shall be calculated using the procedures in § 63.150(g)(5).

(6) Emissions from batch process vents shall be calculated as follows:

(i) $EBPV_{iu}$ for each batch process vent i shall be calculated using the procedures specified in § 63.1323(b).

(ii) The following procedures and equations shall be used to determine $EBPV_{iACTUAL}$:

(A) If the batch process vent is not controlled by a control device or pollution prevention measure, $EBPV_{iACTUAL}=EBPV_{iu}$, where $EBPV_{iu}$ is calculated using the procedures in § 63.1323(b).

(B) If the batch process vent is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction for the batch cycle, calculate $EBPV_{iACTUAL}$ using Equation 32 of this subpart, where percent reduction is for the batch cycle.

$$EBPV_{iACTUAL} = EBPV_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 32]}$$

(1) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(2) The percent reduction for control devices shall be calculated according to the procedures in § 63.1325 (c)(2)(i) through (c)(2)(iii).

(3) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(7) Emissions from aggregate batch vent streams shall be calculated as follows:

(i) For purposes of determining aggregate batch vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be before any control device and before discharge to the atmosphere. Method 1 or 1A, 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) $EABV_{iu}$ for each aggregate batch vent stream i shall be calculated using Equation 33 of this subpart.

$$EABV_{iu} = \left(2.494\times10^{-9}\right)Qh\left(\sum_{j=1}^{n} C_j M_j\right) \quad \text{[Eq. 33]}$$

where:

$EABV_{iu}$=Uncontrolled aggregate batch vent stream emission rate from aggregate batch vent stream i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present from the aggregate batch vent stream, hours per month.

C_j=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

M_j=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in the stream.

(A) The values of Q and C_j shall be determined during a performance test conducted under representative operating conditions. The values of Q and C_j shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(7)(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 and C_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C_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 $EABV_{iACTUAL}$:

(A) If the aggregate batch vent stream is not controlled by a control device or pollution prevention measure, $EABV_{iACTUAL} = EABV_{iu}$, where $EABV_{iu}$ is calculated according to the procedures in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction, calculate $EABV_{iACTUAL}$ using Equation 34 of this subpart.

$$EABV_{iACTUAL} = EABV_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 34]}$$

(1) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(2) The percent reduction for pollution prevention measures shall be calculated according to the procedures specified in paragraph (j) 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 that 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. Said Group 1 and Group 2 emission points are identified in paragraphs (c)(1) through (c)(5) of this section. Credits shall be calculated using Equation 35 of this subpart.

(1) Sourcewide credits shall be calculated using Equation 35 of this subpart.

$$\begin{aligned}
\text{Credits} = {} & D\sum_{i=1}^{n}\left((0.02)ECPV1_{iu} - ECPV1_{iACTUAL}\right) \\
& + D\sum_{j=1}^{n}\left(ECPVS1_{jSTD} - ECPVS1_{jACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(ECPV2_{iBASE} - ECPV2_{iACTUAL}\right) \\
& + D\sum_{j=1}^{m}\left(ECPVS2_{jBASE} - ECPVS2_{jACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((BL)ES1_{iu} - ES1_{iACTUAL}\right) + D\sum_{i=1}^{m}\left(ES2_{iBASE} - ES2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left(EWW1_{ic} - EWW1_{iACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(EWW2_{iBASE} - EWW2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((0.10)EBPV1_{iu} - EBPV1_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((0.10)EABV1_{iu} - EABV1_{iACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(EBPV2_{iBASE} - EBPV2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(EABV2_{iBASE} - EABV2_{iACTUAL}\right)
\end{aligned} \quad \text{[Eq. 35]}$$

Credits and all terms of Equation 35 of this subpart are in units of megagrams per month, the baseline date is November 15, 1990.

where:

D=Discount factor=0.9 for all credit generating emission points except those controlled by a pollution prevention measure; discount factor=1.0 for each credit generating emission point controlled by a pollution prevention measure (i.e., no discount provided).

$ECPV1_{iACTUAL}$=Emissions for each Group 1 continuous process vent i subject to § 63.1315 that is controlled to a level more stringent than the reference control technology. $ECPV1_{iACTUAL}$ is calculated according to paragraph (h)(2) of this section.

$(0.02)ECPV1_{iu}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions. $ECPV1_{iu}$ is calculated according to paragraph (h)(2) of this section.

$ECPVS1_{jSTD}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions. $ECPVS1_{jSTD}$ is calculated according to paragraph (h)(3) of this section.

$ECPVS1_{jACTUAL}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source that are controlled to a level more stringent than the applicable standard. $ECPVS1_{jACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$ECPV2_{iACTUAL}$=Emissions from each Group 2 continuous process vent i subject to § 63.1315 that is controlled. $ECPV2_{iACTUAL}$ is calculated according to paragraph (h)(2) of this section.

$ECPV2_{iBASE}$=Emissions from each Group 2 continuous process vent i subject to § 63.1315 at the baseline date. $ECPV2_{iBASE}$ is calculated according to paragraph (h)(2) of this section.

$ECPVS2_{jBASE}$=Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source at the baseline date. $ECPVS2_{jBASE}$ is calculated according to paragraph (h)(3) of this section.

$ECPVS2_{jACTUAL}$=Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source that are controlled. $ECPVS2_{jACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$ES1_{iACTUAL}$=Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the applicable reference control technology or standard. $ES1_{iACTUAL}$ is calculated according to paragraph (h)(4) of this section.

(BL)$ES1_{iu}$=Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. $ES1_{iu}$ is calculated according to paragraph (h)(4) of this section. For calculating these emissions, BL=0.05 for each Group 1 storage vessel i subject to § 63.1314(a); and BL=0.02 for each storage vessel i subject to § 63.1314(c).

$ES2_{iACTUAL}$=Emissions from each Group 2 storage vessel i that is controlled. $ES2_{iACTUAL}$ is calculated according to paragraph (h)(4) of this section.

$ES2_{iBASE}$=Emissions from each Group 2 storage vessel i at the baseline date. $ES2_{iBASE}$ is calculated according to 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. $EWW1_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW1_{ic}$=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. $EWW1_{ic}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iACTUAL}$=Emissions from each Group 2 wastewater stream i that is controlled. $EWW2_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iBASE}$=Emissions from each Group 2 wastewater stream i at the baseline date. $EWW2_{iBASE}$ is calculated according to paragraph (h)(5) of this section.

(0.10)$EBPV1_{iu}$=Emissions from each Group 1 batch process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV1_{iu}$ is calculated according to paragraph (h)(6) of this section.

$EBPV1_{iACTUAL}$=Emissions from each Group 1 batch process vent i that is controlled to a level more stringent than the reference control technology. $EBPV1_{iACTUAL}$ is calculated according to paragraph (h)(6) of this section.

(0.10)$EABV1_{iu}$=Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EABV1_{iu}$ is calculated according to paragraph (h)(7) of this section.

$EABV1_{iACTUAL}$=Emissions from each Group 1 aggregate batch vent stream i that is controlled to a level more stringent than the reference control technology. $EABV1_{iACTUAL}$ is calculated according to paragraph (h)(7) of this section.

$EBPV2_{iBASE}$=Emissions from each Group 2 batch process vent i at the baseline date. $EBPV2_{iBASE}$ is calculated according to paragraph (h)(6) of this section.

$EBPV2_{iACTUAL}$=Emissions from each Group 2 batch process vent i that is controlled. $EBPV2_{iACTUAL}$ is calculated according to paragraph (h)(6) of this section.

$EABV2_{iBASE}$=Emissions from each Group 2 aggregate batch vent stream i at the baseline date. $EABV2_{iBASE}$ is calculated according to paragraph (h)(7) of this section.

$EABV2_{iACTUAL}$=Emissions from each Group 2 aggregate batch vent stream i that is controlled. $EABV2_{iACTUAL}$ is calculated according to paragraph (h)(7) 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 continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

m=Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

(i) Except as specified in paragraph (h)(1)(iv) of this section, 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.

(iv) For Group 1 and Group 2 batch process vents and Group 1 and Group 2 aggregate batch vent streams, the percent reduction for calculating credits shall be the percent reduction determined according to the procedures in paragraphs (h)(6)(ii) and (h)(6)(iii) of this section for batch process vents and paragraphs (h)(7)(ii) and (h)(7)(iii) of this section for aggregate batch vent streams.

(2) Emissions from continuous process vents subject to § 63.1315 shall be determined as follows:

(i) Uncontrolled emissions from Group 1 continuous process vents ($ECPV1_{iu}$) shall be calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 continuous 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 ($ECPV1_{iACTUAL}$) shall be calculated using Equation 36 of this subpart.

$$ECPV1_{iACTUAL} = ECPV1_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right) \quad [Eq. 36]$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 continuous process vents ($ECPV2_{iACTUAL}$):

(A) For a Group 2 continuous process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, where the control achieves a percent reduction less than or equal to 98 percent reduction, use Equation 37 of this subpart.

$$ECPV2_{iACTUAL} = ECPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 37]$$

(*1*) $ECPV2_{iu}$ shall be calculated according to the equations and procedures for $ECPV_{iu}$ 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, $ECPV2_{iu}$ shall be calculated prior to that recovery device. The equation for $ECPV_{iu}$ in paragraph (g)(2)(ii) of this section shall be used to calculate $ECPV2_{iu}$; 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 continuous 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, use Equation 38 of this subpart.

$$ECPV2_{iACTUAL} = ECPV2_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right) \quad [Eq. 38]$$

(iv) Emissions from Group 2 continuous process vents at baseline shall be calculated as follows:

(A) If the continuous process vent was uncontrolled on November 15, 1990, $ECPV2_{iBASE}=ECPV2_{iu}$ and shall be calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent was controlled on November 15, 1990, use Equation 39 of this subpart.

$$ECPV2_{iBASE} = ECPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 39]$$

(*1*) $ECPV2_{iu}$ is calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(*2*) 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 as part of a pollution prevention project initiated after November 15, 1990, $ECPV2_{iBASE}=ECPV2_{iu}$, where $ECPV2_{iu}$ is calculated according to paragraph (h)(2)(iii)(A)(*3*) of this section.

(3) Emissions from continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be determined as follows:

(i) Emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions ($ECPVS1_{jstd}$) shall be calculated according to paragraph (g)(3)(ii) of this section.

(ii) Actual emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source controlled to a level more stringent than the applicable standard ($ECPVS1_{jACTUAL}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EF_{std} in Equation 31 of this subpart. Further, $ECPVS1_{jACTUAL}$ for continuous process vents subject to § 63.1316(c)(1) controlled in accordance with § 63.1316(c)(1)(iii) shall be calculated using the procedures in paragraph

(h)(2)(ii) of this section for individual continuous process vents and then summing said emissions to get $ECPVS1_{jACTUAL}$, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere.

(iii) Actual emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source ($ECPVS2_{jACTUAL}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EF_{std} in Equation 31 of this subpart.

(iv) Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source at baseline ($ECPVS2_{jBASE}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, at baseline shall be used as EF_{std} in Equation 31 of this subpart.

(4)(i) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(h)(3).

(ii) Actual emissions from Group 1 storage vessels at an existing affected source producing ASA/AMSAN subject to § 63.1314(c) using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction shall be calculated using the procedures specified in § 63.150(h)(3)(ii).

(5) Emissions from wastewater streams shall be calculated using the procedures specified in § 63.150(h)(5).

(6) Emissions from batch process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 batch process vents ($EBPV1_{iu}$) shall be calculated using the procedures § 63.1323(b).

(ii) Actual emissions from Group 1 batch process vents controlled to a level more stringent than the reference control technology ($EBPV1_{iACTUAL}$) shall be calculated using Equation 40 of this subpart, where percent reduction is for the batch cycle.

$$EBPV1_{iACTUAL} = EBPV1_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 40]}$$

(A) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(B) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(c)(2)(i) through (c)(2)(iii).

(C) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 batch process vents ($EBPV2_{iACTUAL}$) shall be calculated using Equation 41 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBPV2_{iu}$ shall be calculated using the procedures specified in § 63.1323(b).

$$EBPV2_{iACTUAL} = EBPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 41]}$$

(iv) Emissions from Group 2 batch process vents at baseline ($EBPV2_{iBASE}$) shall be calculated as follows:

(A) If the batch process vent was uncontrolled on November 15, 1990, $EBPV2_{iBASE}=EBPV2_{iu}$ and shall be calculated using the procedures specified in § 63.1323(b).

(B) If the batch process vent was controlled on November 15, 1990, use Equation 42 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBPV2_{iu}$ shall be calculated using the procedures specified in § 63.1323(b).

$$EBPV2_{iBASE} = EBPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 42]}$$

(7) Emissions from aggregate batch vent streams shall be determined as follows:

(i) Uncontrolled emissions from Group 1 aggregate batch vent streams ($EABV1_{iu}$) shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(ii) Actual emissions from Group 1 aggregate batch vent streams controlled to a level more stringent than the reference control technology ($EABV1_{iACTUAL}$) shall be calculated using Equation 43 of this subpart.

$$EABV1_{iACTUAL} = EABV1_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 43]}$$

(A) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(B) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 aggregate batch vent streams ($EABV2_{iACTUAL}$) shall be calculated using Equation 44 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iACTUAL} = EABV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 44]}$$

(iv) Emissions from Group 2 aggregate batch vent streams at baseline shall be calculated as follows:

(A) If the aggregate batch vent stream was uncontrolled on November 15, 1990, $EABV2_{iBASE}=EABV2_{iu}$ and shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream was controlled on November 15, 1990, use Equation 45 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iBASE} = EABV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 45]}$$

(i) The following procedures shall be followed to establish nominal efficiencies for emission controls for storage vessels, continuous process vents, and process wastewater streams. 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.

(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 operating 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 operating 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 grant permission to take emission credits for use of the control technology. The Administrator may also impose 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) of this section can be submitted to the permitting authority for the affected 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 affected 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 for storage vessels, continuous process vents, batch process vents, aggregate batch vent streams, and wastewater streams:

(1) A pollution prevention measure is any practice that 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 organic 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)(7) of this section and paragraphs (h)(2) through (h)(7) 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) Equation 46 of this subpart shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = \frac{E_B - \frac{(E_{pp})(P_B)}{P_{pp}}}{E_B} 100\% \quad \text{[Eq. 46]}$$

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 either 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) and (g)(3) of this section for continuous process vents, paragraph (g)(4) of this section for storage vessels, paragraph (g)(6) of this section for batch process vents, and paragraph (g)(7) of this section for aggregate batch vent streams.

(B) For wastewater, E_B shall be calculated using Equation 47 of this subpart.

$$E_B = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{Bi}\, H_{Bi} \sum_{m=1}^{s} Fe_m\, HAP_{Bim}\right] \quad \text{[Eq. 47]}$$

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 § 63.144(c)(3), 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 in wastewater stream i.

Fe_m=Fraction emitted of organic HAP m in wastewater from Table 9 of subpart G of this part, 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 September 12, 1996 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 Equation 48 of this subpart and 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.

$$E_{pp} = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{ppi}\,H_{ppi}\sum_{m=1}^{s}Fe_m\,HAP_{ppim}\right] \quad \text{[Eq. 48]}$$

(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)(7) 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 an affected 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 emissions 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 §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(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 Emissions Averaging 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 emissions 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 §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(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 parameter monitoring 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 monitoring excursions in the Periodic Reports as required in § 63.1335(e)(6).

(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 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 §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, as applicable. The specific requirements for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, and wastewater operations that are included in an emissions average for an affected source are identified in paragraphs (m)(1) through (m)(7) of this section.

(1) For each continuous process vent subject to § 63.1315 equipped with a flare, incinerator, boiler, or process heater, as appropriate to the control technique:

(i) Determine whether the continuous process vent is Group 1 or Group 2 according to the procedures specified in § 63.1315;

(ii) Conduct initial performance tests to determine percent reduction according to the procedures specified in § 63.1315; and

(iii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(2) For each continuous process vent subject to § 63.1315 equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device, as appropriate to the control technique:

(i) Determine the flow rate, organic HAP concentration, and TRE index value according to the procedures specified in § 63.1315; and

(ii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(3) For continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1):

(i) Determine whether the emissions from the continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source are greater than, equal to, or less than 0.12 kg organic HAP per Mg of product according to the procedures specified in § 63.1318(b);

(ii) Determine the emission rate, ER_{HAP}, for each collection of process sections within the affected source according to the procedures specified in § 63.1318(b); and

(iv) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1317, § 63.1319, § 63.1320.

(4) 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 according to the procedures specified in § 63.1314;

(ii) Perform the reporting and recordkeeping procedures according to the procedures specified in § 63.1314; and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan according to the procedures specified in § 63.1314.

(5) For wastewater emission points, as appropriate to the control technique:

(i) For wastewater treatment processes, conduct tests according to the procedures specified in § 63.1330;

(ii) Conduct inspections and monitoring according to the procedures specified in § 63.1330;

(iii) Implement a recordkeeping program according to the procedures specified in § 63.1330; and

(iv) Implement a reporting program according to the procedures specified in § 63.1330.

(6) For each batch process vent and aggregate batch vent stream equipped with a control device, as appropriate to the control technique:

(i) Determine whether the batch process vent or aggregate batch vent stream is Group 1 or Group 2 according to the procedures in § 63.1323;

(ii) Conduct performance tests according to the procedures specified in § 63.1325;

(iii) Conduct monitoring according to the procedures specified in § 63.1324; and

(iv) Perform the recordkeeping and reporting procedures according to the procedures specified in §§ 63.1326 and 63.1327.

(7) 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 required by §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, or 63.1330, the owner or operator shall submit the information specified in § 63.1335(f) for alternate monitoring parameters or inspection procedures in the Emissions Averaging Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for 5 years.

(o) Precompliance Reports, Emission Averaging Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.1335.

§ 63.1333 Additional test methods and procedures.

(a) Performance testing shall be conducted in accordance with § 63.7(a)(3), (d), (e), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (a)(4) of this section and the additions specified in paragraphs (b) through (d) of this section. Sections 63.1314 through 63.1330 also contain specific testing requirements.

(1) Performance tests shall be conducted according to the provisions of § 63.7(e), except that performance tests shall be conducted at maximum representative operating conditions for the process.

(2) References in § 63.7(g) to the Notification of Compliance Status requirements in § 63.7(h) shall refer to the requirements in § 63.1335(e)(5).

(3) Because the site-specific test plans in § 63.7(c)(3) are not required, § 63.7(h)(4)(ii) is not applicable.

(4) 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.

(b) Each owner or operator of an existing affected source producing MBS complying with § 63.1315(b)(2) shall determine compliance with the mass emission per mass product standard by using Equation 49 of this subpart.

$$ER_{MBS} = \frac{\sum_{i=1}^{n} E_i}{PP_M} \quad \text{[Eq. 49]}$$

where:

ER_{MBS}=Emission rate of organic HAP or TOC from continuous process vents, kg/Mg product.

E_i=Emission rate of organic HAP or TOC from continuous process vent i as calculated using the procedures specified in § 63.116(c)(4), kg/month.

PP_M=Amount of polymer produced in one month as determined by the procedures specified in § 63.1318(b)(1)(ii), Mg/month.

n=Number of continuous process vents.

When determining E_i, when the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (b)(1) and (b)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume.

(2) The use of Method 25A, 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.

(c) The owner or operator of an affected source, complying with § 63.1322(a)(3) shall determine compliance with the percent reduction requirement using Equation 50 of this subpart.

$$PR = \frac{\left[H_j \sum_{j=1}^{n} (E_i - E_o)_j\right] + \sum_{k=1}^{n} H_k E_{ku} + \sum_{l=1}^{n} AE_{unc}}{\left(H_j \sum_{j=1}^{n} E_i\right) + \sum_{k=1}^{n} H_k E_{ku} + \sum_{l=1}^{n} AE_{unc}} (100) \quad \text{[Eq. 50]}$$

where:

PR=Percent reduction

H_j=Number of operating hours in a year for control device j.

E_i=Mass rate of TOC or total organic HAP at the inlet of control device

j, calculated as specified in § 63.1325(f), kg/hr. This value includes all continuous process vents, batch process vents, and aggregate batch vent streams routed to control device j.

E_o=Mass rate of TOC or total organic HAP at the outlet of control device j, calculated as specified in § 63.1325(f), kg/hr.

H_k=Number of hours of operation during which positive flow is present in uncontrolled continuous process vent or aggregate batch vent stream k, hr/yr.

E_{ku}=Mass rate of TOC or total organic HAP of uncontrolled continuous process vent or aggregate batch vent stream k, calculated as specified in § 63.1325(f)(4), kg/hr.

AE_{unc}=Mass rate of TOC or total organic HAP of uncontrolled batch process vent l, calculated as specified in § 63.1325(f)(4), kg/yr.

n=Number of control devices, uncontrolled continuous process vents and aggregate batch vent streams, and uncontrolled batch process vents. The value of n is not necessarily the same for these three items.

(d) 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.

§ 63.1334 Parameter monitoring levels and excursions.

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter using the procedures specified in paragraph (b), (c), or (d) of this section. The procedures specified in paragraph (b) of this section have been approved by the Administrator. The procedures in paragraphs (c) and (d) of this section have not been approved by the Administrator and determination of the parameter monitoring level using the procedures in paragraph (c) or (d) of this section is subject to review and approval by the Administrator. Said determination and supporting documentation shall be included in the Precompliance Report, specified in § 63.1335(e)(3).

(1) The owner or operator shall operate control and recovery devices such that monitored parameters remain above the minimum established level or below the maximum established level.

(2) As specified in § 63.1335(e)(5) and § 63.1335(e)(8), all established levels, along with their supporting documentation and the definition of an operating day, shall be approved as part of and incorporated into the Notification of Compliance Status or operating permit, respectively.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of subpart A, F, or G of this part.

(b) *Establishment of parameter monitoring levels based on performance tests.* The procedures specified in paragraphs (b)(1) through (b)(3) of this section shall be used, as applicable, in establishing parameter monitoring levels. Level(s) established under this paragraph (b) shall be based on the parameter values measured during the performance test.

(1) *Storage tanks and wastewater.* The maximum and/or minimum monitoring levels shall be based on the parameter values measured during the performance test, supplemented, if desired, by engineering assessments and/or manufacturer's recommendations.

(2) *Continuous process vents.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(3) *Batch process vents.* The monitoring level(s) shall be established using the procedures specified in paragraphs (b)(3)(i) through (b)(3)(ii) of this section, as appropriate. The procedures specified in this paragraph (b)(3) may only be used if the batch emission episodes, or portions thereof, selected to be controlled were tested, and monitoring data were collected, during the entire period in which emissions were vented to the control device, as specified in § 63.1325(c)(1)(i). If the owner or operator chose to test only a portion of the batch emission episode, or portion thereof, selected to be controlled, as specified in § 63.1325(c)(1)(i)(A), the procedures in paragraph (c) of this section must be used.

(i) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(A) During initial compliance testing, the appropriate parameter shall be monitored continuously at all times when batch emission episodes, or portions thereof, selected to be controlled are vented to the control device.

(B) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(C) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(D) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(E) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values measured during each batch emission episode, or portion thereof, selected to be controlled.

(ii) Instead of establishing a single level for the batch cycle, as described in paragraph (b)(3)(i) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section.

(iii) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.1335(e)(5). Said definition shall include an identification of each batch emission episode and the information required to determine parameter monitoring compliance for partial batch cycles (i.e., when part of a batch cycle is accomplished during two different operating days).

(4) *Aggregate batch vent streams.* For aggregate batch vent streams, the monitoring level shall be established in accordance with paragraph (b)(2) of this section.

(c) *Establishment of parameter monitoring levels based on performance tests, engineering assessments, and/or manufacturer's recommendations.* As required in paragraph (a) of this section,

the information specified in paragraphs (c)(2) and (c)(3) of this section shall be provided in the Precompliance Report.

(1) Parameter monitoring levels established under this paragraph (c) 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 expected parameter values.

(2) The specific level of the monitored parameter(s) for each emission point.

(3) The rationale for the specific level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control or recovery device.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* If a performance test is not required by this subpart for a control or recovery device, the maximum or minimum level may be based solely on engineering assessments and/or manufacturer's recommendations. As required in paragraph (a) of this section, the determined level and all supporting documentation shall be provided in the Precompliance Report.

(e) *Compliance determinations.* The provisions of this paragraph (e) apply only to emission points and control or recovery devices for which continuous monitoring is required under this subpart.

(1) The parameter monitoring data for storage vessels, process vents, process wastewater streams, and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance for the monitored control or recovery devices.

(2) Except as provided in paragraphs (e)(3) and (g) of this section, for each excursion, as defined in paragraph (f) of this section, the owner or operator shall be deemed out of compliance with the provisions of this subpart.

(3) If the daily average value of a monitored parameter is above the maximum level or below the minimum level established, or if monitoring data cannot be collected during monitoring device calibration check or monitoring device malfunction, but the affected source is operated during the periods of start-up, shutdown, or malfunction in accordance with the affected source's Start-up, Shutdown, and Malfunction Plan, then the event shall not be considered a monitoring parameter excursion.

(f) *Parameter monitoring excursion definitions.*

(1) For storage vessels, continuous process vents, aggregate batch vent streams, and wastewater streams, an excursion means any of the three cases listed in paragraphs (f)(1)(i) through (f)(1)(iii) of this section. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (f)(1)(i) through (f)(1)(iii) of this section, this is considered a single excursion for the control or recovery device.

(i) When the daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

(ii) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in paragraph (f)(1)(iv) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(iii) When the period of control or recovery device operation is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (f)(1)(iv) of this section.

(iv) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (f)(1)(ii) and (f)(1)(iii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.1335(g)(3), monitoring data are insufficient to calculate a valid hour of data if there are less than four data measurements made during the hour.

(2) For batch process vents, an excursion means one of the two cases listed in paragraphs (f)(2)(i) and (f)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in either paragraph (f)(2)(i) or (f)(2)(ii) of this section, this is considered a single excursion for the control device.

(i) When the batch cycle daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters.

(ii) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the 15-minute periods when batch emission episodes, or portions thereof, selected to be controlled are being vented to the control device during the operating day.

(g) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (g)(1) through (g)(6) of this section. This paragraph (g) applies to affected 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.

§ 63.1335 General recordkeeping and reporting provisions.

(a) *Data retention.* Each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, unless otherwise specified in this subpart.

(b) *Requirements of subpart A of this part.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in subpart A of this part as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Start-up, shutdown, and malfunction plan.* The owner or operator of an affected source shall develop and implement a written start-up, shutdown, and malfunction plan as specified in § 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of start-up, shutdown, and malfunction and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with this subpart. The affected source shall keep this plan onsite and shall incorporate it by reference into their operating permit. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

(i) *Records of start-up, shutdown, and malfunction.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

(A) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with this subpart.

(B) For each start-up, shutdown, or malfunction, a statement that the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed; alternatively, documentation of any actions taken that are not consistent with the plan.

(C) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions.

(D) Records specified in paragraphs (b)(1)(i)(B) and (b)(1)(i)(C) of this section are not required if they pertain solely to Group 2 emission points that are not included in an emissions average or to Group 2 continuous process vents subject to § 63.1315(a) with a total resource effectiveness value greater than 4.0 or, for Group 2 continuous process vents subject to § 63.1315(b), with a total resource effectiveness value greater than 6.7.

(ii) *Reports of start-up, shutdown, and malfunction.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of the schedule specified in § 63.10(d)(5)(i). Said reports shall include the information specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 regarding construction and reconstruction, excluding the provisions specified in § 63.5 (d)(1)(ii)(H), (d)(2), and (d)(3)(ii).

(c) *Requirements of subpart H of this part.* Owners or operators of affected sources shall comply with the reporting and recordkeeping requirements in subpart H of this part, except as specified in § 63.1331.

(d) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(8) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) or (h) of this section. Documentation requirements are specified in paragraphs (d)(9) and (d)(10) of this section.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. Owners or operators of batch process vents must record each measured data value.

(3) Daily average (or batch cycle daily average) values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (d)(3)(ii) of this section, except as specified in paragraph (d)(6) of this section.

(i) The daily average value or batch cycle daily average shall be calculated as the average of all parameter values recorded during the operating day. As specified in § 63.1326(e)(2)(i), only parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has chosen to control shall be used to calculate the average. The calculated 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 the owner or operator specifies in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another 24-hour period.

(4) *Records required when out of compliance.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is below the minimum level or above the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (d)(2) of this section.

(5) *Records required when in compliance for daily average value or batch cycle daily average value.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block average values for 1 hour or shorter periods for that operating day; or

(ii) Retain the data recorded in paragraph (d)(2) of this section.

(6) *Records required when all recorded values are in compliance.* If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day. For these operating days, the records required in paragraph (d)(5) 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.

(8) In addition to the periods specified in paragraph (d)(7) of this section, records shall be kept of the times and durations of any other periods during process operation or control device operation when monitors are not operating. For batch process vents, this paragraph (d)(8) only applies during batch emission episodes, or portions thereof, that the owner or operator has selected to control.

(9) For each TPPU that is not part of the affected source because it does not use as a reactant or process solvent, or produce as a by-product or co-product any organic HAP, the owner or operator shall maintain the documentation specified in § 63.1310(b)(1).

(10) For each flexible operation unit in which the primary product is determined to be something other than a thermoplastic product, the owner or operator shall maintain the documentation specified in § 63.1310(f)(6).

(e) *Reporting and notification.*

(1) In addition to the reports and notifications required by subparts A and H of this part, as specified in this

subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(8) of this section, as applicable.

(2) All reports required under this subpart shall be sent to the Administrator at the addresses listed in § 63.13. If acceptable to both the Administrator and the owner or operator of an affected source, reports may be submitted on electronic media.

(3) *Precompliance Report.* Affected sources requesting an extension for compliance, or requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls, shall submit a Precompliance Report according to the schedule described in paragraph (e)(3)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(3)(ii) through (e)(3)(vi) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. For new affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section.

(ii) A request for an extension for compliance must be submitted in the Precompliance Report, if it has not been submitted to the operating permit authority as part of the operating permit application. The request for a compliance extension will include the data outlined in § 63.6(i)(6)(i) (A), (B), and (D), as required in § 63.1311(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in subpart G of this part or seeks to comply by monitoring a different parameter than those specified in this subpart or in subpart G of this part.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the information requested in paragraph (e)(3)(iv)(A) or (e)(3)(iv)(B) of this section must be submitted in the Precompliance Report.

(A) The owner or operator must submit notification of the intent to use the provisions specified in paragraph (g) of this section; or

(B) The owner or operator must submit a request for approval to use alternative continuous monitoring and recordkeeping provisions as specified in paragraph (g) of this section.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart. Alternative controls must be deemed by the Administrator to be equivalent to the controls required by the standard, under the procedures outlined in § 63.6(g).

(vi) If an owner or operator demonstrates that the emissions estimation equations contained in § 63.1323(b) are inappropriate as specified in § 63.1323(b)(6)(ii)(B), the information required by § 63.1323(b)(6)(ii)(D) shall be submitted.

(vii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in § 63.1334 (c) or (d), the information specified by § 63.1334 (c) or (d), as appropriate.

(4) *Emissions Averaging Plan.* For all existing affected sources using emissions averaging, an Emissions Averaging Plan shall be submitted for approval according to the schedule and procedures described in paragraph (e)(4)(i) of this section. The Emissions Averaging Plan shall contain the information specified in paragraph (e)(4)(ii) of this section, unless the information required in paragraph (e)(4)(ii) of this section is submitted with an operating permit application. An owner or operator of an affected source who submits an operating permit application instead of an Emissions Averaging Plan shall submit the information specified in paragraph (e)(8) of this section. In addition, a supplement to the Emissions Averaging Plan, as required under paragraph (e)(4)(iii) of this section, is to be submitted whenever alternative controls or operating scenarios may be used to comply with this subpart. Updates to the Emissions Averaging Plan shall be submitted in accordance with paragraph (e)(4)(iv) of this section.

(i) *Submittal and approval.* The Emissions Averaging Plan shall be submitted no later than 18 months prior to the compliance date, and it is subject to Administrator approval. The Administrator shall determine within 120 operating days whether the Emissions Averaging Plan submitted presents sufficient information. The Administrator shall either approve the Emissions Averaging 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 operating days.

(ii) *Information required.* The Emissions Averaging Plan shall contain the information listed in paragraphs (e)(4)(ii)(A) through (e)(4)(ii)(K) of this section for all emission points included in an emissions average.

(A) The required information shall include the identification of all emission points in the planned emissions average and, where applicable, notation of whether each storage vessel, continuous process vent, batch process vent, aggregate batch vent stream, and process wastewater stream is a Group 1 or Group 2 emission point, as defined in § 63.1312 or as designated under § 63.1332 (c)(3) through (c)(5).

(B) The required information shall include the projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.1332. The projected credits must be greater than or equal to the projected debits, as required under § 63.1332(e)(3).

(C) The required information shall include 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.

(D) The required information shall include the specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.1332(j)(1) 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.

(E) The required information shall include a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.1332 (m), (n), and (o) that are applicable to each emission point in the emissions average will be implemented beginning on or before the date of compliance.

(F) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(F)(*1*) through (e)(4)(ii)(F)(*5*) of this section for each storage vessel and continuous process vent subject to § 63.1315 included in the average.

(*1*) The required documentation shall include 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 continuous

process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) and the resulting TRE index value shall be submitted.

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(3) The required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(4) The required documentation shall include 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 § 63.1332(i) shall be followed to apply for a nominal efficiency.

(5) The required documentation shall include the operating plan required by § 63.1314, as specified in § 63.122 (a)(2) and (b) for each storage vessel controlled with a closed-vent system with a control device other than a flare.

(G) The information specified in paragraph (f) of this section shall be included in the Emissions Averaging Plan for:

(1) Each continuous process vent subject to § 63.1315 controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114; and

(2) 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.

(H) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(H)(1) through (e)(4)(ii)(H)(5) of this section for each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) included in the average.

(1) For continuous process vents subject to § 63.1316(b)(1)(i), the required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Continuous process vents subject to § 63.1316 (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) are considered Group 1 emission points for purposes of emissions averaging, as specified in § 63.1332(c)(5).

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(3) For process sections generating debits or credits by comparing actual emissions expressed as kg HAP emissions per Mg of product to the applicable standard, the required documentation shall include the actual emission level expressed as kg HAP emissions per Mg of product.

(4) For process sections using combustion control devices, the required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(5) For process sections using combustion control devices, the required documentation shall include 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 § 63.1332(i) shall be followed to apply for a nominal efficiency.

(I) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) and for which no monitoring parameters or inspection procedures are specified in § 63.114, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(J) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(J)(1) through (e)(4)(ii)(J)(3) of this section for each batch process vent and aggregate batch vent stream included in the average.

(1) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2.

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(3) For batch process vents, the required documentation shall include the estimated percent reduction for the batch cycle. For aggregate batch vent streams, the required documentation shall include the estimated percent reduction achieved on a continuous basis.

(K) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from batch process vents or aggregate batch vent streams and for which no monitoring parameters or inspection procedures are specified in § 63.1324, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(L) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(L)(1) through (e)(4)(ii)(L)(4) of this section for each process wastewater stream included in the average.

(1) The required documentation shall include the data used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream and the information specified in Table 14b of subpart G of this part for wastewater streams at new and existing affected sources.

(2) The required documentation shall include the estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(3) The required documentation shall include the estimated percent reduction if:

(i) A control technology that achieves an emission reduction less than or equal to the emission reduction that would otherwise have been achieved by a steam stripper designed to the specifications found in § 63.138(g) is or

will be applied to the wastewater stream;

(*ii*) 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

(*iii*) A pollution prevention measure is or will be applied.

(*4*) The required documentation shall include the anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.1332(i). A nominal efficiency shall be applied for if:

(*i*) A control technology that achieves an emission reduction greater than the emission reduction that would have been achieved by a steam stripper designed to the specifications found in § 63.138(g), is or will be applied to the wastewater stream; or

(*ii*) 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.

(M) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(N) The required information shall include documentation of the data required by § 63.1332(k). The documentation 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 not included in an emissions average.

(iii) *Supplement to Emissions Averaging Plan.* The owner or operator required to prepare an Emissions Averaging Plan under paragraph (e)(4) of this section shall also prepare a supplement to the Emissions Averaging Plan for any alternative controls or operating scenarios that may be used to achieve compliance.

(iv) *Updates to Emissions Averaging Plan.* The owner or operator of an affected source required to submit an Emissions Averaging Plan under paragraph (e)(4) of this section shall also submit written updates of the Emissions Averaging Plan to the Administrator for approval under the circumstances described in paragraphs (e)(4)(iv)(A) and (e)(4)(iv)(B) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(A) The owner or operator who plans to make a change listed in either paragraph (e)(4)(iv)(A)(*1*) or (e)(4)(iv)(A)(*2*) of this section shall submit an Emissions Averaging Plan update at least 120 operating days prior to making the change.

(*1*) An Emissions Averaging Plan update shall be submitted whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.1332 by using a control technique other than that specified in the Emissions Averaging Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Emissions Averaging Plan.

(*2*) An Emissions Averaging Plan update shall be submitted whenever an emission point or a TPPU is added to an existing affected 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 Emissions Averaging Plan is to be added to an emissions average. The information in paragraph (e)(4) of this section shall be updated to include the additional emission point.

(B) The owner or operator who has made a change as defined in paragraph (e)(4)(iv)(B)(*1*) or (e)(4)(iv)(B)(*2*) of this section shall submit an Emissions Averaging Plan update within 90 operating days after the information regarding the change is known to the affected 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.

(*1*) An Emissions Averaging Plan update shall be submitted whenever a process change is made such that the group status of any emission point in an emissions average changes.

(*2*) An Emissions Averaging Plan update shall be submitted whenever a value of a parameter in the emission credit or debit equations in § 63.1332 (g) or (h) changes such that it is below the minimum or above the maximum established level specified in the Emissions Averaging Plan and causes a decrease in the projected credits or an increase in the projected debits.

(C) The Administrator shall approve or request changes to the Emissions Averaging Plan update within 120 operating days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 operating days after the compliance dates specified in § 63.1311. The notification shall contain the information listed in paragraphs (e)(5)(i) through (e)(5)(viii) of this section.

(i) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, continuous monitoring system performance evaluations, any other information used to demonstrate compliance, and any other information required to be included in the Notification of Compliance Status under § 63.122 for storage vessels, § 63.117 for continuous process vents, § 63.146 for process wastewater, § 63.1316 through § 63.1320 for continuous process vents subject to § 63.1316, § 63.1327 for batch process vents, § 63.1329 for process contact cooling towers, and § 63.1332 for emission points included in an emissions average. In addition, each owner or operator shall comply with paragraph (e)(5)(i)(A) and (e)(5)(i)(B) of this section.

(A) For performance tests, group determinations, and process section applicability determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(5)(i)(B) of this section, 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 required information shall be submitted, but a complete test report is not required.

(B) 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.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.120(d)(3) for storage vessels, § 63.114(e) for continuous process vents, § 63.1324 for batch process vents and aggregate batch vent streams, § 63.143(f) for process wastewater, § 63.1332(m) for emission points in emissions averages,

paragraph (e)(8) or (f) of this section, the Notification of Compliance Status shall contain the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(D) of this section, unless this information has been established and provided in the operating permit.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values or batch cycle daily average values of monitored parameters.

(D) For batch process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in § 63.1325(c)(2) and § 63.1334(b)(3)(iii).

(iii) For emission points included in an emissions average, the Notification of Compliance Status shall contain the values of all parameters needed for input to the emission credit and debit equations in § 63.1332 (g) and (h), calculated or measured according to the procedures in § 63.1332 (g) and (h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified.

(iv) The determination of applicability for flexible operation units as specified in § 63.1310(f)(6).

(v) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in § 63.1310(f)(7).

(vi) The results for each predominant use determination for storage vessels belonging to an affected source subject to this subpart that is made under § 63.1310(g)(6).

(vii) The results for each predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.1310(h)(6).

(viii) For owners or operators of Group 2 batch process vents establishing a batch cycle limitation as specified in § 63.1325(g), the affected source's operating year for purposes of determining compliance with the batch cycle limitation.

(6) *Periodic Reports.* For existing and new affected sources, each owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (e)(6)(xi) of this section.

(i) Except as specified in paragraphs (e)(6)(x) and (e)(6)(xi) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or containing the information in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section, as appropriate, shall be submitted semiannually no later than 60 operating days after the end of each 180 day period. The first report shall be submitted no later than 240 days 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. Subsequent reports shall cover each preceding 6-month period.

(ii) If none of the compliance exceptions specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that the affected source was in compliance for the preceding 6-month period and no activities specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the preceding 6-month period.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.1314 through 63.1330 for any emission point or process section, Periodic Reports shall include:

(A) All information specified in § 63.122 for storage vessels; §§ 63.117 and 63.118 and § 63.1320 for continuous process vents, as applicable; § 63.1327 for batch process vents and aggregate batch vent streams; § 63.104 for heat exchange systems; and § 63.146 for process wastewater;

(B) The daily average values or batch cycle daily average values of monitored parameters for both excused excursions, as defined in § 63.1334(g), and unexcused excursions, as defined in § 63.1334(f). For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified;

(C) The periods when monitoring data were not collected shall be specified;

(D) The information in paragraphs (e)(6)(iii)(D)(*1*) through (e)(6)(iii)(D)(*3*) of this section, as applicable:

(*1*) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section;

(*2*) Notification if 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 paragraphs (e)(6)(iii)(D)(*2*)(*i*) and (e)(6)(iii)(D)(*2*)(*ii*) of this section, for emission points that are added or that change from Group 2 to Group 1 as specified in § 63.1310(i)(2)(ii); for continuous process vents under the conditions listed in § 63.1315(a)(12) or § 63.1320(b)(3), as applicable; or for batch process vents under the conditions listed in § 63.1327(b) or § 63.1327(d). This information may be submitted in a separate report, as specified in § 63.1315(a)(12), § 63.1320(b)(3), § 63.1327(b), or § 63.1327(d); and

(*i*) The owner or operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

(*ii*) The Administrator shall approve the compliance schedule or request changes within 120 operating days of receipt of the compliance schedule and justification.

(*3*) Notification if one or more emission point(s) or one or more TPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(*3*)(*i*) through (e)(6)(iii)(D)(*3*)(*iii*) of this section:

(*i*) A description of the addition to the affected source;

(*ii*) Notification of the group status of the additional emission point or all emission points in the TPPU; and

(*iii*) A compliance schedule, as required under paragraph (e)(6)(iii)(D)(*2*) of this section.

(E) The information in paragraph (b)(1)(ii) of this section for reports of start-up, shutdown, and malfunction.

(iv) For each batch process vent with a batch cycle limitation, every second Periodic Report shall include the type and number of batch cycles accomplished during the preceding 12-month period and a statement that the batch process vent is either in or out of compliance with the batch cycle limitation.

(v) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) 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 (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using the same method, results and any other information required shall be submitted, but a complete test report is not required.

(vi) The Periodic Report shall include the results for each change made to a primary product determination for a thermoplastic product made under § 63.1310(f)(6).

(vii) The Periodic Report shall include the results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under § 63.1310(g)(6).

(viii) The Periodic Report shall include the results for each change made to a predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.1310(h)(6).

(ix) The Periodic Report required by § 63.1331(a)(5) may be submitted as part of the Periodic Report required by paragraph (e)(6) of this section.

(x) The owner or operator of an affected source shall submit quarterly reports for all emission points included in an emissions average.

(A) The quarterly reports shall be submitted no later than 60 operating days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 150 days after the compliance date.

(B) The quarterly reports shall include the information specified in paragraphs (e)(6)(x)(B)(*1*) through (e)(6)(x)(B)(*7*) of this section for all emission points included in an emissions average.

(*1*) The credits and debits calculated each month during the quarter;

(*2*) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.1332(e)(4);

(*3*) The values of any inputs to the debit and credit equations in § 63.1332(g) and (h) that change from month to month during the quarter or that have changed since the previous quarter;

(*4*) 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 (e)(6)(v) of this section;

(*5*) Reports of daily average (or batch cycle daily average) values of monitored parameters for excursions as defined in § 63.1334(f);

(*6*) For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified; and

(*7*) Any other information the affected source is required to report under the operating permit or Emissions Averaging Plan for the affected source.

(C) § 63.1334 shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 emission points included in emissions averages.

(D) Every fourth quarterly report shall include the following:

(*1*) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.1332(e)(3); and

(*2*) A certification of compliance with all the emissions averaging provisions in § 63.1332.

(xi) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in paragraphs (e)(6)(xi)(A) through (e)(6)(xi)(E) of this section.

(A) If requested by the Administrator, the owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point or process section that is not included in an emissions average if either condition in paragraph (e)(6)(xi)(A)(*1*) or (e)(6)(xi)(A)(*2*) of this section is met.

(*1*) An emission point has any excursions, as defined in § 63.1334(f), for a semiannual reporting period.

(*2*) A process section subject to § 63.1316 is out of compliance with its applicable standard.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(xi)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 operating days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year, the owner or operator may return to semiannual reporting for the emission point or process section unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(E) § 63.1334 shall govern the use of monitoring data to determine compliance for Group 1 emission points.

(*7*) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) through (e)(7)(ii) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.1314 shall be submitted as specified in § 63.122 (h)(1) and (h)(2).

(ii) For owners or operators of affected sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.1332(i) shall be submitted.

(8) *Operating permit.* An owner or operator who submits an operating permit application instead of an Emissions Averaging Plan or a Precompliance Report shall submit the following information with the operating permit application:

(i) The information specified in paragraph (e)(4) of this section for points included in an emissions average;

(ii) The information specified in paragraph (e)(5) of this section, Notification of Compliance Status, as applicable; and

(iii) The information specified in paragraph (e)(3) of this section, Precompliance Report, as applicable.

(f) *Alternative monitoring parameters.* 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 specified in § 63.1314 for storage vessels, § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(3) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery device, control device, 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) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

(3) The required information shall include a description of the proposed

monitoring, recordkeeping, and reporting system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (f)(3)(ii) of this section is met:

(i) If monitoring and recordkeeping is not continuous; or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the provisions listed in § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, § 63.1314 for storage vessels, or § 63.1330 for wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (g)(4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(3) of this section, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in § 63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(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 (or batch cycle 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 affected 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 or recovery device operating conditions, considering typical variability of the specific process and control or recovery device operating parameter being monitored.

(3) 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, in accordance with paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes;

(B) Except for the monitoring of batch process vents, calculate hourly average 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) Calculate daily average (or batch cycle daily average) values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.1334(f), 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) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements specified in paragraph (h)(1) or (h)(2) of this section as alternatives to the provisions specified in § 63.1314 for storage vessels, § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for wastewater. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section.

(1) The owner or operator may retain only the daily average (or batch cycle daily average) value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns, or malfunctions (e.g., a temperature reading of −200 °C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) through (h)(1)(ii)(C) of this section. All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits;

(B) The running average is based on at least six 1-hour periods; and

(C) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected

operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C). The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (h)(1)(vi)(C) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (h) of this section.

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (h)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (h)(1) of this section.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average (or batch cycle daily average) value for any operating day when the daily average (or batch cycle daily average) value is less than the maximum or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average (or batch cycle daily average) values, the owner or operator shall notify the Administrator in the next Periodic Report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily average (or batch cycle daily average) values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average (or batch cycle daily average) value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average (or batch cycle daily average) value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(vi) of this section, for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (h)(1)(iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(iv) For purposes of paragraph (h) of this section, an excursion means that the daily average (or batch cycle daily average) value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section.

(A) The daily average (or batch cycle daily average) value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of paragraph (h)(2) of this section, if the owner or operator follows the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3).

(B) An excused excursion, as described in § 63.1334(g), shall not be considered an excursion for purposes of paragraph (h)(2) of this section.

Tables to Subpart JJJ of Part 63

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES

Reference	Applies to subpart JJJ	Comment
63.1(a)(1)	Yes	§ 63.1312 specifies definitions in addition to or that supersede definitions in § 63.2.
63.1(a)(2)–63.1(a)(3)	Yes.	
63.1(a)(4)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(a)(5)	No	Reserved.
63.1(a)(6)–63.1(a)(8)	Yes.	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	No	Subpart JJJ and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)	Yes.	
63.1(a)(12)–63.1(a)(14)	Yes.	
63.1(b)(1)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(b)(2)	Yes.	

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES—Continued

Reference	Applies to subpart JJJ	Comment
63.1(b)(3)	No	§63.1310(b) provides documentation requirements for TPPUs not considered affected sources.
63.1(c)(1)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(c)(2)	No	Area sources are not subject to subpart JJJ.
63.1(c)(3)	No	Reserved.
63.1(c)(4)	Yes.	
63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications overridden by this table.
63.1(d)	No	Reserved.
63.1(e)	Yes.	
63.2	Yes	§63.1312 specifies those subpart A definitions that apply to subpart JJJ.
63.3	Yes	Subpart JJJ specifies those units of measure that apply to subpart JJJ.
63.4(a)(1)–63.4(a)(3)	Yes.	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)	Yes.	
63.5(b)(1)	Yes.	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes.	
63.5(b)(4)	No	Area sources are not subject to subpart JJJ.
63.5(b)(5)	Yes.	
63.5(b)(6)	No	§63.1310(i) specifies requirements.
63.5(c)	No	Reserved.
63.5(d)(1)(i)	No.	
63.5(d)(1)(ii)	Yes	Except that for affected sources subject to subpart JJJ, emission estimates specified in §63.5(d)(1)(ii)(H) are not required.
63.5(d)(1)(iii)	Yes	Except that §63.1335(e)(5) specifies Notification of Compliance Status requirements.
63.5(d)(2)	No.	
63.5(d)(3)	Yes	Except §63.5(d)(3)(ii) does not apply.
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes	Except that where §63.5(d)(1) is referred to, §63.5(d)(1)(i) does not apply.
63.6(a)	Yes.	
63.6(b)(1)	Yes.	
63.6(b)(2)	Yes.	
63.6(b)(3)	Yes.	
63.6(b)(4)	Yes.	
63.6(b)(5)	Yes.	
63.6(b)(6)	No	Reserved.
63.6(b)(7)	Yes.	
63.6(c)(1)	Yes	§63.1311 specifies the compliance date.
63.6(c)(2)	Yes.	
63.6(c)(3)	No	Reserved.
63.6(c)(4)	No	Reserved.
63.6(c)(5)	Yes.	
63.6(d)	No	Reserved.
63.6(e)	Yes	Except 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.
63.6(f)(1)	Yes.	
63.6(f)(2)	Yes	Except §63.7(c), as referred to in §63.6(f)(2)(iii)(D), does not apply.
63.6(f)(3)	Yes.	
63.6(g)	Yes.	
63.6(h)	No	Subpart JJJ does not require opacity and visible emission standards.
63.6(i)	Yes	Except for §63.6(i)(15), which is reserved.
63.6(j)	Yes.	
63.7(a)(1)	Yes.	
63.7(a)(2)	No	§63.1335(e)(5) specifies submittal dates.
63.7(a)(3)	Yes.	
63.7(b)	No	§63.1333(a)(4) specifies notification requirements.
63.7(c)	No.	
63.7(d)	Yes.	
63.7(e)	Yes	Except that performance tests must be conducted at maximum representative operating conditions. In addition, some of the testing requirements specified in subpart JJJ are not consistent with §63.7(e)(3).
63.7(f)	Yes.	
63.7(g)	Yes	Except that references to the Notification of Compliance Status report in §63.9(h) are replaced with the requirements in §63.1335(e)(5).

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES—Continued

Reference	Applies to subpart JJJ	Comment
63.7(h)	Yes	Except § 63.7(h)(4)(ii) is not applicable, since the site-specific test plans in § 63.7(c)(3) are not required.
63.8(a)(1)	Yes.	
63.8(a)(2)	No.	
63.8(a)(3)	No	Reserved.
63.8(a)(4)	Yes.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subpart JJJ specifies locations to conduct monitoring.
63.8(b)(3).		
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	No.	
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	§ 63.1334 specifies monitoring frequency.
63.8(c)(5)–63.8(c)(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)–63.8(f)(3)	Yes.	
63.8(f)(4)(i)	No	Timeframe for submitting request is specified in § 63.1335(e).
63.8(f)(4)(ii)	No.	
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	Subpart JJJ does not require continuous emission monitors.
63.8(g)	No	Data reduction procedures specified in § 63.1335(d).
63.9(a)	Yes.	
63.9(b)	No	Subpart JJJ does not require an initial notification.
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No.	
63.9(f)	No	Subpart JJJ does not require opacity and visible emission standards.
63.9(g)	No.	
63.9(h)	No	§ 63.1335(e)(5) specifies Notification of Compliance Status requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	Yes.	
63.10(b)(2)	Yes.	
63.10(b)(3)	No	§ 63.1310(b) requires documentation of sources that are not affected sources.
63.10(c)	No	§ 63.1335 specifies recordkeeping requirements.
63.10(d)(1)	Yes.	
63.10(d)(2)	No.	
63.10(d)(3)	No	Subpart JJJ does not require opacity and visible emission standards.
63.10(d)(4)	Yes.	
63.10(d)(5)	Yes	Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as Periodic Reports specified in § 63.1335(e)(6). The start-up, shutdown, and malfunction 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.
63.10(e)	No.	
63.10(f)	Yes.	
63.10(d)(4)	Yes.	
63.12	Yes.	
63.13	Yes.	
63.14	Yes.	
63.15	Yes.	

TABLE 2.—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
75 ≤ capacity < 151	≥13.1
151 ≥ capacity	≥5.2

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 3.—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES PRODUCING THE LISTED THERMOPLASTICS

Thermoplastic	Chemical[a]	Vessel capacity (cubic meters)	Vapor pressure[b] (kilopascals)
ASA/AMSAN[c]	Styrene/acrylonitrile mixture	≥3.78	≥0.47
	Acrylonitrile	≥75.7	≥1.62
Polystyrene, continuous processes		≥38 and <75.7	≥14.2
		≥75.7	≥1.9
Nitrile[c]	Acrylonitrile	≥ 13.25	≥ 1.8

[a] Vessel capacity and vapor pressure criteria are specific to the listed chemical. When chemical not listed (i.e., —), vessel capacity and vapor pressure criteria apply to all chemicals regulated by this rule for a given subcategory.
[b] Maximum true vapor pressure of total organic HAP at storage temperature.
[c] The applicability criteria in Table 2 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 3).

TABLE 4.—GROUP 1 STORAGE VESSELS AT NEW AFFECTED 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 5.—GROUP 1 STORAGE VESSELS AT NEW AFFECTED SOURCES PRODUCING THE LISTED THERMOPLASTICS

Thermoplastic	Chemical[a]	Vessel capacity (cubic meters)	Vapor pressure[b] (kilopascals)
ASA/AMSAN[c]	Styrene/acrylonitrile mixture	≥3.78	≥0.47.
	Acrylonitrile	≥75.7	≥1.62.
SAN, continuous		≥2,271	0.5≤vp<0.7.
		≥151	0.7≤vp≥10.
		≥30 and <151	vp≥10.
		≥151	vp≥10.
Nitrile[c]	Acrylonitrile	≥13.25	≥1.8.
Polystyrene, continuous processes		≥19.6 and <45.4	vp≥7.48.
		≥45.4 and <109.8	vp≥0.61.
		≥109.8	vp≥0.53.
ABS, continuous mass	Styrene	≥45.43	≥0.078.
		≥38 and <45.43	vp≥13.1.
		≥45.43	vp≥0.53.

[a] Vessel capacity and vapor pressure criteria are specific to the listed chemical. When chemical not listed (i.e., —), vessel capacity and vapor pressure criteria apply to all chemicals regulated by this rule for a given subcategory.
[b] Maximum true vapor pressure of total organic HAP at storage temperature.
[c] The applicability criteria in Table 4 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 5).

TABLE 6.—KNOWN ORGANIC HAZARDOUS AIR POLLUTANTS FROM THERMOPLASTIC PRODUCTS

Thermoplastic product/subcategory	Organic HAP/chemical name (CAS No.)						
	Acetaldehyde (75–07–0)	Acrylonitrile (107–13–1)	1,3 Butadiene (106–99–0)	1,4–Dioxane (123–91–1)	Ethylene Glycol (107–21–1)	Methanol (67–56–1)	Styrene (100–42–5)
ABS latex		✔	✔				✔
ABS using a batch emulsion process		✔	✔				✔
ABS using a batch suspension process		✔	✔				✔
ABS using a continuous emulsion process		✔	✔				✔
ABS using a continuous mass process		✔	✔				✔
ASA/AMSAN		✔	✔				✔
EPS							✔
MABS		✔	✔				✔
MBS			✔				✔
Nitrile resin		✔					
PET using a batch dimethyl terephthalate process	✔			✔	✔	✔	
PET using a batch terephthalic acid process	✔			✔	✔		
PET using a continuous dimethyl terephthalate process	✔			✔	✔	✔	
PET using a continuous terephthalic acid process	✔			✔	✔		

TABLE 6.—KNOWN ORGANIC HAZARDOUS AIR POLLUTANTS FROM THERMOPLASTIC PRODUCTS—Continued

Thermoplastic product/subcategory	Organic HAP/chemical name (CAS No.)						
	Acetaldehyde (75–07–0)	Acrylonitrile (107–13–1)	1,3 Butadiene (106–99–0)	1,4–Dioxane (123–91–1)	Ethylene Glycol (107–21–1)	Methanol (67–56–1)	Styrene (100–42–5)
PET using a continuous terephthalic acid high viscosity multiple end finisher process	✔			✔	✔		
Polystyrene resin using a batch process							✔
Polystyrene resin using a continuous process							✔
SAN using a batch process		✔					✔
SAN using a continuous process		✔					✔

CAS No.=Chemical Abstract Service Number.
ABS=Acrylonitrile butadiene styrene resin.
ASA/AMSAN=Acrylonitrile styrene resin/alpha methyl styrene acrylonitrile resin.
EPS=expandable polystyrene resin.
MABS=methyl methacrylate acrylonitrile butadiene styrene resin.
PET=poly(ethylene terephthalate) resin.
AAN=styrene acrylonitrile resin.
MBS=methyl methacrylate butadiene styrene resin.

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature[a]	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average firebox temperature as specified in §63.1326(e)(2). 4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average upstream and downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test—NCS.[c] 3. Record the batch cycle daily average upstream temperature and temperature difference across catalyst bed as specified in §63.1326(e)(2). 4. Report all batch cycle daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR.[d e] 5. Report all batch cycle daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR.[d e] 6. Report all instances when monitoring data are not collected.[e]
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the batch process vents or aggregate batch vent streams are *not* introduced with or used as the primary fuel.	Firebox temperature[a]	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average firebox temperature as specified in §63.1326(e)(2).[d] 4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Flare	Presence of a flame at the pilot light.	1. Hourly records of whether the monitor was continuously operating during batch emission episodes, or portions thereof, selected for control and whether the pilot flame was continuously present during said periods. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.[c] 3. Record the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when a pilot flame is absent or the monitor is not operating. 4. Report the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when all pilot flames of a flare are absent—PR.[d]

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Scrubber for halogenated batch process vents or aggregate batch vent streams (Note: Controlled by a combustion device other than a flare).	pH of scrubber effluent, and.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average pH of the scrubber effluent measured during the performance test—NCS.[c] 3. Record the batch cycle daily average pH of the scrubber effluent as specified in §63.1326(e)(2). 4. Report all batch cycle daily average pH values of the scrubber effluent that are below the minimum operating pH established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Do	Scrubber liquid flow rate.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the scrubber liquid flow rate measured during the performance test—NCS.[c] 3. Record the batch cycle daily average scrubber liquid flow rate as specified in §63.1326(e)(2). 4. Report all batch cycle daily average scrubber liquid flow rates that are below the minimum flow rate established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Absorber[f]	Exit temperature of the absorbing liquid, and.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average exit temperature of the absorbing liquid measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit temperature of the absorbing liquid as specified in §63.1326(e)(2) for each batch cycle. 4. Report all the batch cycle daily average exit temperatures of the absorbing liquid that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Do	Exit specific gravity for the absorbing liquid.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average exit specific gravity measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit specific gravity as specified in §63.1326(e)(2). 4. Report all batch cycle daily average exit specific gravity values that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Condenser[f]	Exit (product side) temperature.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average exit temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit temperature as specified in §63.1326(e)(2). 4. Report all batch cycle daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Carbon Adsorber[f]	Total regeneration stream mass flow during carbon bed regeneration cycle(s), and.	1. Record the 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 measured during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is above the maximum mass flow rate established in the NCS or operating permit—PR.[d e]
Do	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s). 2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycles(s) measured during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum temperature established in the NCS or operating permit—PR.[d e]
All Control Devices	Presence of flow diverted to the atmosphere from the control device *or*.	1. Hourly records of whether the flow indicator was operating during batch emission episodes, or portions thereof, selected for control and whether flow was detected at any time during said periods as specified in §63.1326(e)(3). 2. Record and report the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when emissions are diverted through a bypass line or the flow indicator is not operating—PR.[d]
Do	Monthly inspections of sealed valves.	1. Records that monthly inspections were performed as specified in §63.1326(e)(4)(i). 2. Record and report all monthly inspections that show the valves are not closed or the seal has been changed—PR.[d]

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Absorber, Condenser, and Carbon Adsorber (as an alternative to the requirements previously presented in this table).	Concentration level or reading indicated by an organic monitoring device at the outlet of the control device.	1. Continuous records as specified in §63.1326(e)(1).[b] 2. Record and report the average concentration level or reading measured during the performance test—NCS.[c] 3. Record the batch cycle daily average concentration level or reading as specified in §63.1326(e)(2). 4. Report all batch cycle daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d,e]

[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 records" is defined in §63.111.
[c] NCS = Notification of Compliance Status described in §63.1335(e)(5).
[d] PR = Periodic Reports described in §63.1335(e)(6).
[e] The periodic reports shall include the duration of periods when monitoring data are not collected as specified in §63.1335(e)(6)(iii)(C).
[f] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 8.—OPERATING PARAMETERS FOR WHICH LEVELS ARE REQUIRED TO BE ESTABLISHED FOR CONTINUOUS AND BATCH PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS

Device	Parameters to be monitored	Established operating parameter(s)
Thermal incinerator	Firebox temperature	Minimum temperature.
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater	Firebox temperature	Minimum temperature.
Scrubber for halogenated vents	pH of scrubber effluent; and scrubber liquid flow rate	Minimum pH; and minimum flow rate.
Absorber	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Minimum temperature; and minimum specific gravity.
Condenser	Exit temperature	Maximum temperature.
Carbon absorber	Total regeneration stream mass flow during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum mass flow; and maximum temperature.
Other devices (or as an alternate to the requirements previously presented in this table)[a].	HAP concentration level or reading at outlet of device	Maximum HAP concentration or reading.

[a] Concentration is measured instead of an operating parameter.

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Part II

Environmental Protection Agency

40 CFR Part 63

National Emissions Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins; Final Rule

NESHAP

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5543–1]

RIN 2060–AE37 NESHAP

National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) from existing and new plant sites that emit organic hazardous air pollutants (HAP) identified on the EPA's list of 189 HAP. The organic HAP are emitted during the manufacture of one or more elastomers.

In the production of elastomers, a variety of organic HAP are used as monomers or process solvents. Available emissions data gathered in conjunction with the development of the elastomer standards show that the following organic HAP are those which have the potential for reduction by implementation of the standard: Styrene, n-hexane, 1,3-butadiene, acrylonitrile, methyl chloride, hydrogen chloride, carbon tetrachloride, chloroprene, and toluene. Some of these pollutants are considered to be mutagens and carcinogens, and all can cause reversible or irreversible toxic effects following exposure. The potential toxic effects include eye, nose, throat, and skin irritation; liver and kidney toxicity, and neurotoxicity. These effects can range from mild to severe. The rule is estimated to reduce organic HAP emissions from existing affected sources by over 6,300 megagrams per year (Mg/yr). The majority of the organic HAP regulated by these standards are also volatile organic compounds (VOC). In reducing emissions of organic HAP, VOC are also reduced.

The rule implements section 112(d) of the Act, which requires the Administrator to regulate emissions of HAP listed in section 112(b) of the Act. The intended effect of this rule is to protect the public by requiring the maximum degree of reduction in emissions of organic HAP from new and existing major sources that the Administrator determines is achievable, taking into consideration the cost of achieving such emission reduction, and any nonair quality, health and environmental impacts, and energy requirements.

EFFECTIVE DATE: September 5, 1996. See the Supplementary Information section concerning judicial review.

ADDRESSES: *Docket.* Docket No. A–92–44, containing information considered by the EPA in development of the promulgated standards, is available for public inspection and copying between 8 a.m. and 4 p.m., Monday through Friday, at the following address in room M–1500, Waterside Mall (ground floor): U. S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street SW., Washington, DC 20460; telephone: (202) 260–7548. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For questions concerning applicability and other rule determinations, inquiries should be directed to the appropriate regional office contact listed below:

Greg Roscoe, Air Programs Compliance, Branch Chief, U.S. EPA Region I, 5EA, JFK Federal Building, Boston, MA 02203, (617) 565–3221.

Kenneth Eng, Air Compliance Branch Chief, U.S. EPA Region II, 290 Broadway, New York, NY 10007–1866, (212) 637–4000.

Bernard Turlinski, Air Enforcement Branch Chief, U.S. EPA Region III (3AT10), 841 Chestnut Building, Philadelphia, PA 19107, (215) 597–3989.

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John R. Hepola, Air Enforcement Branch Chief, U.S. EPA Region VI, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202–2733, (214) 665–7220.

Donald Toensing, Chief, Air Permitting and Compliance Branch, U.S. EPA Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7446.

Douglas M. Skie, Air and Technical Operations, Branch Chief, U.S. EPA Region VIII, 999 18th Street, Suite 500, Denver, CO 80202–2466, (303) 312–6432.

Colleen W. McKaughan, Air Compliance Branch Chief, U.S. EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 744–1198.

Christopher Hall, Air Toxics Program Manager, U.S. EPA Region X, 1200 Sixth Avenue, OAQ–107, Seattle, WA 98101–9797, (206) 553–1949.

For information concerning the technical analysis for this rule, contact Mr. Robert Rosensteel at (919) 541–5608, Organic Chemicals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: *Regulated entities.* Entities potentially regulated by this action are elastomer product process units (EPPUs) manufacturing the same primary product and located at a plant site that is a major source of HAP. Regulated categories and entities include:

Category	Examples of regulated entities
Industry	Producers of butyl rubber, halobutyl rubber, epichlorohydrin elastomers, ethylene propylene rubber, Hypalon™, neoprene, nitrile butadiene rubber, nitrile butadiene latex, polysulfide rubber, polybutadiene rubber/styrene butadiene rubber by solution, styrene butadiene latex, and styrene butadiene rubber by emulsion.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in § 63.480 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

Response to Comment Document. The response to comment document for the promulgated standards contains: (1) A summary of the public comments made on the proposed standards and the Administrator's response to the comments; and (2) A summary of the changes made to the standards since proposal. The document may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone (919) 541–2777; or from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22151, telephone (703) 487–4650. Please refer to "Hazardous Air Pollutant Emissions from Process Units in the Elastomers Manufacturing Industry—Basis and Purpose Document for Final Standa Summary of Public Comments and

Responses" (EPA–453/R–96–006b; May 1996). This document is also located in the docket (Docket Item No. V–C–1) and is available for downloading from the Technology Transfer Network. The Technology Transfer Network is one of the EPA's electronic bulletin boards. The Technology Transfer Network provides information and technology exchange in various areas of air pollution control. The service is free except for the cost of a phone call. Dial (919) 541–5742 for up to a 14,400 bps modem. If more information on the Technology Transfer Network is needed, call the HELP line at (919) 541–5384.

Previous Background Documents. The following is a listing of background documents pertaining to this rulemaking. The complete title, EPA publication number, publication date, and docket number are included. Where appropriate, the abbreviated descriptive title is used to refer to the document throughout this notice.

(1) Hazardous Air Pollutant Emissions from Process Units in the Elastomer Manufacturing Industry—Supplementary Information Document for Proposed Standards. EPA–453/R–95–005a, May 1995; Docket number A–92–44, item number III–B–2.

(2) Hazardous Air Pollutant Emissions from Process Units in the Elastomer Manufacturing Industry—Basis and Purpose Document for Proposed Standards. EPA–453/R–95–006a, May 1995; Docket number A–92–44, item number III–B–1.

Judicial Review. Under section 307(b)(1) of the Act, judicial review of the final rule 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 final 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.

The information presented in this preamble is organized as follows:

I. Summary of Considerations Made in Developing This Standard
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I. Summary of Considerations Made in Developing This Standard

A. Background and Purpose of Regulation

The Clean Air Act was created in part "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population" (CAA, section 101(b)(1)). Section 112(b) lists 189 HAP believed to cause adverse health or environmental effects. Section 112(d) requires that emission standards be promulgated for all categories and subcategories of major sources of these HAP and for many smaller "area" sources listed for regulation, pursuant to section 112(c). Major sources are defined as those that emit or have the potential to emit at least 10 tons per year of any single HAP or 25 tons per year of any combination of HAP.

On July 16, 1992 (57 FR 31576), the EPA published a list of categories of sources slated for regulation. This list included all nine of the source categories regulated by the standards being promulgated today. The statute requires emissions standards for the listed source categories to be promulgated between November 1992 and November 2000. On December 3, 1993, the EPA published a schedule for promulgating these standards (58 FR 63841). Standards for the nine source categories covered by today's rule were proposed on June 12, 1995 (60 FR 30801).

For the purpose of this rule, the EPA has separated the 9 Group 1 polymers into 12 elastomer products (i.e., subcategories). These products are butyl rubber (BR), halobutyl rubber (HBR), epichlorohydrin elastomers (EPI), ethylene propylene rubber (EPR), Hypalon™ (HYP), neoprene (NEO), nitrile butadiene rubber (NBR), nitrile butadiene latex (NBL), polysulfide rubber (PSR), polybutadiene rubber/styrene butadiene rubber by solution (PBR/SBRS), styrene butadiene latex (SBL), and styrene butadiene rubber by emulsion (SBRE).

In the 1990 Amendments to the Clean Air Act, Congress specified that each standard for major sources must require the maximum reduction in emissions of HAP that the EPA determines is achievable, considering cost, non-air quality health and environmental impacts, and energy requirements. In essence, these Maximum Achievable Control Technology (MACT) standards would ensure that all major sources of air toxics achieve the level of control already being achieved by the better controlled and lower emitting sources in each category. This approach provides assurance to citizens that each major source of toxic air pollution will be required to employ good control measures to limit its emissions.

Available emission data, collected during the development of this rule, shows that pollutants that are listed in section 112(b)(1) and are emitted by Group I Polymer and Resins sources include n-hexane, styrene, 1,3-butadiene, acrylonitrile, methyl chloride, carbon tetrachloride, chloroprene, and toluene. Some of these pollutants are considered to be probable human carcinogens when inhaled, and all can cause reversible and irreversible toxic effects following exposure. These effects include respiratory and skin irritation, effects upon the eye, various systemic effects including effects upon the liver, kidney, heart and circulatory systems, neurotoxic effects, and in extreme cases, death.

The EPA does recognize that the degree of adverse effects to health can range from mild to severe. The extent and degree to which the health effects may be experienced is dependent upon (1) the ambient concentrations observed in the area (e.g., as influenced by emission rates, meteorological conditions, and terrain), (2) the frequency of and duration of exposures, (3) characteristics of the exposed individuals (e.g., genetics, age, pre-existing health conditions, and lifestyle) which vary significantly with the

population, and (4) pollutant specific characteristics (e.g., toxicity, half-life in the environment, bioaccumulation, and persistence).

Due to the volatility and relatively low potential for bioaccumulation of these pollutants, air emissions are not expected to deposit on land or water and cause subsequent adverse health or ecosystem effects.

The alternatives considered in the development of this regulation, including those alternatives selected as standards for new and existing elastomer sources, are based on process and emissions data received from every existing elastomer facility known to be in operation at the time of the initial data collection. During the development of today's rule, the EPA met with industry several times to discuss this data. In addition, facilities and State regulatory authorities had the opportunity to comment on draft versions of the proposed regulation and to provide additional information. The EPA published the proposed rule for comment on June 12, 1995 (60 FR 30801). The public comments that were received on the proposed rule are summarized in the Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses (Docket Item No. V–C–1). These comments were considered, and in some cases, today's standards reflect these comments. Of major concern to commenters were the reporting and recordkeeping burden and the requirements for back-end process operations and wastewater control.

The final standards give existing sources 3 years from the date of promulgation to comply. Subject to certain limited exceptions, this is the maximum amount of time allowed under the Clean Air Act. New sources are required to comply with the standard upon startup. The EPA believes these standards to be achievable for affected sources within the timeframes provided. The number of existing sources affected by this rule is less than 50; therefore, the EPA does not believe that required retrofits or other actions cannot be achieved in the time frame allotted.

Included in the final rule are methods for determining initial compliance as well as monitoring, recordkeeping, and reporting requirements. All of these components are necessary to ensure that sources will comply with the standards both initially and over time. However, the EPA has made every effort to simplify the requirements in the rule. The Agency has also attempted to maintain consistency with existing regulations by either incorporating text from existing regulations or referencing the applicable sections, depending on which method would be least confusing for a given situation.

As described in the "Basis and Purpose Document for Proposed Standards" (EPA–453/R–95–006a), regulatory alternatives were considered that included a combination of requirements equal to, and above, the MACT floor. Cost-effectiveness was a factor considered in evaluating options above the floor; in cases where options more stringent than the floor were selected, they were judged to have a reasonable cost effectiveness. For epichlorohydrin rubber (EPR), polybutadiene rubber (PBR)/styrene butadiene rubber (SBR) (by solution), and SBR (by emulsion) the estimated cost effectiveness was found to be relatively high at the MACT floor level due to the requirements for process back-end operations. However, the back-end provisions of the regulation contain several options for compliance that will allow facilities to select the most cost-effective option based on facility-specific considerations.

Representatives from other interested EPA offices and programs are included in the regulatory development process as members of the Work Group. The Work Group is involved in the regulatory development process, and must review and concur with the regulation before proposal and promulgation. Therefore, the EPA believes that the implications to other EPA offices and programs have been adequately considered during the development of these standards.

B. Source of Authority

National emission standards for new and existing sources of HAP established under section 112(d) reflect MACT or

> * * * the maximum degree of reduction in emissions of the HAP * * * 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 for new or existing sources in the category or subcategory to which such emission standard applies * * * (42 U.S.C. 7412(d)(2)).

For new sources, section 112(d)(3) provides that 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) provides further that for existing sources the standards shall be no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources for source categories and subcategories with 30 or more sources or the average emission limitation achieved by the best performing 5 sources for source categories or subcategories with fewer than 30 sources. These two minimum levels of control define the MACT floor for new and existing sources.

The regulatory alternatives considered in the development of this regulation, including those regulatory alternatives selected as standards for new and existing affected sources, are based on process and emissions data received from the existing plant sites known by the EPA to be in operation.

As stated above, the MACT floor represents the least stringent standard permitted by law for new and existing sources. The EPA may establish standards more stringent than the MACT floor when it determines that such standards are achievable, "taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts, and energy requirements" (42 U.S.C. 7412(d)(2)). In a few instances, the standards in today's rule are more stringent than the MACT floor. In each case, the EPA determined, based on available data, that such standards were achievable within the meaning of section 112(d). Table 1 shows the subcategory-specific instances where an option was selected that was more stringent than the MACT floor, along with the corresponding incremental cost-effectiveness from the MACT floor.

TABLE 1.—INCREMENTAL COST EFFECTIVENESS VALUES OF REGULATORY OPTIONS MORE STRINGENT THAN THE MACT FLOOR[a]

Subcategory	Incremental cost effectiveness[b] ($/Mg)				
	Storage	Front-end process vents	Back-end process	Wastewater	Equipment leaks
Butyl	floor	$3,100	floor	$1,600	$1,700

TABLE 1.—INCREMENTAL COST EFFECTIVENESS VALUES OF REGULATORY OPTIONS MORE STRINGENT THAN THE MACT FLOOR[a]—Continued

Subcategory	Incremental cost effectiveness[b] ($/Mg)				
	Storage	Front-end process vents	Back-end process	Wastewater	Equipment leaks
Epichlorohydrin	floor	floor	floor	floor	$2,000
Ethylene propylene	floor	floor	floor	floor	$2,000
Halobutyl	$300	$1,400	floor	floor	$1,100
Hypalon®	floor	floor	floor	floor	floor
Neoprene	floor	$2,900	floor	floor	[c]$1,600
Nitrile butadiene latex	floor	floor	floor	floor	[c]$2,600
Nitrile butadiene rubber	floor	floor	floor	floor	[c]$1,200
Polybutadiene/styrene butadiene rubber by solution	floor	floor	floor	floor	[c]$2,600
Polysulfide	floor	floor	floor	floor	floor
Styrene butadiene latex	floor	floor	floor	floor	floor
Styrene butadiene rubber by emulsion	floor	floor	floor	floor	floor

[a] In the table, "floor" indicates that the level of the promulgated standard is equivalent to the MACT floor.
[b] The incremental cost effectiveness reflects the cost and emission reduction from the MACT floor to the level of the promulgated standard.
[c] Equipment leak control programs at elastomer production facilities consisted of a complex combination of controls for the numerous components that can leak and cause HAP emissions. This complexity made it impractical to define a MACT floor "program" for which impacts could be assessed for multiple-plant subcategories. Therefore, the cost effectiveness values shown in the table represent the incremental cost effectiveness values from baseline.

C. Technical Basis of Regulation

Potential regulatory alternatives were developed based on the Hazardous Organic NESHAP (HON) (subparts F, G, and H of 40 CFR part 63), and the Batch Processes Alternative Control Techniques (ACT) document (EPA 453/R–93–017; November 1993). The HON was selected as a basis for regulatory alternatives because: (1) The characteristics of the emissions from storage vessels, continuous front-end process vents, equipment leaks, and wastewater at Group I elastomer facilities are similar or identical to those addressed by the HON; and (2) the levels of control required under the HON were already determined through extensive analyses to be reasonable from a cost and impact perspective.

Finally, the Batch Processes ACT was selected to identify regulatory alternatives for batch process vents, which are not addressed by the HON. The Batch Processes ACT addresses the control of VOC emissions, and all of the organic HAP identified for the Group I elastomers facilities are also VOC. Unlike the HON, the Batch Processes ACT is not a regulation and, therefore, does not specify a level of control that must be met. Instead, the Batch Processes ACT provides information on potential levels of control, their costs, etc. Based on the review of the Batch Processes ACT, the EPA selected a level of control equivalent to 90 percent reduction for batch front-end process vents. This level of control was selected for regulatory analysis purposes because it represents a reasonable level of control considering costs and other impacts.

D. Stakeholder and Public Participation

In the development of this standard, numerous representatives of the elastomers industry were consulted. Industry representatives have included trade associations and elastomer producers responding to section 114 questionnaires and information collection requests (ICR's). The EPA also received input from representatives from State and Regional environmental agencies. Representatives from other interested EPA offices and programs participated in the regulatory development process as members of the Work Group. The Work Group is involved in the regulatory development process, and is given opportunities to review and comment on the standards before proposal and promulgation. Therefore, the EPA believes that the impact on other EPA offices and programs has been adequately considered during the development of these standards. In addition, the EPA has met with members of industry concerning these standards. Finally, industry representatives, regulatory authorities, and environmental groups had the opportunity to comment on the proposed standards and to provide additional information during the public comment period that followed proposal.

The standards were proposed in the Federal Register on June 12, 1995 (60 FR 30801). The preamble to the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of proposal. To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal. However, the public did not request a hearing and, therefore, one was not held. The public comment period was from June 12, 1995 to August 11, 1995. A total of twenty-nine comment letters were received. Commenters included industry representatives and State agencies. The comments were carefully considered, and changes were made in the proposed standards when determined by the EPA to be appropriate. A detailed discussion of these comments and responses can be found in the Basis and Purpose Document for Final Standards, which is referenced in the ADDRESSES section of this preamble. The summary of comments and responses in the Basis and Purpose Document for the Final Standards serves as the basis for the revisions that have been made to the standards between proposal and promulgation. Section IV of this preamble discusses some of the major changes made to the standards.

II. Summary of Promulgated Standards

Emissions of specific organic HAP from the following types of emission points (i.e., emission source types) are being covered by the final standard: Storage vessels, continuous front-end process vents, batch front-end process vents, back-end processes operations, equipment leaks, and wastewater operations. The organic HAP emitted and required to be controlled by these standards vary by subcategory. Each of the twelve elastomer products constitutes a separate subcategory, each of which belongs to one of the nine

source categories regulated by these standards.

The existing affected source is defined as each group of one or more EPPUs that manufacture the same elastomer product as their primary product, and (1) are located at a major source plant site, (2) are not exempt, and (3) are not part of a new affected source. This means that each plant site will have only one existing affected source in any given subcategory.

If a plant site with an existing affected source producing elastomer A as its primary product constructs a new EPPU also producing elastomer A as its primary product, the new EPPU is a new affected source if the new EPPU has the potential to emit more than 10 tons per year of a single HAP, or 25 tons per year of all HAP. In this situation, the plant site would have an existing affected source producing elastomer A and a new affected source producing elastomer A. Each subsequent new EPPU with potential HAP emissions above the levels cited above would be a separate new affected source.

New affected sources are also created when an EPPU is constructed at a major source plant site where the elastomer product was not previously produced, with no regard to the potential HAP emissions from the EPPU. Another instance where a new affected source is created is if a new EPPU is constructed at a new plant site (i.e., green field site) that will be a major source. The final manner in which a new affected source is created is when an existing affected source undergoes reconstruction, thus making the previously existing source subject to new source standards.

With relatively few exceptions, the final standards for storage vessels, continuous front-end process vents, equipment leaks, and wastewater streams are the same as those promulgated for the corresponding types of emission points at facilities subject to the HON. As shown in Tables 2 and 3, some subcategories have requirements that differ from the HON; these cases are designated by "MACT Floor." These different requirements are specified in the final standards.

As in the HON, if an emission point within an affected source meets the applicability criteria and is required to be controlled under the standard, it is referred to as a Group 1 emission point. If an emission point within the affected source is not required to apply controls, it is referred to as a Group 2 emission point.

A. Storage Vessel Provisions

For all subcategories, the storage vessel requirements are identical to the HON storage vessel requirements in subpart G. A storage vessel means a tank or other vessel that is associated with an elastomer product process unit and that stores a liquid containing one or more organic HAP. The rule specifies assignment procedures for determining whether a storage vessel is associated with an elastomer product 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) and without emissions to the atmosphere, (3) vessels with capacities smaller than 38 m^3 (10,000 gal), (4) vessels and equipment storing and/or handling material that contains no detectable organic HAP, and/or organic HAP as impurities only, (5) surge control vessels and bottoms receiver tanks, and (6) wastewater storage tanks. An impurity is produced coincidentally with another chemical substance and is processed, used, or distributed with it.

In addition to those vessels that do not meet the definition of storage vessels, the standards exempt certain storage vessels containing latex. Specifically, storage vessels containing a latex, located downstream of the stripping operations, all storage vessels containing styrene butadiene latex, and storage vessels containing styrene, acrylamide, and epichlorohydrin, are exempt from the storage vessel requirements of the final rule.

The owner or operator must determine whether a storage vessel is Group 1 or Group 2; Group 1 storage vessels require control. The criteria for determining whether a storage vessel is Group 1 or Group 2 are the same as the HON criteria.

TABLE 2.—SUMMARY OF FINAL STANDARDS FOR EXISTING AFFECTED SOURCES

Subcategory	Level of final standard[a]				
	Storage	Front-end process vents	Back-end process emissions	Wastewater	Equipment leaks
BR, HBR	HON	HON/ACT, exempting halogenated vent streams controlled by flare or boiler before June 12, 1995.	no control	HON	HON.
EPI, HYP, NEO, NBL, NBR, PSR, SBL	HON	HON/ACT	no control	HON	HON.
EPR	HON	HON/ACT, exempting halogenated vent streams controlled by flare or boiler before June 12, 1995.	MACT floor residual HAP limit.	HON	HON.
PBR/SBRS, SBRE	HON	HON/ACT	MACT floor residual HAP limit.	HON	HON.

[a] HON=the level of the standard is equivalent to existing source provisions of subpart G of 40 CFR 63 for storage and wastewater, and subpart H of 40 CFR 63 for equipment leaks.

HON/ACT=the level of the standard for continuous front-end process vents is equal to the existing source process vent provisions in subpart G of 40 CFR 63, and the level of the standard for batch front-end process vents is equal to the 90 percent control level from the Batch Processes ACT.

TABLE 3.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES

Subcategory	Level of standard*				
	Storage	Front-end process vents	Back-end process emissions	Wastewater	Equipment leaks
BR, EPI, HBR, HYP, NEO, NBL, NBR, SBL	New source HON	New source HON/ ACT.	No control	Existing source HON.	New source HON
EPR, PBR/SBRS, SBRE	New source HON	New source HON/ ACT.	New source floor residual HAP limit.	Existing source HON.	New source HON

*HON=the level of the standard is equivalent to the provisions of subpart G of 40 CFR 63 for storage and wastewater, and subpart H of 40 CFR 63 for equipment leaks.

HON/ACT=the level of the standard for continuous front-end process vents is equal to the new source process vent provisions in subpart G of 40 CFR 63, and the level of the standard for batch front-end process vents is equal to the 90 percent control level from the Batch Processes ACT.

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.

B. Front-End Process Vent Provisions

There are separate provisions in the rule for front-end process vents that originate from unit operations operated in a continuous mode, and those from unit operations operated in a batch mode. An affected source could be subject to both the continuous and batch front-end process vent provisions if front-end operations at an elastomer production process unit consist of a combination of continuous and batch unit operations. The continuous provisions would be applied to those vents from continuous unit operations, and the batch provisions to vents from batch unit operations.

1. Continuous Front-End Process Vent Provisions

The provisions in the final rule for continuous front-end process vents are the same as the HON process vent provisions in subpart G. Continuous front-end process vents are gas streams that originate from continuously operated units in the front-end of an elastomer process, and include gas streams discharged directly to the atmosphere and gas streams discharged to the atmosphere after diversion through a product recovery device. The continuous front-end process vent provisions apply only to vents that emit gas streams containing more than 0.005 weight-percent HAP.

A Group 1 continuous front-end process vent is defined as a continuous front-end 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 total resource effectiveness (TRE) index value less than or equal to 1.0. The continuous front-end process vent provisions require the owner or operator of a Group 1 continuous front-end 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 continuous front-end 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 continuous front-end 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 continuous front-end 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 § 63.115 of subpart G.

The rule encourages pollution prevention through product recovery because an owner or operator of a Group 1 continuous front-end 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 continuous front-end process vent becomes a Group 2 continuous front-end 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 or reduce the outlet mass emission rate of total hydrogen halides and halogens to less than 0.45 kg/hr.

The rule exempts certain halogenated process vent streams from the requirement to control the halogens at the exit from a combustion device. Specifically, halogenated continuous front-end process vents at existing affected sources producing butyl rubber, halobutyl rubber, or ethylene-propylene rubber are exempt from the requirements to control hydrogen halides and halogens from the outlet of combustion devices. However, the rule requires that these vent streams be controlled in accordance with the other Group 1 requirements for continuous front-end process vents.

Monitoring, reporting, and recordkeeping provisions necessary to demonstrate compliance are also included in the continuous front-end process vent provisions. Compliance with the monitoring provisions is based on a comparison of daily average monitored values to enforceable parameter "levels" established by the owner or operator.

2. Batch Front—End-Process Vent Provisions

Process vents that include gas streams originating from batch unit operations in the front-end of an elastomer product process unit are subject to the batch front-end process vent provisions of the rule. Consistent with provisions in the rule for other emission source types, batch front-end process vents are classified as Group 1 or Group 2, with control being required for Group 1 batch front-end process vents.

An important aspect of the batch front-end process vent provisions is that applicability is on an individual vent basis. All batch emission episodes that are emitted to the atmosphere through the vent are to be considered in the group determination. The rule does not require that emissions from similar batch unit operations emitted from different vents be combined for applicability determinations. In other words, if a process included four batch reactors, and each reactor had a dedicated vent to the atmosphere, applicability would be determined for each reactor.

The applicability criteria of the batch front-end process vent provisions are from the Batch Processes ACT, and are based on annual emissions of the HAP emitted from the vent, and the average flow rate of the vent stream. The vent stream characteristics are determined at the exit from the batch unit operation before any emission control or recovery device. The rule specifies that reflux condensers, condensers recovering monomer or solvent from a batch stripping operation, and condensers recovering monomer or solvent from a batch distillation operation are considered part of the unit operation. Therefore, the batch front-end process vent applicability criteria would be applied after these condensers.

The first step in the applicability determination is to calculate the annual HAP emissions. Annual HAP emissions may be calculated using equations contained in the regulation (which are from the Batch Processes ACT). Testing or engineering assessment may also be used if the equations are not appropriate. Batch front-end process vents with annual HAP emissions less than 225 kilograms per year are exempt from all batch front-end process vent requirements, other than the requirement to estimate annual HAP emissions.

There are two tiers of Group 2 batch front-end process vents. First, if the annual HAP emissions of a vent are below specified cutoff levels, the batch front-end process vent is classified as a Group 2 vent, and a batch cycle limitation must be established (discussed below). The cutoff emission level is 11,800 kilograms HAP per year.

If annual HAP emissions are greater than the cutoff emission level specified above, the owner must determine the annual average flow rate of the batch front-end process vent, and the "cutoff flow rate" using the equation in § 63.488(f). The Group 1/Group 2 classification is then based on a comparison between the actual annual average flow rate, and the cutoff flow rate. If the actual flow rate is less than the calculated cutoff flow rate, then the batch process vent is a Group 1 vent, and control is required. If the actual flow rate is greater than the calculated cutoff flow rate, then the batch process vent is a Group 2 batch front-end process vent, and the owner or operator must establish a batch cycle limitation.

Owners and operators of Group 2 batch front-end process vents must establish a batch cycle limitation that ensures that HAP emissions from the vent do not increase to a level that would make the batch front-end process vent Group 1. The batch cycle limitation is an enforceable restriction on the number of batch cycles that can be performed in a year. An owner or operator has two choices regarding the level of the batch cycle limitation. The limitation may be set to maintain emissions below the annual emission cutoff level listed above, or the limitation may be set to ensure that annual emissions do not increase to a level that makes the calculated cutoff flow rate increase beyond the actual annual average flow rate. The advantage to the first option is that the owner or operator would not be required to determine the annual average flow rate of the vent. A batch cycle limitation does not limit production to any previous production level, but is based on the number of cycles necessary to exceed one of the two batch front-end process vent applicability criteria discussed above.

The batch front-end process vent provisions require the owner or operator of a Group 1 batch front-end process vent stream to: (1) Reduce the emissions of organic HAP using a flare or (2) reduce emissions of organic HAP by 90 weight-percent over each batch cycle using a control or recovery device. If a halogenated batch vent stream (defined as a vent that has a mass emission rate of halogen atoms in organic compounds of 3,750 kilograms per year or greater) is sent to a combustion device, the outlet stream must be controlled to reduce emissions of hydrogen halides and halogens by 99 percent. Control could be achieved at varying levels for different emission episodes as long as the required level of control for the batch cycle was achieved. The owner or operator could even elect to control some emission episodes and by-pass control for others. Performance test provisions are included for Group 1 batch front-end process vents to verify that the control device achieves the required performance.

Monitoring, reporting, and recordkeeping provisions necessary to demonstrate compliance are also included in the batch front-end process vent provisions. These provisions are modeled after the analogous continuous process vent provisions in the HON. Compliance with the monitoring provisions is based on a comparison of batch cycle daily average monitored values to enforceable parameter monitoring levels established by the owner or operator.

The provisions for batch front-end process vents contain three conditions that can greatly simplify compliance. First, an owner or operator can control a batch front-end process vent in accordance with the Group 1 batch front-end process vent requirements and bypass the applicability determination. Second, if a batch front-end process vent is combined with a continuous vent stream before a recovery or control device, the owner or operator is exempt from all batch front-end process vent requirements. However, applicability determinations and performance tests for the continuous vent must be conducted at conditions when the addition of the batch vent streams makes the HAP concentration in the combined stream greatest. Finally, if batch front-end process vents combine to create a "continuous" flow to a control or recovery device, the less complicated continuous process vent monitoring requirements are used.

C. Back-End Process Provisions

Back-end process operations include all operations at an EPPU that occur after the stripping operations. These operations include, but are not limited to, filtering, drying, separating, and other finishing operations, as well as product storage.

The back-end process provisions contain residual HAP limitations for three subcategories: EPR, PBR/SBRS, and SBRE. The limitations for EPR and PBR/SBRS are in units of kilograms HAP per megagram of crumb rubber dry weight (crumb rubber dry weight means the weight of the polymer, minus the weight of water and residual organics) and the limitation for SBRE is in units of kilogram HAP per megagram latex.

The limitation is a monthly average weighted based on the weight of rubber or latex processed in the stripper. Two methods of compliance are available: (1) Stripping the polymer to remove the residual HAP to the levels in the standards, on a monthly weighted average basis, or (2) reducing emissions using add-on control to a level equivalent to the level that would be achieved if stripping was used.

1. Compliance Using Stripping Technology

If stripping is the method of compliance selected, the rule allows two options for demonstrating compliance: by sampling and by monitoring stripper operating parameters. If compliance is demonstrated by sampling, samples of the stripped wet crumb or stripped latex must be taken as soon as safe and feasible after the stripping operation, but no later than the entry point for the first unit operation following the stripper (e.g., the watering screen), and analyzed to determine the residual HAP content. For styrene-butadiene rubber produced by the emulsion process, the sample of latex shall be taken just prior to entering the coagulation operations.

A sample must be taken once per day for continuous processes, or once per batch for batch processes. The sample must be analyzed to determine the residual HAP content, and the corresponding weight of rubber or latex processed in the stripper must be recorded. This information is then used to calculate a monthly weighted average. A monthly weighted average that is above the limitation is a violation of the standard, as is a failure to sample and analyze at least 75 percent of the samples required during the month. The EPA is in the process of approving test methods that will be used to determine compliance with the standard. These methods are being promulgated separately by the EPA. Records of each test result would be required, along with the corresponding weight of the polymer processed in the stripper. Records of the monthly weighted averages must also be maintained.

An owner or operator complying using stripping can also demonstrate compliance by continuously monitoring stripper operating parameters. If using this approach, the owner or operator must establish stripper operating parameters for each grade of polymer processed in the stripper, along with the corresponding residual HAP content of that grade. The parameters that must be monitored include, at a minimum, temperature, pressure, steaming rates (for steam strippers), and some parameter that is indicative of residence time. The HAP content of the grade must be determined initially using the residual HAP test methods discussed above. The owner or operator can elect to establish a single set of stripper operating parameters for multiple grades.

The EPA believes that computer predictive modeling may be an attractive alternative to the periodic sampling and stripper parametric monitoring options in the rule, but did not specifically include provisions for these options, because the use of computer predictive modeling is so site-specific that it was not possible to include general requirements for its use in subpart U. However, the rule does allow the opportunity for site-specific approval of the use of computer predictive modeling, stack test monitoring, or other alternative means of compliance through the submittal of an alternative compliance plan.

The difference in the demonstration of compliance by sampling, and the demonstration of compliance by monitoring stripping parameters, is that the monitoring option is entirely based on a grade or batch. To further explain, if a particular grade of polymer is processed in the stripper continuously for 32 hours, a sample of that grade is required to be taken each operating day, if the sampling compliance demonstration option is selected. However, if the stripping parameter monitoring option is selected, the entire length of time the grade is being processed in the stripper is treated as a single unit.

During the operation of the stripper, the parameters must be continuously monitored, with a reading of each parameter taken at least once every 15 minutes. If, during the processing of a grade, all hourly average parameter values are in accordance with the established levels, the owner or operator can use the HAP content determined initially in the calculation of the monthly weighted average, and sampling is not required. However, if one hourly average value for any parameter is not in accordance with the established operating parameter, a sample must be taken and the HAP content determined using specified test methods.

Records of the initial residual HAP content results, along with the corresponding stripper parameter monitoring results for the sample, must be maintained. The hourly average monitoring results are required to be maintained, along with the results of any HAP content tests conducted due to exceedance of the established parameter monitoring levels. Records must also be kept of the weight of polymer processed in each grade, and the monthly weighted average values.

If complying with the residual HAP limitations using stripping technology, and demonstrating compliance by monitoring stripper parameters, there are three ways a facility can be in violation of the standard. First, a monthly weighted average that is above the limitation is a violation of the standard, as is a failure to sample and analyze a sample for a grade with an hourly average parameter value not in accordance with the established monitoring parameter levels. The third way for a facility to be out of compliance is if the stripper monitoring data are not sufficient for at least 75 percent of the grades produced during the month. Stripper data are considered insufficient if monitoring parameters are obtained for less than 75 percent of the 15-minute periods during the processing of a grade.

2. Compliance Using Add-On Control

If add-on control is the method of compliance selected, there are two levels of compliance. Initial compliance is based on a source test, and continuous compliance is based on the daily average of parameter monitoring results for the control or recovery device.

The initial performance test must consist of three 1-hour runs or three complete batch cycles, if the duration of the batch cycle is less than 1 hour. The test runs must be conducted during processing of "worst-case" grade, which means the grade with the highest residual HAP content leaving the stripper. The "uncontrolled" residual HAP content in the latex or wet crumb rubber must be determined, using the test methods, after the stripper. Then, when the crumb for which the uncontrolled residual HAP was determined is being processed in the back-end unit operation being controlled, the inlet and outlet emissions for the control or recovery device must be determined using Method 18 or Method 25A. The uncontrolled HAP content is then adjusted to account for the reduction in emissions by the control or recovery device, and compared to the levels in the standard. For initial compliance, the adjusted residual HAP content level for each test run must be less than the level in today's standards.

During the initial test, the appropriate parameter must be monitored, and an enforceable "level" established as a maximum or minimum operating parameter based on this monitoring. As

with continuous front-end process vents, the level is established as the average of the maximum (or minimum) point values for the three test runs.

Continuous monitoring must be conducted on the control or recovery device, and compliance is based on the daily average of the monitoring results. The monitoring, recordkeeping, and reporting provisions are the same as the process vent provisions in the HON, which are required for continuous front-end process vents in today's final standard.

3. Carbon Disulfide Limitations For Styrene Butadiene Rubber By Emulsion Producers

Today's regulation would reduce carbon disulfide (CS_2) emissions from styrene-butadiene rubber producers using an emulsion process by limiting the concentration of CS_2 in the dryer vent stacks to 45 ppmv. Sulfur-containing shortstopping agents used to produce certain grades of rubber have been determined to be the source of CS_2 in the dryer stacks. Owners or operators would be required to develop standard operating procedures for each grade that uses a sulfur-containing shortstopping agent. These standard operating procedures would specify the type and amount of agent added, and the point in the process where the agent is added. One standard operating procedure can be used for more than one grade if possible.

The owner or operator is required to validate each standard operating procedure through either a performance test or a demonstration using engineering assessment. The facility would be in compliance with this the regulation if the appropriate standard operating procedure is followed whenever a sulfur-containing shortstopping agent is used. Facilities that route dryer vents to a combustion device would be exempt from § 63.500 of the regulation.

D. Wastewater Provisions

Except for back-end wastewater streams originating from equipment that only produces latex products and back-end wastewater streams at affected sources that are subject to the residual organic HAP limitation, the standards require owners and operators to comply with the wastewater provisions in the HON. Owners and operators of new and existing sources are required to make a group determination for each wastewater stream based on the existing source applicability criteria in the HON: Flow rate and organic HAP concentration. The level of control required for Group 1 wastewater streams is dependent upon the organic HAP constituents in the wastewater stream.

The standards also require owners and operators to comply with the maintenance wastewater requirements in § 63.105 of subpart F. These provisions require owners and operators to include a description of procedures for managing wastewaters generated during maintenance in their startup, shutdown, and malfunction plan.

E. Equipment Leak Provisions

For all subcategories, both existing and new affected sources are required to comply with the equipment leak standards specified in subpart H of 40 CFR part 63. In general, subpart H requires owners and operators to implement a leak detection and repair (LDAR) program, including various work practice and equipment standards. The subpart H standards are applicable to equipment in volatile HAP service for 300 or more hours per year (hr/yr). The standards define "in volatile organic HAP service" as being in contact with or containing process fluid that contains a total of 5 percent or more total HAP. Equipment subject to the standards are: Valves, pumps, compressors, connectors, pressure relief devices, open-ended valves or lines, sampling connection systems, instrumentation systems, agitators, surge control vessels, bottoms receivers, and closed-vent systems and control devices.

A few differences to the subpart H standards are contained in this final rule. These differences include not requiring the submittal of an Initial Notification or Implementation Plan and allowing 150 days (rather than 90 days) to submit the Notification of Compliance Status. In addition, the exemptions discussed earlier for storage vessels are also applicable for surge control vessels and bottoms receivers.

Affected sources subject to today's final rule and currently complying with the NESHAP for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks (40 CFR part 63, subpart I) are required to continue to comply with subpart I until the compliance date of this final rule, at which point in time they must comply with today's rule and are no longer subject to subpart I. Further, affected sources complying with subpart I through a quality improvement program are allowed to continue these programs without interruption as part of complying with today's rule. In other words, becoming subject to today's standards does not restart or reset the "compliance clock" as it relates to reduced burden earned through a quality improvement program.

F. Emissions Averaging Provisions

The EPA is allowing emissions averaging among continuous front-end process vents, batch front-end process vents, aggregate batch vents, back-end process operations, storage vessels, and wastewater streams within an existing affected source. New affected sources are not allowed to use emissions averaging. Emissions averaging is not allowed between subcategories; it is only allowed between emission points within the same affected source. Under emissions averaging, a system of "credits" and "debits" is used to determine whether an affected source is achieving the required emission reductions. Twenty emission points per plant site are allowed in the set of emissions averaging plans submitted for the plant site, with an additional 5 emission points allowed if pollution prevention measures are used.

G. Compliance and Performance Test Provisions and Monitoring Requirements

Compliance and performance test provisions and monitoring requirements contained in the final standards are very similar to those found in the HON. Each type of emission point included in the standards is discussed briefly in the following paragraphs. Also, significant differences from the parameter monitoring requirements found in the HON are discussed.

1. Storage Vessels

Monitoring and compliance provisions for storage vessel improvements include periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections. If a control device is used, the owner or operator must identify the appropriate monitoring procedures to be followed in order to demonstrate compliance. Monitoring parameters and procedures for many of the control devices likely to be used are identified in the final standards. Reports and records of inspections, repairs, and other information necessary to determine compliance are also required by the final standards.

2. Continuous Front-end Process Vents

The final standards for continuous front-end process vents require the owner or operator to either calculate a TRE index value to determine the group status of each continuous front-end process vent or to comply with the control requirements. The TRE index value is determined after the last 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 specified in the final standards.

Performance test provisions are included for Group 1 continuous front-end process vents to verify that control devices or recovery achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the standards.

3. Batch Front-End Process Vents

Similar to the provisions for continuous front-end process vents, there is a procedure for determining the group status of batch front-end process vents. This procedure is based on annual emissions and annual average flow rate of the batch front-end process vent. Equations for estimating and procedures for measuring annual emissions and annual average flow rates are provided in the final standards. The use of engineering assessment for the group determination is also allowed.

Performance test provisions are included for Group 1 batch front-end process vents to verify that control devices achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the final standard.

For Group 2 batch front-end process vents, the standard requires owners and operators to establish a batch cycle limitation. The batch cycle limitation restricts the number of batch cycles that can be accomplished per year. This enforceable limitation ensures that a Group 2 batch front-end process vent does not become a Group 1 batch front-end process vent as a result of running more batch cycles than anticipated when the group determination was made. The determination of the batch cycle limitation is not tied to any previous production amounts. An affected source may set the batch cycle limitation at any level it desires as long as the batch front-end process vent remains a Group 2 batch front-end process vent. Alternatively the standards would allow owners or operators to declare any Group 2 batch front-end process vent to be a Group 1 batch front-end process vent. In such cases, control of the batch process front-end vent is required.

4. Back-End Process Vents

The final rule specifies the performance tests, test methods (with the exception of residual HAP reference test methods), and monitoring requirements necessary to determine that the allowed back-end emission limitations are achieved. The following paragraphs discuss each of these.

Performance tests and test methods for residual HAP limitations. Initial performance tests, in the traditional sense, are required for facilities complying with the back-end operations provisions using add-on control. Testing is required for all control and recovery devices, other than flares and certain boilers and process heaters. The back-end process provisions require the use of approved test methods.

Initial tests are required for facilities complying by using stripper parameter monitoring. The purpose of this initial testing is to establish correlations between residual HAP contents and stripper operating parameters. Within a few months of the promulgation of this regulation, the EPA will promulgate test methods for determining the residual HAP content in crumb and latex.

If an owner or operator complies with the back-end standards by sampling, periodic sampling and testing is required. The residual HAP test methods would also be used for these analyses.

Performance tests and test methods for carbon disulfide emission limitations for SBRE facilities. Initial performance tests are one option for "verifying" each standard operating procedure as an acceptable procedure that results in carbon disulfide concentrations of 45 ppmv or less in the dryer stacks at SBRE facilities. Standard operating procedures may also be verified through engineering assessments. If the performance testing option is selected, one performance test is required for each standard operating procedure. Method 18 or 25A is specified to measure the carbon disulfide concentration. Additional verifications are not required unless a new standard operating procedure is added, or an existing standard operating procedure is revised.

Monitoring requirements. Control and recovery devices and strippers used to comply with the final rule need to be maintained and operated properly if the required level of control is to be achieved on a continuing basis. Monitoring of control and recovery device and stripper parameters can be used to ensure that such proper operation and maintenance are occurring.

For control and recovery devices, the back-end process operation standard uses the same list of parameters discussed above for continuous front-end process vents. For strippers, the regulation requires the monitoring of temperature, pressure, steaming rates, and a parameter indicative of residence time.

5. Wastewater

For demonstrating compliance with the various requirements, the final standard allows the owners or operators to either conduct performance tests or to document compliance using engineering calculations. Appropriate compliance and monitoring provisions are included in the final standard.

6. Equipment Leaks

The final standard retains the use of Method 21 to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. A "leak" is a concentration specified in the regulation for the type of equipment being monitored and is based on the instrument response to methane (the calibration gas) in the air. The observed screening value may require adjustment for the response factor relative to methane if the weighted response factor of the stream exceeds a specified multiplier. The final rule requires the use of Method 18 or Method 25A to determine the organic content of a process stream. To test for leaks in a batch system, test procedures using either a gas or a liquid for pressure testing the batch system are specified to test for leaks.

7. Continuous Parameter Monitoring

The final standards require owners or operators to establish parameter monitoring levels. The standards provide the owner or operator the flexibility to establish the levels based on site-specific information. Site-specific levels can best accommodate variation in emission point characteristics and control device designs. Three procedures for establishing these levels are provided in the final standards. They are based on performance tests; engineering assessments, performance tests, and/or manufacturer's recommendations; and engineering assessments and/or manufacturer's recommendations. While the establishment of a level based solely on performance tests is preapproved by the Administrator, values determined using the last two procedures, which may or may not use the results of performance tests, must be approved by the Administrator for each individual case.

The final standards require the availability of at least 75 percent of monitoring data to constitute a valid day's worth of data for continuous and batch front-end process vents. Failure to have a valid day's worth of monitoring data is considered an excursion. The criteria for determining a valid day's or

hour's worth of data are provided in the final standards. A certain number of excused excursions have been allowed for in the final standards; these provisions are the same as the provisions in the HON. The standards allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, affected sources are allowed one excused excursion per semiannual reporting period. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other federal requirements and could choose not to allow the excused excursion provisions contained in these final standards.

H. Recordkeeping and Reporting Provisions

The final standards require owners or operators of affected sources to maintain required records for a period of at least 5 years. The final standards require that the following reports be submitted, as applicable: (1) Precompliance Report, (2) Emissions Averaging Plan, (3) Notification of Compliance Status report, (4) Periodic Reports, and (5) other reports (e.g., notifications of storage vessel internal inspections).

Specific recordkeeping and reporting requirements are specified in each section that addresses an individual emission point (e.g., § 63.486 for batch front-end process vents). The recordkeeping and reporting provisions related to the affected source as a whole (e.g., types of reports, such as the Notification of Compliance Status) are found in § 63.506. For example, § 63.491 requires an owner or operator to record the batch cycle limitation for each Group 2 batch front-end process vent. Section 63.492 goes on to require the owner or operator to submit this information in the Notification of Compliance Status as specified in § 63.506. Finally, § 63.506 requires submittal of the information specified in § 63.492.

III. Summary of Impacts

This section presents a summary of the air, non-air environmental (waste and solid waste), energy, cost, and economic impacts resulting from the control of HAP emissions under this final rule.

A. Facilities Affected by These NESHAP

The promulgated rule would affect BR, EPI, EPR, HYP, NEO, NBR, PBR, PSR, and SBR facilities that are major sources in themselves, or that are located at a major source. Based on available information, all of the facilities at which these elastomers are produced were judged to be major sources for the purpose of developing these standards. (Final determination of major source status occurs as part of the compliance determination process undertaken by each individual source.)

Impacts are presented relative to a baseline reflecting the level of control in the absence of the rule. The current level of control was well understood, because emissions and control data were collected on each facility included in the analysis. The impacts for existing sources were estimated by bringing each facility's control level up to today's standards.

Impacts are not assessed for new sources because it was projected that no new sources are expected to begin operation through 1999. For more information on this projection, see the New Source Memo in the SID.

B. Primary Air Impacts

Today's standards are estimated to reduce HAP emissions from all existing sources of listed elastomers by 6,400 Mg/yr. This represents a 48 percent reduction from baseline. Table 4 summarizes the HAP emission reductions for each individual subcategory.

C. Other Environmental Impacts

The total criteria air pollutant emissions resulting from process vent and wastewater control of today's standards are estimated to be around 178 Mg/yr, with NO_x emissions from incinerators and boilers accounting for around 155 Mg/yr. Minimal wastewater or solid and hazardous waste impacts are projected.

D. Energy Impacts

The total nationwide energy demands that would result from implementing the process vent and wastewater controls are around 1.10×10^{12} Btu annually.

TABLE 4. HAP EMISSION REDUCTION BY SUBCATEGORY

Subcategory	HAP emission reduction (Mg/yr)						Percentage reduction from baseline
	Storage	Front-end process vents	Back-end process operations	Wastewater operations	Equipment leaks	Total	
Butyl rubber	0	211	0	102	293	606	64
Epichlorohydrin elastomer	4	0	0	0	120	124	77
Ethylene propylene rubber	2	85	979	0	1,020	2,012	62
Halobutyl rubber	62	38	0	0	233	335	26
Hypalon™	0	0	0	0	0	0	0
Neoprene	0	258	0	0	96	354	48
Nitrile butadiene latex	0	0	0	94	41	135	85
Nitrile butadiene rubber	1	0	0	0	364	365	62
Polybutadiene rubber/styrene butadiene rubber by solution	0	0	882	0	637	1,519	44
Polysulfide rubber	0	0	0	0	0	0	0
Styrene butadiene latex	0	22	0	272	332	627	44
Styrene butadiene rubber by emulsion	0	0	195	48	0	243	23
Total—(percent of total reduction)	69, (1)	615, (10)	2,056, (32)	516, (8)	3,136, (49)	6,392	48

E. 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, operation and maintenance costs, and the cost savings generated by reducing the loss of valuable product in the form of emissions. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with today's standards. Average cost

effectiveness ($/Mg of pollutant removed) is also presented as part of cost impacts and is determined by dividing the annual cost by the annual emission reduction. Table 5 summarizes the estimated capital and annual costs and average cost effectiveness by subcategory.

Under the promulgated rule, it is estimated that total capital costs for existing sources would be $26 million (1989 dollars), and total annual costs would by $18.4 million (1989 dollars) per year. It is expected that the actual compliance cost impacts of the rule would be less than presented because of the potential to use common control devices, upgrade existing control devices, use other less expensive control technologies, implement pollution prevention technologies, or use emissions averaging. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices could be utilized, it is not possible to quantify the amount by which actual compliance costs would be reduced.

TABLE 5. SUMMARY OF REGULATORY COSTS

	TCI[a] (1000$)	TAC[b] (1000$/yr)	AER[c] (Mg/yr)	CE[d] ($/Mg)
Butyl	691	1,316	606	2,200
Epichlorohydrin	491	241	124	1,900
Ethylene Propylene	5,854	3,506	2,012	1,700
Halobutyl	328	322	335	1,000
Hypalon®	0	0	0	N/A
Neoprene	560	897	354	2,500
Nitrile butadiene latex	465	243	135	1,800
Nitrile butadiene rubber	397	444	365	1,200
Polybutadine/styrene butadiene rubber by solution	11,780	8,335	1,519	[e]5,500
Polysulfide	0	0	0	N/A
Styrene butadiene latex	1,480	1,028	627	1,600
Styrene butadiene rubber by emulsion	3,942	2,112	243	[e]8,700

[a] "TCI" represents Total Capital Investment.
[b] "TAC" represents Total Annualized Cost, including the monitoring, recordkeeping, and reporting cost.
[c] "AER" represents the Annual Emission Reduction.
[d] "CE" represents Cost-Effectiveness.
[e] This cost-effectiveness is primarily due to the high costs estimated to control back-end process emissions to the MACT floor level. The costs developed are costs for incineration devices to sufficient back-end vents so that emissions will be reduced to a level equivalent to the level achieved by meeting the residual HAP limit by stripping. Extrapolation of industry estimates of the cost of enhanced stripping place the cost of enhanced stripping as low as 10 percent of the cost of incineration.

F. Economic Impacts

Economic impacts for the regulatory alternatives analyzed at proposal show that the estimated price increases for the affected chemicals range from 0.2 percent for nitrile butadiene latex (NBL) to 2.5 percent for BR. Estimated decreases in production range from 0.7 percent for NBL to 5.0 percent for BR. With the reduced estimate in costs from proposal, the economic impacts of the final rule should be lower than those estimated at proposal. No closures of facilities are expected as a result of the standard.

Three aspects of the analysis are likely to lead to an overestimate of the impacts. First, the economic analysis model assumes that all affected firms compete in a national market, though in reality some firms may be protected from competitors by regional or local trade barriers. Second, facilities with the highest control cost per unit of production are assumed to also have the highest baseline production costs per unit. This assumption may not always be true, because the baseline production costs per unit are not known, and thus, the estimated impacts, particularly for the smaller firms, may be too high. Finally, economic impacts may be overstated, because the alternative for halobutyl rubber and butyl rubber that was used in this analysis is more stringent and more costly than the selected regulatory alternative.

For more information regarding the impacts of the final standards, consult the Basis and Purpose Document (see the SUPPLEMENTARY INFORMATION section near the beginning of the preamble).

IV. Significant Comments and Changes to the Proposed Standards

In response to comments received on the proposed standards, changes have been made to the final standards. While several of these changes are clarifications designed to make the EPA's intent clearer, a number of them are significant changes to the requirements of the proposed standards. A summary of the substantive comments and/or changes made since the proposal are described in the following sections. The rationale for these changes and detailed responses to public comments are included in the Basis and Purpose Document for the final standards. Additional information is contained in the docket for these final standards (see ADDRESSES section of this preamble).

National Emission Standards for Hazardous Air Pollutant Emissions from the Production of Acrylonitrile Butadiene Styrene (ABS) Resin, Styrene Acrylonitrile (SAN) Resin, Methyl Methacrylate Acrylonitrile Butadiene Styrene (MABS) Resin, Methyl Methacrylate Butadiene Styrene (MBS) Resin, Polystyrene Resin, Poly(ethylene terephthalate) (PET) Resin, and Nitrile Resin (Group IV Polymers and Resins) (40 CFR part 63, subpart JJJ), were developed concurrently with subpart U. Many of the basic requirements of the two rules are alike, and in some cases they are identical. Subpart V was proposed on March 29, 1995, and comments from the public were received. In many instances, similar comments were received on analogous sections of subparts U and V. In these instances, the responses to comments and appropriate rule changes were coordinated. However, in some instances, comments were received on subpart V, and not on subpart U, that were applicable to provisions of subpart U. A summary of these comments can be found in the "Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses" (EPA–453/R–96–001b, May 1996; Docket Number

A–92–45, Item Number V–C–1). In a few cases, the EPA decided that a change to subpart U based on these comments was appropriate. These changes did not result in a change in the stringency of the subpart U provisions, but were typically changes to improve the clarity of the rule. The one area where a subpart V comment resulted in a tangible change to subpart U was in the batch vent applicability determination; that is, an affected source is allowed to determine the group status of a batch front-end process vent based on its primary product.

A. Applicability Provisions and Definitions

1. Designation of Affected Source and the Definition of EPPU

Commenters expressed confusion about the definitions of affected source and EPPU in the proposed rule. The EPA reviewed both definitions and agreed the definitions needed clarification. Therefore, the EPA has revised the language describing affected source and EPPU in the final rule. The definition of affected source has been clarified, as discussed in section II and paragraph A.3 of this section.

The definition of EPPU was revised and now includes a list of the equipment that comprises an EPPU. Because wastewater operations are ancillary equipment and are often used by more than one EPPU and may be used by more than one affected source, they are not included as part of the EPPU.

2. Definition of Organic HAP

Numerous commenters recommended that the EPA restrict the list of organic HAP in the final rule to those that are used or are present in significant quantities at EPPUs or those that are listed in the HON, subpart F, table 2. The EPA agreed with the commenters that a table providing a listing of the specific organic HAP expected to be regulated for each subcategory covered by the rule should be included in the final rule. Therefore, the definition of organic HAP was revised to specify those organic HAP known to be used or present in significant quantities for each subcategory. This list is provided in table 7 of the final rule.

This revised definition of organic HAP was developed using available process description information received from industry and gathered from available literature. Because there may be additional organic HAP present at an affected source, the final rule requires owners or operators to notify the EPA of the presence of any additional organic HAP based on the following criteria: (1) Organic HAP is knowingly introduced into the manufacturing process, or has been or will be reported under any Federal or State program, such as TRIS or Title V; and (2) Organic HAP is presented in Table 2 of subpart F.

3. Determining New Source Status

The EPA received comments regarding the process for determining if new or existing source requirements would apply to a particular EPPU. In response to those comments, the EPA has revised the provisions in the final standards. Under the final standards, new affected sources are created under each of the following four situations: (1) If a plant site with an existing affected source producing an elastomer product as its primary product constructs a new EPPU also producing the same elastomer product as it primary product, the new EPPU is a new affected source if the new EPPU has the potential to emit more than 10 tons per year of a single HAP, or 25 tons per year of all HAP; (2) when an EPPU is constructed at a major source plant site where the elastomer product was not previously produced; (3) if a new EPPU is constructed at a new plant site (i.e., green field site) that will be a major source; and (4) when an existing affected source undergoes reconstruction, thus making the previously existing source subject to new source standards.

This approach to defining a new affected source was selected in order to make subpart U more consistent with the HON. This standard differs from the HON, however, in that it applies to multiple source categories. Thus, unlike the HON, a newly added EPPU at a facility is covered by this rule even if that EPPU is in a different source category from the existing EPPUs at the facility. It is the EPA's position that the addition of a process unit in a different source category is a new source and must meet the requirements for new sources even though the EPPU may have the potential to emit less than 10 tons per year of a single HAP or 25 tons per year of all HAP. Indeed, if a source covered by another MACT standard (i.e., a different source category) were built at a HON facility, that source would be subject to the new source requirements under that MACT standard.

4. Flexible Operation Units

The final rule has retained the HON concept of flexible operation units, but the language in the final rule has been significantly modified to more adequately address polymer production facilities. The final provisions require flexible operation units with an elastomer as the primary product to commit to complying with the elastomers rule at all times, regardless of what product they are producing at any particular time. The primary product for a flexible operation unit is determined based on projected production for the next 5 years.

B. Storage Vessel Provisions

In comments received on the storage tank provisions, the EPA noted a common misinterpretation of the proposed regulation related to the distinction between a "storage vessel" and a "surge control vessel". The EPA determined that many of the comments received on "storage vessels" were in fact referring to vessels that fall under the definition of surge control vessel. The EPA suggests that owners and operators of facilities subject to subpart U pay careful attention to these definitions.

1. Applicability Requirements

Several comments were received requesting that the EPA consider the exemption of vessels storing specific HAP or products. In fact, one commenter indicated that the EPA should conduct a full-floor analysis for new and existing storage vessels, considering each chemical separately and the various sizes of tanks for each subcategory. Other commenters supported the exemption of stripped latex storage tanks from control requirements, but also declared that high conversion SBR or polybutadiene latex storage tanks should also be exempt. Another commenter stated that tanks downstream of EPR stripping operations should be exempt from storage vessel requirements, just as those containing latex downstream of stripping operations are exempt.

The EPA does not believe that the floor analyses for each HAP stored at elastomer production facilities are required to be conducted under the Act, nor should they be conducted. The Act requires the EPA to set emission standards for HAP on a source category (or subcategory) basis; it does not compel the EPA to establish separate control measures for each HAP emitted by a source in the category. As suggested by the commenter, this approach could result in an incomplete standard, since it would not include a standard for a listed HAP that may be used in the future by elastomer facilities. Further, consideration of individual HAP storage vessel controls would not be representative of facility-wide storage vessel control levels.

However, the EPA believes that it is reasonable to exempt a storage vessel from the final regulation when it is clear that the vessel would never be a Group 1 storage vessel. The EPA determined that the following HAP used in the elastomer industry have low enough vapor pressures that vessels storing these HAP would never be Group 1: acrylamide, epichlorohydrin, and styrene. Therefore, the final rule exempts storage vessels containing these HAP at existing sources. This exemption is also extended to surge control vessels and bottoms receivers at existing sources.

In addition, the EPA is convinced that an SBL storage vessel (high conversion or otherwise) would never contain sufficient HAP to exceed the vapor pressure cutoff for Group 1 storage vessels. This is primarily due to the low vapor pressure of styrene. Therefore, the final rule exempts all SBL storage vessels, surge control vessels, and bottoms receivers from the requirements of §§ 63.484 and 63.502.

Finally, the EPA agrees that storage vessels, surge control vessels, and bottoms receivers downstream of stripping operations at ethylene-propylene rubber facilities that are in compliance with the provisions of § 63.494 through the use of stripping technology should be exempt from the storage vessel, surge control vessel, and bottoms receiver requirements. Further, the EPA believes that these exemptions should also extend to the other subcategories required to comply with the residual organic HAP limitations in § 63.494(a)(1)–(3). However, since the residual organic HAP content of rubber leaving the stripping operations at ethylene propylene rubber and polybutadiene/ styrene-butadiene rubber by solution facilities complying with these provisions through the use of add-on control is not restricted, these exemptions are not available to these facilities.

2. Emission Limits

Commenters requested that the regulation allow the use of alternative storage vessel/surge control vessel control techniques. Two commenters described specific control systems present at their facilities, and asked that the EPA include allowances for these systems in the rule. They stressed that such allowances should consider the overall effectiveness of the control system, and not just the efficiency of the control or recovery device.

The EPA agrees that it is reasonable to consider the overall effectiveness of a control "system" in determining compliance with the rule, and that such systems that have been demonstrated to be equivalent to the reference control technology should be allowed. While the EPA believes the system described by the commenter could be demonstrated to be equivalent to the reference control technology for surge control vessels, the commenter did not provide sufficient documentation to allow a complete evaluation of equivalence.

However, the EPA maintains that subpart U, as proposed, already provides the opportunity for the commenter, as well as other elastomer production facilities, to demonstrate equivalency of alternative control techniques. For storage vessels, § 63.121 of subpart G addresses the procedures to obtain approval of alternative means of emission limitations. For surge control vessels and bottoms receivers, these procedures are contained in § 63.177 of subpart H. In summary, these sections specify that the owner or operator must submit documentation of the equivalency determination to the Administrator.

C. Continuous Front-end Process Vent Provisions

1. Applicability Requirements

Several commenters stated that the exemption from halide controls for butyl/halobutyl production should be extended to all rubber manufacturers, since halogen-containing compounds or by-products have historically been routed to flares. Another commenter agreed with the exemptions for butyl and halobutyl production facilities, but pointed out that this exemption should only be applicable to existing sources.

Only one existing facility was identified in each the halobutyl and the butyl rubber subcategories. At both of these facilities, halogenated vent streams were vented to a flare and/or boiler. Since both of these subcategories were single-facility subcategories, the MACT floor was determined to be the existing level of control. The EPA examined the impacts of requiring halogenated vent streams at the halobutyl and butyl rubber facilities to comply with the proposed requirements for all other elastomer subcategories (i.e, the HON-level of control). The EPA concluded that the costs associated with this level of control were not reasonable, given the associated emission reduction. Therefore, the proposed regulation allowed halogenated streams at halobutyl and butyl rubber facilities that were routed to a flare or boiler prior to proposal to continue to be controlled with these combustion devices, without additional control for the resulting halides.

Prior to proposal, the EPA was aware of one EPR facility that also routed a halogenated vent stream to a boiler. However, since only one of five EPR facilities reported this situation, the EPA concluded that this level of control was not the MACT floor for EPR. Other EPR producers claimed that they also had halogenated streams at their facilities, but none offered any information to quantify the amount of halogens in the stream to determine if the streams could be classified as halogenated.

After proposal, the EPA learned that chlorinated organic compounds are present in streams at all of the EPR facilities. These compounds are a by-product of the polymerization reaction, resulting from a chlorinated catalyst. At all four of the facilities contacted, the streams containing the chlorinated compounds are routed to either a flare or boiler. Due to the widely varying concentration in the stream, all facilities indicated that it was difficult, if not impossible, to accurately determine the halogen atom concentration in the vent stream. However, all expressed confidence that at times, the halide threshold in the incoming stream was exceeded.

Therefore, the EPA concluded that four of the five EPR facilities have halogenated streams that are routed to either a boiler or flare. For this reason, the EPA has determined that the floor for EPR is the existing level of control for these halogenated vent streams. In addition, as with halobutyl and butyl rubber, the EPA does not believe that it would be cost-effective to require new incinerators and scrubbers to be installed at these facilities, when the only net emission reduction would be the reduction of the hydrochloric acid, since the reduction of the halogenated organic compound in the incinerator would be the same as was already being achieved in the boiler or flare. However, as noted above, sufficient stream-specific information was not available to conduct this analysis. Therefore, the final rule has been changed to extend the exemption for existing halogenated streams routed to a boiler or flare to EPR producers. Further, the final rule specifies that this exemption does not apply to new sources.

2. Emission Limits

Based on a commenter's request, the final rule exempts a vent stream routed to an internal combustion engine as primary fuel from source testing requirements. The final rule also requires that the on/off status of internal

combustion be monitored as a means of demonstrating compliance with these control requirements.

D. Batch Front-End Process Vent Provisions

Commenters believed that batch front-end process vent provisions were inappropriate and unnecessarily burdensome. Several commenters disagreed with the EPA's reliance on the Batch Processes ACT document in the development of the batch vent provisions, claiming that it was not appropriate to the elastomer manufacturing industry.

The EPA believes that the potential for HAP emissions from batch operations at elastomer production facilities warrant control. While the EPA disagrees with the statement that the provisions are inappropriate, the EPA agrees with comments regarding the complexity of the proposed batch vent provisions. Therefore, in the final rule these provisions were simplified. Many of these changes are discussed below.

In response to comments on the batch front-end process vent applicability provisions, the volatility class concept has been eliminated. The Batch Processes ACT developed an annual threshold emission level for each of three volatility classes. The EPA initially judged that selection of a single annual threshold emission level would not be appropriate and included all three levels in the proposed standards. However, upon further review, the EPA found no adverse impact would result from the use of a single annual threshold emission level and, indeed, the final standards have been significantly simplified. Besides removing the requirement to determine the volatility class, the final standards contain only one equation for determining the cutoff flow rate (§ 63.488(f)) which is the last step in the group determination process.

A commenter on the proposed Polymers and Resins IV (40 CFR part 63, subpart V) regulation suggested changing the batch vent group determination provisions to only utilize emissions data from an EPPU's primary product. The EPA agreed that to base the group determination on a single product could, if appropriately applied, provide acceptable results from an environmental perspective, while simplifying the compliance requirements for and improving the enforceability of the batch front-end process vent standards. Therefore, the final standards contain provisions allowing the owner or operator of an affected source to perform the group determination for batch front-end process vents based on annualized production of a single batch product. However, the EPA does not consider it to be appropriate from an environmental perspective to allow anything other than the worst-case HAP emitting batch product to be considered when basing applicability on a single product. Therefore, the final standards specify that the worst-case HAP emitting batch product be used when an owner or operator chooses to annualize a single product for purposes of determining applicability. The final standards define the worst-case HAP emitting product and describe how emissions are to be annualized to represent full-time production, where full-time production does not necessarily mean operating at maximum production rate. Since the proposed batch vent provisions were similar between subparts U and V, the EPA decided that this change was also appropriate for subpart U.

Several commenters stated that the proposed provisions for the methods allowed for the calculation of batch front-end process vent emissions were overly restrictive. The proposed rule required that emissions be calculated using either the emission estimation equations or source testing. If the owner or operator could demonstrate that both the equations and source testing were inappropriate, then they were allowed to use engineering assessment to calculate HAP emissions. The commenters believed that an affected source should be allowed to use engineering assessments without having to demonstrate that source testing was inappropriate.

The EPA maintains that it is imperative that a consistent technique for the estimation of batch front-end process vent emissions be used, which is provided through the emission estimation equations. The EPA believes the data required to use the batch front-end process vent emissions estimation equations should be obtainable with reasonable effort. The final standards continue to require use of the emissions estimation equations, unless the owner or operator can demonstrate that these equations are inappropriate.

However, the EPA has concluded that direct measurement of emissions through testing may prove to be difficult and may or may not provide an increased assurance of accuracy over the use of engineering assessment. Therefore, if an owner or operator can demonstrate that the emissions estimation equations are not appropriate, the final standards allow the selection of either direct measurement or engineering assessment. Further, criteria for demonstrating that the emissions estimation equations are not appropriate to a specific batch emissions episode have been added to the final standards. These criteria require either: (1) The availability of test data that demonstrate a greater than 20 percent discrepancy between the test value and the estimated value, or (2) that the owner or operator demonstrate to the Administrator that the emissions estimation equations are not appropriate for a given batch emissions episode.

E. Back-End Process Operation Provisions

The back-end process operation provisions received the majority of the comments on the proposed rule. Significant comments were received on practically every aspect of these provisions. Following is a summary of the comments that resulted in notable changes to the back-end process operation requirements.

1. Averaging Period

Several commenters declared that compliance based on a weekly average HAP limitation was unreasonable, and that compliance should be demonstrated on the basis of a monthly (or 30-day) rolling average instead. These commenters claimed that requiring compliance based on a weekly average fails to provide adequate operational flexibility for manufacturers to produce different grades of polymers in accordance with customer demands.

Upon investigation of this issue, the EPA concluded that a monthly averaging period for the residual HAP limitations was more appropriate. Changing to a monthly averaging period would provide more operational flexibility to elastomer producers, while maintaining the same annual emission reduction.

2. Residual Organic HAP Limitations

Commenters objected to numerous aspects of the residual organic HAP limitations. Most of these comments were directed towards the methods used to determine the back-end MACT floors. Discussed below are comments on definitions, test methods, and other areas that affect the determination of the residual organic HAP limitations. The EPA addressed these comments and re-assessed the MACT floors.

Definition of crumb rubber dry weight. Comments stated that, for solution processes, the definition of "crumb rubber dry weight" should not exclude extender oils and carbon black for compliance purposes, because these are an integral part of the polymer. The EPA agrees with these comments, and has

revised the definition of crumb rubber dry weight to reflect this decision.

Residual organic HAP test methods. Concurrent with the proposal of subpart U, the EPA proposed three residual HAP test methods—one each for SBRE, PBR/SBRS, and EPR. Several commenters stated that no single analytical method would produce consistent results for all polymers, and consequently, each company should be allowed to demonstrate compliance using a company-specific method that is comparable to the EPA test method.

After careful review and consideration of this issue, the EPA agreed with the commenters and has undergone an extensive effort to rectify this situation. The EPA concluded that it was appropriate to allow every interested company to validate their own test method using a modified version of 40 CFR part 63, appendix A, Method 301.

A total of nine test methods were submitted (three for EPR, three for SBRE, and three for PBR/SBRS). The modified Method 301 analysis performed allows each company to validate their own test method, and seven of the ten affected companies have done so. Therefore, each source has a compliance method available for determining residual HAP. The EPA believes that it would be helpful if the industry had access to all validated test methods, and is in the process of reviewing the methods and validation data that were submitted, and has preliminarily indicated that approval of all nine methods is anticipated. The EPA intends to promulgate these methods as appendix A Methods 310 a, b, and c for EPR, Methods 312 a, b, and c for SBRE, and Methods 313 a, b, and c for PBR/SBRS. However, since the approval and subsequent promulgation of the methods has not yet occurred, this final rule does not stipulate the methods to be used to determine residual organic HAP. Upon promulgation of these methods, the Agency will propose modifications to subpart U to specify that these methods be used to determine residual organic HAP.

Furthermore, the affected industry has been intimately involved with all activity associated with the EPA's promulgation of the residual organic HAP test methods. The EPA held meetings with industry representatives to discuss their comments on the proposed methods, and to discuss procedures for validating company test methods. Every company that was expected to be subject to the back-end residual organic HAP limitations was invited to these meetings. As noted above, a total of nine test methods were submitted. These methods were from seven companies, leaving only three affected companies that decided not to submit methods. Representatives of each of those three companies which did not submit test methods were in attendance at one or more of the meetings and are therefore knowledgeable about the test methods. Since industry's submittal of the test methods, the EPA has worked closely with industry representatives to finalize the methods. Therefore, the EPA contends that all affected companies should be well aware of the methods that will be promulgated.

As noted earlier, the final approval of these test methods is upcoming. It is anticipated that these methods will be promulgated in the autumn of 1996. The EPA does not believe that the interval between the promulgation of subpart U and the promulgation of these residual organic HAP test methods impairs the ability of any source to comply with the requirements by the specified compliance date. This is the case because affected sources are not required to be in compliance until three years after promulgation of the rule.

MACT floor determination. Commenters indicated that the selection of a MACT floor "somewhere between the mean, median, and mode" did not represent central tendency. They maintained that a mean is the correct approach for establishing the MACT floor. The EPA agreed that one measure of central tendency should be used to establish the average and decided that the mean was the most appropriate measure for the residual organic HAP limitations floor determinations. In some situations, the use of the mean can result in a floor level of control that is not represented by any available control technology. However, this did not apply to this situation, where the emissions used to determine the floor were a result of process-specific stripping techniques, and not specific add-on control technologies.

For EPR and PBR/SBRS, commenters stated that combining data received from different companies using different sampling and analytical methods, without establishing whether the methods achieve comparable results, was not an appropriate way to establish residual HAP limits. The commenters stated that if production figures and dryer stack testing results were used to establish these limits, these results cannot be equated to those from crumb sampling at the EPA's designated sampling point, because there are numerous potential emission sources between the proposed sampling point and the stack testing locations. In addition, commenters indicated that the proposed limitation did not recognize the fact that residual HAP may remain in the polymer after finishing. Finally, the commenters also stated that using annual emissions and limited weekly data to establish weekly limits is inherently uncertain, and may have resulted in an inappropriate standard.

In the original MACT floor analyses, the EPA presumed that the back-end emission factor calculated from the reported emissions and production was equivalent to the residual HAP levels in the crumb leaving the stripping operations. Inherent in this analysis was the assumption that the companies reported total HAP emissions from all back-end emission sources, rather than only a portion of these sources.

Upon receipt of these comments, the EPA again contacted each EPR and PBR/SBRS production facility to (1) verify the emissions numbers used to determine the back-end emission factor, (2) discuss the correlation of the methods used to estimate the original emission estimates and the residual organic HAP test methods undergoing validation, (3) determine the appropriate production, including oil extender weight, to use in determining the emission factor, (4) obtain information related to residual HAP remaining in the product after finishing, and (5) obtain short-term residual HAP information to be used in the adjustment of annual emissions to monthly.

After obtaining this information, the EPA recalculated the MACT floors for each subcategory. It should be noted that only one facility indicated that the original emission estimates were calculated in a manner that was inconsistent with the residual organic HAP test methods. Two PBR/SBRS companies and one EPR company provided detailed short-term residual HAP data to allow the conversion of the annual data to a monthly limit. The resulting monthly limits were 8 kg/Mg for EPR and 10 kg/Mg for PBR/SBRS.

While no comments were received criticizing the MACT floor analysis for SBRE, the change to a monthly average limit resulted in a change in the SBRE limit. In the determination of the original SBRE back-end MACT floor, residual HAP data were used from three of the four facilities. The fourth facility provided residual HAP data, but it was in a monthly average format and could not be used in the determination of a weekly limit. However, the change to a monthly limit meant that the data from this facility could also be used, resulting in a monthly limit of 0.4 kg styrene per

Mg latex leaving the stripping operation for existing SBRE sources.

3. Monitoring Requirements

Several comments were received regarding the proposed crumb and latex sampling requirements. In both instances, the EPA decided that the changes suggested by the commenters were technically appropriate, and they did not result in any detrimental environmental impact.

Specifically, commenters found the requirement to sample "before any opportunity for emissions to the atmosphere" to be either infeasible or unsafe for PBR/SBRS and EPR and suggested modifications to the proposed sampling provisions. In response to these comments, the final rule states that PBR/SBRS or EPR crumb samples must be taken "as soon as safe and feasible after the stripping operation, but no later than the entry point for the first unit operation following the stripper (e.g., the dewatering screen)."

For SBRE, commenters pointed out that a more logical sampling location for determining the initial HAP concentration in the SBL is the mixed latex in the storage tank feeding the coagulator (rather than directly after the stripper). The EPA agreed with these comments, and the final rule has revised the SBL sampling location to be "prior to any coagulation operations."

Comments were also received opposing the proposed crumb or latex sampling frequency provisions. Commenters believed that it is impractical to take a rubber sample each operating day for every grade of elastomer produced, because of the time required to reach representative operating conditions and to run an accurate analytical test. Suggested alternatives included one test per day, one test per "campaign," daily sampling that is reduced to weekly sampling upon demonstration of daily compliance, and daily sampling with the exception of grades produced for less than 4 hours in a day. Since the variability of the residual HAP contents between elastomer grades is relatively small, and since production schedules typically produce very similar grades of polymer for extended periods of time, the EPA concluded that reducing the sampling frequency to once per day for continuous processes would greatly simplify the rule, while still ensuring that practically all grades of elastomer are represented by such sampling. This change is reflected in the final rule.

Some commenters were concerned that compliance would be based on one sample per day, and requested that an owner or operator be allowed to sample crumb or latex more frequently, and include the residual organic HAP results of these samples in the average. While the EPA believes that the proposed rule did not preclude a company from using more than one sample per day in determining the (weekly) average, the EPA has revised the language in the final rule to make this opportunity clearer.

Several commenters stated that the rule should provide an allowance for missed or invalid crumb or latex samples. The proposed rule designated the failure to collect any single sample as an excursion. These commenters suggested that the EPA should require 75 percent of samples to be collected.

The EPA recognizes that a number of circumstances could occur that cause a sample not to be analyzed in accordance with the rule. These may be in the form of sampling system malfunctions, mis-analysis, or other problems. The EPA also realizes that there are unique challenges associated with the sampling of solid polymer, and agrees that problems could occur that would cause a sample to be missed. The EPA also recognizes that some of the test methods being validated to analyze the residual organic HAP in the crumb take long periods of time to perform, meaning that the opportunity to obtain a second sample may not be available if a mis-analysis in the laboratory occurs. While the EPA expects that sound company procedures could eliminate most of these and other problems, the EPA agrees that it is unreasonable to expect that no problems would ever occur that result in a missed sample. Therefore, an excursion for back-end process operations is defined in the final rule as when either (1) the monthly weighted average is above the applicable limit, or (2) when less than 75 percent of the required samples are taken, analyzed, and included in the monthly average.

At proposal, the EPA specifically requested comments on the feasibility of the use of computer predictive modeling as an alternative to the daily crumb or latex sampling, or the stripper parametric monitoring compliance alternatives. Numerous commenters supported the allowance of such systems, while other expressed reservations. While the EPA believes that computer predictive modeling may be an attractive alternative to the periodic sampling and stripper parametric monitoring compliance options, the EPA is convinced that the use of computer predictive modeling is so site-specific that it is not possible to include general requirements for the use of such a system in subpart U. Nevertheless, the EPA believes that facilities should have the opportunity to utilize techniques that are equivalent to the two options of compliance provided in the proposed rule for facilities using stripping technology. Therefore, the EPA has included a third option that provides the opportunity for the site-specific approval of alternative means of compliance through the submittal of an alternative compliance plan.

F. Wastewater Operations Provisions

Several commenters pointed out that the wastewater provisions of subpart G that are referenced in § 63.501 of subpart U are the subject of litigation brought by the Chemical Manufacturers' Association against the EPA. Consequently, sources subject to these provisions cannot know what the final wastewater provisions, proposed to be incorporated into subpart U, will be. These commenters believed that the EPA should "reserve" the provisions of § 63.501 pending the outcome of the litigation.

As part of the HON litigation proposal, the EPA will request comments specific to the elastomers rule. If comments specific to the elastomers rule are received they will be addressed as part of the HON rulemaking actions or in actions specific to the elastomers rule, depending on the comments. Therefore, the comment period for this rule will not be reopened.

The EPA believes that the wastewater provisions and the other HON provisions should be referenced in the elastomers rule so that final resolutions of the HON litigation will be automatically included in the elastomers rule. However, changes made to the HON will be evaluated by the EPA for applicability to this rule. The "automatic" part refers to the fact that text changes will not need to be made to this rule once the EPA, following notice and an opportunity for comment, finds the HON changes to be applicable. If the EPA determines that any changes to the HON are not applicable to this rule, the elastomers rule will be revised accordingly.

Comments were received that the VOHAP threshold for regulation of new source wastewater streams (10 ppmw) was too restrictive, and that the EPA has not provided an economic justification regarding the achievability of the limit. Another comment was received stating that many elastomer product process wastewater streams will have VOHAP concentrations less than 50 ppmw, and monitoring and recordkeeping requirements are not needed for these streams. This comment recommended that the EPA exempt from regulation

"any process stream at an affected source with an average flow rate of less than 0.02 liters per minute or an average VOHAP concentration of less than 50 ppmw."

The EPA evaluated the new source MACT floor determinations for wastewater, and determined that no facility in any subcategory reported wastewater controls equivalent to the new source levels. In fact, no facility-wide wastewater controls greater than the existing source HON limitations were reported. Therefore, the EPA believes that this comment is valid, and has changed the final rule so that the new sources are subject to the same wastewater requirements as existing sources.

In the proposed rule, the definition of "wastewater" stated that a stream must contain at least 5 ppmw of VOHAP and have a flow rate of 0.02 liter per minute. Given the change in the definition of a Group 1 wastewater stream for new sources, the EPA believes that it is reasonable to revise the definition of wastewater in accordance with the commenter's suggestion and therefore the wastewater definition has been revised in the final rule.

G. Equipment Leak Provisions

One commenter requested that the proposed rule include an exclusion for reciprocating pumps that must leak small quantities of product to lubricate and cool the shaft and seal areas. The EPA agrees that an exemption for the situation described by the commenter is reasonable. The EPA reached a similar conclusion in the proposed Polymers and Resins IV regulation (subpart V). Therefore, § 63.502(d) has been added to the final rule that exempts these reciprocating pump systems.

Several commenters stated that 3 years should be allowed for compliance with equipment leak provisions for compressors (instead of 6 months) under certain circumstances. The EPA agrees with the commenters, and has amended the compliance schedule for compressors in the following situations: (1) Existing reciprocating compressors which would require design modifications to connect to a closed-vent or recovery system; and (2) systems where existing compressors would be replaced.

H. Emissions Averaging Provisions

Several commenters requested that batch front-end process vents be eligible to average emissions. The EPA had not allowed emissions averaging of batch front-end process vents at proposal because the EPA considered the accuracy and consistency needed for emissions averaging to be greater than that needed for applicability determinations. However, upon reconsideration, the EPA determined that the accuracy and consistency needs of emissions averaging could be met by applying a "discount" factor (10 percent) to calculated emissions or by requiring direct measurement of emissions. Therefore, the final rule allows emissions averaging of existing batch front-end process vents.

I. Monitoring

Many commenters requested that the proposed rule allow excused excursions in the same way that the HON rule allows excused excursions. In the final rule, the EPA decided to excuse a certain number of excursions for each reporting period. This decision was based on data and information presented during public comment on the HON and reiterated in public comments received on this rule, and during industry meetings held subsequent to proposal that indicated that a certain number of excursions could be expected even with properly operated pollution control devices. The EPA also concluded that not allowing excused excursions would impose significant additional capital and operating costs on the affected source for only negligible corresponding reductions in air emissions. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other Federal requirements and could choose not to allow the excused excursion provisions of this rule.

The EPA considered the number of excused excursions that would be most appropriate for this standard and determined that the number of excursions allowed in the HON would be reasonable. Therefore, the final provisions allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, affected sources are allowed one excused excursion per semiannual reporting period.

J. Recordkeeping and Reporting

Several commenters stated that the recordkeeping and reporting requirements of the proposed rule were extremely burdensome and requested that the EPA reduce the burden. The EPA reexamined the recordkeeping and reporting requirements of the rule after proposal and determined that burden reductions were warranted. The EPA considers the recordkeeping and reporting requirements of the final rule the minimum necessary to ensure compliance with the final standards. The following changes were made to reduce the recordkeeping and reporting burden:

(1) The requirement to submit an Initial Notification has been eliminated;

(2) The requirement to submit an Implementation Plan has been eliminated;

(3) The requirement to record monitored parameters every 15 minutes has been removed. The final rule requires hourly recording of monitored parameters in place of the 15 minute records required in the proposed rule.

Although the above changes will reduce the burden on industry, the level of this reduction was not quantified.

V. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of the final standards. The principal purposes of the docket are:

(1) To allow interested parties to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process; and

(2) To serve as the record in case of judicial review (except for interagency review materials as provided for in section 307(d)(7)(A)).

B. Executive Order 12866

Under Executive Order 12866 (58 FR 5173 (October 4, 1993)), the EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in standards that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect, in a material way, the economy, 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 entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(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 the Executive Order, the OMB has notified the EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. The EPA submitted this action to the OMB for review. Changes made in response to suggestions or recommendations from the OMB were documented and included in the public record.

C. Paperwork Reduction Act

The information collection requirements for this NESHAP have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1746.01), and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, or by calling (202) 260–2740.

The public recordkeeping and reporting burden for this collection of information is estimated to average approximately 587 hours per respondent for each of the first 3 years following promulgation of the rule. 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 recordkeeping and reporting burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch (2137), 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."

D. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant adverse economic impact on a substantial number of small businesses. Consistent with Small Business Administration (SBA) size standards, an elastomer producing firm is classified as a small entity if it has less than 750 employees and is unaffiliated with a larger domestic entity. Based upon this standard, three of the eighteen elastomer producing firms are classified as small entities (i.e., having fewer than 750 employees). The EPA determined that annual compliance costs as a percentage of sales are less than one percent for all of the small entities affected by this regulation. This does not qualify as a significant economic impact on a substantial number of small businesses.

E. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

Pursuant to Subtitle E of SBREFA, this rule, which is nonmajor, was submitted to Congress before publication in the Federal Register.

F. Unfunded Mandates

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

The EPA has determined that the final standards do not include a Federal mandate that may result in estimated costs of, in the aggregate, $100 million or more to either State, local, or tribal governments, or to the private sector, nor do the standards significantly or uniquely impact small governments, because they contain no requirements that apply to such governments or impose obligations upon them. Therefore, the requirements of the Unfunded Mandates Act do not apply to this final rule.

List of Subjects in 40 CFR Part 63

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

Dated: July 15, 1996.

Fred Hansen,

Acting Administrator.

For the reasons set out in the preamble, part 63 of title 40, chapter I of the Code of Federal Regulations is amended as follows:

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

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 subpart U to read as follows:

Subpart U—National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

Sec.

63.480 Applicability and designation of affected sources.
63.481 Compliance schedule and relationship to existing applicable rules.
63.482 Definitions.
63.483 Emission standards.
63.484 Storage vessel provisions.
63.485 Continuous front-end process vent provisions.
63.486 Batch front-end process vent provisions.
63.487 Batch front-end process vents—reference control technology.
63.488 Methods and procedures for batch front-end process vent group determination.
63.489 Batch front-end process vents—monitoring requirements.
63.490 Batch front-end process vents—performance test methods and procedures to determine compliance.
63.491 Batch front-end process vents—recordkeeping requirements.
63.492 Batch front-end process vents—reporting requirements.
63.493 Standards for back-end processes.
63.494 Back-end process provisions—residual organic HAP limitations.
63.495 Back-end process provisions—procedures to determine compliance using stripping technology.
63.496 Back-end process provisions—procedures to determine compliance using control or recovery devices.
63.497 Back-end process provisions—monitoring provisions for control and recovery devices.
63.498 Back-end process provisions—recordkeeping.
63.499 Back-end process provisions—reporting.
63.500 Back-end process provisions—carbon disulfide limitations for styrene butadiene rubber by emulsion processes.
63.501 Wastewater provisions.
63.502 Equipment leak provisions.
63.503 Emissions averaging provisions.
63.504 Additional test methods and procedures.
63.505 Parameter monitoring levels and excursions.
63.506 General recordkeeping and reporting provisions.

Subpart U—National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins

§ 63.480 Applicability and designation of affected sources.

(a) *Definition of affected source.* The provisions of this subpart apply to each affected source. An affected source is either an existing affected source or a new affected source. Existing affected source is defined in paragraph (a)(1) of this section, and new affected source is defined in paragraph (a)(2) of this section. The affected source also includes all wastewater streams and wastewater operations associated with the elastomer product process unit(s) (EPPUs) included in the affected source.

(1) Except as specified in paragraphs (b) through (d) of this section, an existing affected source is defined as each group of one or more EPPUs that is not part of a new affected source, as defined in paragraph (a)(2) of this section, and that is manufacturing the same primary product and located at a plant site that is a major source.

(2) Except as specified in paragraphs (b) through (d) of this section, a new affected source is defined as a source meeting the criteria of paragraph (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) At a plant site previously without HAP emission points, each group of one or more EPPUs manufacturing the same primary product that is part of a major source on which construction commenced after June 12, 1995,

(ii) An EPPU meeting the criteria in paragraph (i)(1)(i) of this section, or

(iii) A reconstructed affected source meeting the criteria in paragraph (i)(2)(i) of this section.

(b) *EPPUs exempted from the affected source.* EPPUs that do not use any organic HAP may be excluded from the affected source, provided that the owner or operator complies with the requirements of paragraphs (b)(1) and (b)(2) of this section, if requested to do so by the Administrator.

(1) Retain information, data, and analyses used to document the basis for the determination that the EPPU does not use any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, or engineering calculations.

(2) When requested by the Administrator, demonstrate that the EPPU does not use any organic HAP.

(c) *Emission points exempted from the affected source.* The affected source does not include the emission points listed in paragraphs (c)(1) through (c)(6) of this section:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems in segregated sewers;

(3) Spills;

(4) Water from safety showers;

(5) Vessels and equipment storing and/or handling material that contains no organic HAP or organic HAP as impurities only; and

(6) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year.

(d) *Processes exempted from the affected source.* The processes specified in paragraphs (d)(1) through (d)(3) of this section are not part of the affected source.

(1) Research and development facilities;

(2) Equipment that is located within an EPPU that is subject to this subpart but does not contain organic HAP; and

(3) Solvent reclamation, recovery, or recycling operations at hazardous waste treatment, storage, and disposal facilities (TSDF) requiring a permit under 40 CFR part 270 that are separate entities and not part of an EPPU to which this subpart applies.

(e) *Applicability determination of elastomer equipment included in a process unit producing a non-elastomer product.* If an elastomer product that is subject to this subpart is produced within a process unit that is subject to subpart V of this part, and at least 50 percent of the elastomer is used in the production of the product manufactured by the subpart V process unit, the unit operations involved in the production of the elastomer are considered part of the process unit that is subject to subpart V, and not this subpart.

(f) *Primary product determination and applicability.* The primary product of a process unit shall be determined according to the procedures specified in paragraphs (f)(1) and (f)(2) of this section. Paragraphs (f)(3) through (f)(4) of this section describe whether or not a process unit is subject to this subpart. Paragraphs (f)(5) through (f)(7) of this section discuss compliance for those EPPUs operated as flexible operation units, as specified in paragraph (f)(2) of this section.

(1) If a process unit only manufactures one product, then that product shall represent the primary product of the process unit.

(2) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraphs (f)(2)(i) or (f)(2)(ii) of this section based on the anticipated operations for the 5 years following September 5, 1996 for existing affected sources and for the first 5 years after initial startup for new affected sources.

(i) If the flexible operation unit will manufacture one product for the greatest operating time over the five-year period, then that product shall represent the primary product of the flexible operation unit.

(ii) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest production on a mass basis over the five-year period shall represent the primary product of the flexible operation unit.

(3) If the primary product of a process unit is an elastomer product, then that process unit is considered an EPPU. If that EPPU meets all the criteria of paragraph (a) of this section, it is either an affected source or is part of an affected source comprised of other EPPU subject to this rule at the same plant site with the same primary product. The status of a process unit as an EPPU, and as an affected source or part of an affected source shall not change regardless of what products are produced in the future by the EPPU, with the exception noted in paragraph (f)(3)(i) of this section.

(i) If a process unit terminates the production of all elastomer products and does not anticipate the production of any elastomer product in the future, the process unit is no longer an EPPU and is not subject to the provisions of this subpart after notification is made as specified in paragraph (f)(3)(ii) of this section.

(ii) The owner or operator of a process unit that wishes to remove the EPPU designation from the process unit, as specified in paragraph (f)(3)(i) of this section, shall notify the Administrator. This notification shall be accompanied by rationale for why it is anticipated that no elastomer products will be produced in the process unit in the future.

(iii) If a process unit meeting the criteria of paragraph (f)(3)(i) of this section begins the production of an elastomer product in the future, the owner or operator shall use the procedures in paragraph (f)(4)(i) of this section to determine if the process unit is re-designated as an EPPU.

(4) If the primary product of a process unit is not an elastomer product, then that process unit is not an affected source, nor is it part of any affected source subject to this rule. The process unit is not subject to this rule at any time, regardless of what product is being produced. The status of the process unit

as not being an EPPU, and therefore not being an affected source or part of an affected source subject to this subpart, shall not change regardless of what products are produced in the future by the EPPU, with the exception noted in paragraph (f)(4)(i) of this section.

(i) If, at any time beginning September 5, 2001, the owner or operator determines that an elastomer product is the primary product for the process unit based on actual production data for any preceding consecutive five-year period, then the process unit shall be classified as an EPPU. If an EPPU meets all the criteria in paragraph (a) of this section, it is either an affected source or part of an affected source and shall be subject to this rule.

(ii) If a process unit meets the criteria of paragraph (f)(4)(i) of this section, the owner or operator shall notify the Administrator within 6 months of making this determination. The EPPU, as the entire affected source or part of an affected source, shall be in compliance with the provisions of this rule within 3 years from the date of such notification.

(iii) If a process unit is re-designated as an EPPU but does not meet all the criteria of paragraph (a) of this section, the owner or operator shall notify the Administrator within 6 months of making this determination. This notification shall include documentation justifying the EPPU's status as not being an affected source or not being part of an affected source.

(5) Once the primary product of a process unit has been determined to be an elastomer product and it has been determined that all the criteria of paragraph (a) of this section are met for the EPPU, the owner or operator of the affected source shall comply with the standards for the primary product. Owners or operators of flexible operation units shall comply with the standards for the primary product as specified in either paragraph (f)(5)(i) or (f)(5)(ii) of this section, except as specified in paragraph (f)(5)(iii) of this section.

(i) Each owner or operator shall determine the group status of each emission point that is part of that flexible operation unit based on emission point characteristics when the primary product is being manufactured. Based on this finding, the owner or operator shall comply with the applicable standards for the primary product for each emission point, as appropriate, at all times, regardless of what product is being produced.

(ii) Alternatively, each owner or operator shall determine the group status of each emission point that is part of the flexible operation unit based on the emission point characteristics when each product produced by the flexible operation unit is manufactured, regardless of whether the product is an elastomer product or not. Based on these findings, the owner or operator shall comply with the applicable standards, as appropriate, regardless of what product is being produced.

Note: Under this scenario, it is possible that the group status, and therefore the requirement to achieve emission reductions, for an emission point may change depending on the product being manufactured.]

(iii) Whenever a flexible operation unit manufactures a product that meets the criteria of paragraph (b) of this section (i.e., does not use or produce any organic HAP), all activities associated with the manufacture of the product, including the operation and monitoring of control or recovery devices, shall be exempt from the requirements of this rule.

(6) The determination of the primary product for a process unit, to include the determination of applicability of this subpart to process units that are designed and operated as flexible operation units, shall be reported in the Notification of Compliance Status required by § 63.506(e)(5) when the primary product is determined to be an elastomer product. The Notification of Compliance Status shall include the information specified in either paragraph (e)(6)(i) or (e)(6)(ii) of this section. If the primary product is determined to be something other than an elastomer product, the owner or operator shall retain information, data, and analysis used to document the basis for the determination that the primary product is not an elastomer product.

(i) If the EPPU manufactures only one elastomer product, identification of that elastomer product.

(ii) If the EPPU is designed and operated as a flexible operation unit, the information specified in paragraphs (f)(6)(ii)(A) through (f)(6)(ii)(C) of this section, as appropriate.

(A) Identification of the primary product.

(B) Information concerning operating time and/or production mass for each product that was used to make the determination of the primary product under paragraph (f)(2)(i) or (f)(2)(ii) of this section.

(C) Identification of which compliance option, either paragraph (f)(5)(i) or (f)(5)(ii) of this section, has been selected by the owner or operator.

(7) To demonstrate compliance with the rule during those periods when a flexible operation unit that is subject to this subpart is producing a product other than an elastomer product or is producing an elastomer product that is not the primary product, the owner or operator shall comply with either paragraphs (f)(7)(i) and (f)(7)(ii) or paragraph (f)(7)(iii) of this section.

(i) Establish parameter monitoring levels as specified in § 63.505, for those emission points designated as Group 1, as appropriate.

(ii) Submit the parameter monitoring levels developed under paragraph (f)(7)(i) of this section and the basis for them in the Notification of Compliance Status report, as specified in § 63.506(e)(5).

(iii) Demonstrate that the parameter monitoring levels established for the primary product are also appropriate for those periods when products other than the primary product are being produced. Material demonstrating this finding shall be submitted in the Notification of Compliance Status report as specified in § 63.506(e)(5).

(g) *Storage vessel ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(8) of this section to determine to which process unit a storage vessel shall belong.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on September 5, 1996, that storage vessel shall belong to the process unit subject to the other subpart.

(2) If a storage vessel is dedicated to a single process unit, the storage vessel shall belong to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall belong to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., the process unit has the predominant use of the storage vessel).

(4) If predominant use cannot be determined for a storage vessel that is shared among process units and if only one of those process units is an EPPU subject to this subpart, the storage vessel shall belong to that EPPU.

(5) If predominant use cannot be determined for a storage vessel that is shared among process units and if more than one of the process units are EPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the storage vessel to any one of the EPPUs sharing the storage vessel.

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 5, 1996 or based on the expected

utilization for the 5 years following September 5, 1996 for existing affected sources, whichever is more representative of the expected operations for that storage vessel, and based on the expected utilization for the 5 years after initial startup for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status required by § 63.506(e)(5)(vii). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If the storage vessel begins receiving material from (or sending material to) another process unit; ceases to receive material from (or send material to) a process unit; or if the applicability of this subpart to a storage vessel has been determined according to the provisions of paragraphs (g)(1) through (g)(8) of this section and there is a significant change in the use of the storage vessel that could reasonably change the predominant use, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(8) Where a storage vessel is located at a major source that includes one or more process units which place material into, or receive materials from the storage vessel, but the storage vessel is located in a tank farm, the applicability of this subpart shall be determined according to the provisions in paragraphs (g)(8)(i) through (g)(8)(iv) of this section.

(i) The storage vessel may only be assigned to a process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw materials, as appropriate). With respect to any process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, this subpart does not apply to the storage vessel.

(iii) If there is only one process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that process unit. Applicability of this subpart to the storage vessel shall then be determined according to the provisions of paragraph (a) of this section.

(iv) If there are two or more process units at the major source that meet the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraph (g)(6) of this section. The predominant use shall be determined among only those process units that meet the criteria of paragraph (g)(8)(i) of this section.

(h) *Recovery operation equipment ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (h)(1) through (h)(7) of this section to determine to which process unit recovery operation equipment shall belong.

(1) If recovery operation equipment is already subject to another subpart of 40 CFR part 63 on September 5, 1996, that recovery operation equipment shall belong to the process unit subject to the other subpart.

(2) If recovery operation equipment is used exclusively by a single process unit, the recovery operation shall belong to that process unit.

(3) If recovery operation equipment is shared among process units, then the recovery operation equipment shall belong to that process unit located on the same plant site as the recovery operation equipment that has the greatest input into or output from the recovery operation equipment (i.e., that process unit has the predominant use of the recovery operation equipment).

(4) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if one of those process units is an EPPU subject to this subpart, the recovery operation equipment shall belong to the EPPU subject to this subpart.

(5) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if more than one of the process units are EPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the recovery operation equipment to any one of those EPPUs.

(6) If the predominant use of recovery operation equipment varies from year to year, then the predominant use shall be determined based on the utilization that occurred during the year preceding September 5, 1996 or based on the expected utilization for the 5 years following September 5, 1996 for existing affected sources, whichever is the more representative of the expected operations for the recovery operations equipment, and based on the expected utilization for the first 5 years after initial startup for new affected sources. This determination shall be reported in the Notification of Compliance Status required by § 63.506(e)(5)(viii). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If there is an unexpected change in the utilization of recovery operation equipment that could reasonably change the predominant use, the owner or operator shall redetermine to which process unit the recovery operation belongs by reperforming the procedures specified in paragraphs (h)(2) through (h)(6) of this section.

(i) *Changes or additions to plant sites.* The provisions of paragraphs (i)(1) through (i)(4) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (i)(5) provides examples of what are and are not considered process changes for purposes of paragraph (i) of this section.

(1) *Adding an EPPU to a plant site.* The provisions of paragraphs (i)(1)(i) through (i)(1)(ii) of this section apply to owners or operators that add EPPUs to a plant site.

(i) If an EPPU is added to a plant site, the addition shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial startup or by September 5, 1996, whichever is later, if the addition meets the criteria specified in paragraphs (i)(1)(i)(A) through (i)(1)(i)(B) and either (i)(1)(i)(C) or (i)(1)(i)(D) of this section:

(A) It is an addition that meets the definition of construction in § 63.2 of subpart A;

(B) Such construction commenced after June 12, 1995; and

(C) 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, and the primary product of the addition is currently produced at the plant site as the primary product of an affected source; or

(D) The primary product of the addition is not currently produced at the plant site as the primary product of an affected source, and the plant site meets, or after the addition is constructed will meet, the definition of a major source in § 63.2 of subpart A.

(ii) If an EPPU is added to a plant site, the addition shall be subject to the requirements for an existing affected source in this subpart upon initial startup or by 3 years after September 5, 1996, whichever is later, if the addition does not meet the criteria specified in

paragraph (i)(1)(i) of this section and the plant site meets, or after the addition is completed will meet, the definition of major source.

(2) *Adding emission points or making process changes to existing affected sources.* The provisions of paragraphs (i)(2)(i) through (i)(2)(ii) of this section apply to owners or operators that add emission points or make process changes to an existing affected source.

(i) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source, the entire affected source shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial startup or by September 5, 1996, whichever is later, if the process change or addition meets the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section:

(A) It is a process change or addition that meets the definition of reconstruction in § 63.2 of subpart A; and

(B) Such reconstruction commenced after June 12, 1995.

(ii) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source and the process change or addition does not meet the criteria specified in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section, the resulting emission point(s) shall be subject to the requirements for an existing affected source in this subpart. The resulting emission point(s) shall be in compliance upon initial startup or by 3 years after September 5, 1996, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the process change or addition. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(iii) To establish a compliance date for an emission point or points specified in paragraph (i)(2)(ii) of this section, the procedures specified in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section shall be followed.

(A) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(B) The compliance schedule shall be submitted within 180 days after the process change or addition is made or the information regarding the change or addition is known to the owner or operator, unless the compliance schedule has been previously submitted to the permitting authority. The compliance schedule may be submitted in the next Periodic Report if the process change or addition is made after the date the Notification of Compliance Status report is due.

(C) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(3) *Existing source requirements for Group 2 emission points that become Group 1 emission points.* If a process change or addition that does not meet the criteria in paragraph (i)(1) or (i)(2) of this section is made to an existing plant site or existing affected source, and the change causes a Group 2 emission point to become a Group 1 emission point, for that emission point the owner or operator shall comply with the requirements of this subpart for existing Group 1 emission points. Compliance shall be achieved as expeditiously as practicable, but in no event later than 3 years after the emission point becomes a Group 1 emission point.

(4) *Existing source requirements for some emission points that become subject to subpart H requirements.* If a surge control vessel or bottoms receiver becomes subject to § 63.170 of subpart H, or if a compressor becomes subject to § 63.164 of subpart H, the owner or operator shall be in compliance upon initial startup or by 3 years after September 5, 1996, whichever is later, 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 (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(5) *Determining what are and are not process changes.* For purposes of paragraph (i) of this section, examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is a replacement, removal, or addition of recovery equipment. For purposes of paragraph (i) 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 report required by § 63.506(e)(5).

(j) *Applicability of this subpart except during periods of startup, shutdown, and malfunction.* Each provision set forth in this subpart or referred to in this subpart shall apply at all times except during periods of startup, shutdown, and malfunction if the startup, shutdown, or malfunction precludes the ability of a particular emission point at an affected source to comply with one or more specific provisions to which it is subject.

§ 63.481 Compliance schedule and relationship to existing applicable rules.

(a) Affected sources are required to achieve compliance on or before the dates specified in paragraphs (b) through (d) of this section. Paragraph (e) of this section provides information on requesting compliance extensions. Paragraphs (f) through (i) of this section discuss the relationship of this subpart to subpart A and to other applicable rules. Where an override of another authority of the Act is indicated in this subpart, only compliance with the provisions of this subpart is required. Paragraph (j) of this section specifies the meaning of time periods.

(b) New affected sources that commence construction or reconstruction after June 12, 1995 shall be in compliance with this subpart upon initial startup or September 5, 1996, whichever is later, as provided in § 63.6(b) of subpart A.

(c) Existing affected sources shall be in compliance with this subpart (except for § 63.502 for which compliance is covered by paragraph (d) of this section) no later than 3 years after September 5, 1996, as provided in § 63.6(c) of subpart A, unless an extension has been granted as specified in paragraph (e) of this section.

(d) Except as provided for in paragraphs (d)(1) through (d)(4) of this section, existing affected sources shall be in compliance with § 63.502 no later than March 5, 1997 unless a request for a compliance extension is granted pursuant to section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6) of subpart H.

(1) Compliance with the compressor provisions of § 63.164 of subpart H shall occur no later than September 5, 1997 for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iii) of this section, if the work can be accomplished without a process unit shutdown, as defined in § 63.161 of subpart H.

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed; or

(iii) A new barrier fluid will be utilized which requires changes to the existing barrier fluid system.

(2) Compliance with the compressor provisions of § 63.164 of subpart H shall occur no later than March 5, 1998, for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(iv) of this section.

(i) The compressor meets one or more of the criteria specified in paragraphs (d)(1)(i) through (d)(1)(iii) of this section;

(ii) The work can be accomplished without a process unit shutdown as defined in § 63.161 of subpart H;

(iii) The additional time is actually necessary, due to the unavailability of parts beyond the control of the owner or operator; and

(iv) The owner or operator submits the request for a compliance extension to the U.S. Environmental Protection Agency (EPA) Regional Office at the addresses listed in § 63.13 of subpart A no later than 45 days before March 5, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i)(A), (B), and (D) of subpart A. Unless the EPA Regional Office objects to the request for a compliance extension within 30 calendar days after receipt of the request, the request shall be deemed approved.

(3) If compliance with the compressor provisions of § 63.164 of subpart H cannot reasonably be achieved without a process unit shutdown, as defined in § 63.161 of subpart H, the owner or operator shall achieve compliance no later than September 8, 1998. The owner or operator who elects to use this provision shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(4) Compliance with the compressor provisions of § 63.164 of subpart H shall occur not later than September 6, 1999 for any compressor meeting one or more of the criteria in paragraphs (d)(4)(i) through (d)(4)(iii) of this section. The owner or operator who elects to use these provisions shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(i) Compliance cannot be achieved without replacing the compressor;

(ii) Compliance cannot be achieved without recasting the distance piece; or

(iii) Design modifications are required to connect to a closed-vent or recovery system.

(5) Compliance with the surge control vessel and bottoms receiver provisions of § 63.170 of subpart H shall occur no later than September 6, 1999.

(e) 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. 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 or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than the date on which the Precompliance Report is required to be submitted in § 63.506(e)(3)(i). The dates specified in § 63.6(i) of subpart A for submittal of requests for extensions shall not apply to this subpart.

(1) A request for an extension of compliance shall include the data described in § 63.6(i)(6)(i) (A), (B), and (D) of subpart A.

(2) The requirements in § 63.6(i)(8) through § 63.6(i)(14) of subpart A shall govern the review and approval of requests for extensions of compliance with this subpart.

(f) Table 1 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart. For the purposes of this subpart, Table 3 of subpart F is not applicable.

(g) Table 2 of this subpart summarizes the provisions of subparts F, G, and H that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(h)(1) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 63, subpart I, is required to comply only with the provisions of this subpart.

(2) Sources subject to 40 CFR part 63, subpart I that have elected to comply through a quality improvement program, as specified in § 63.175 or § 63.176 or both of subpart H, may elect to continue these programs without interruption as a means of complying with this subpart. In other words, becoming subject to this subpart does not restart or reset the "compliance clock" as it relates to reduced burden earned through a quality improvement program.

(i) After the compliance dates specified in this section, a storage vessel that belongs to an affected source subject to this subpart 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. After the compliance dates specified in paragraph (d) of this section, that storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(j) All terms in this subpart that define a period of time for completion of required tasks (e.g., monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods.

(1) Notwithstanding time periods specified in this subpart for completion of required tasks, such time periods may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(2) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraphs (j)(2)(i) or (j)(2)(ii) of this section, as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(3) In all instances where a provision of this subpart requires completion of a task during each multiple successive period, an owner or operator may perform the required task at any time during the specified period, provided that the task is conducted at a reasonable interval after completion of the task during the previous period.

§ 63.482 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in subparts A (§ 63.2), F (§ 63.101), G (§ 63.111), and H (§ 63.161) as specified after each term:

Act (subpart A)
Administrator (subpart A)
Automated monitoring and recording system (subpart G)
Average concentration (subpart G)
Boiler (subpart G)
Bottoms receiver (subpart H)

By compound (subpart G)
By-product (subpart F)
Car-seal (subpart G)
Chemical manufacturing process unit (subpart F)
Closed-vent system (subpart G)
Co-product (subpart F)
Combustion device (subpart G)
Commenced (subpart A)
Compliance date (subpart A)
Compliance schedule (subpart A)
Connector (subpart H)
Construction (subpart A)
Continuous monitoring system (subpart A)
Continuous record (subpart G)
Continuous recorder (subpart G)
Cover (subpart G)
Distillation unit (subpart G)
Emission standard (subpart A)
Emissions averaging (subpart A)
EPA (subpart A)
Equipment (subpart H)
Equipment leak (subpart F)
Existing source (subpart A)
External floating roof (subpart G)
Fill (subpart G)
Fixed roof (subpart G)
Flame zone (subpart G)
Flexible operation unit (subpart F)
Floating roof (subpart G)
Flow indicator (subpart G)
Halogens and hydrogen halides (subpart G)
Hazardous air pollutant (subpart A)
Heat exchange system (subpart F)
Impurity (subpart F)
Incinerator (subpart G)
In organic hazardous air pollutant service (subpart H)
Instrumentation system (subpart H)
Internal floating roof (subpart G)
Lesser quantity (subpart A)
Maintenance wastewater (subpart F)
Major source (subpart A)
Malfunction (subpart A)
Mass flow rate (subpart G)
Maximum true vapor pressure (subpart G)
New source (subpart A)
Open-ended valve or line (subpart H)
Operating permit (subpart F)
Organic HAP service (subpart H)
Organic monitoring device (subpart G)
Owner or operator (subpart A)
Performance evaluation (subpart A)
Performance test (subpart A)
Permitting authority (subpart A)
Plant site (subpart F)
Point of generation (subpart G)
Potential to emit (subpart A)
Primary fuel (subpart G)
Process heater (subpart G)
Process unit shutdown (subpart H)
Process wastewater (subpart F)
Process wastewater stream (subpart G)
Product separator (subpart F)
Reactor (subpart G)
Reconstruction (subpart A)
Recovery device (subpart G)
Reference control technology for process vents (subpart G)
Reference control technology for storage vessels (subpart G)
Reference control technology for wastewater (subpart G)
Relief valve (subpart G)
Research and development facility (subpart F)
Residual (subpart G)
Run (subpart A)
Secondary fuel (subpart G)
Sensor (subpart H)
Shutdown (subpart A)
Specific gravity monitoring device (subpart G)
Startup (subpart A)
Startup, shutdown, and malfunction plan (subpart F)
State (subpart A)
Surge control vessel (subpart H)
Temperature monitoring device (subpart G)
Test method (subpart A)
Total resource effectiveness index value (subpart G)
Treatment process (subpart G)
Unit operation (subpart F)
Vent stream (subpart G)
Visible emission (subpart A)
Waste management unit (subpart G)
Wastewater (subpart F)
Wastewater stream (subpart G)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in a subpart referenced above and in this section, it shall have the meaning given in this section for purposes of this subpart.

Affected source is defined in § 63.480(a).

Aggregate batch vent stream means a gaseous emission stream containing only the exhausts from two or more batch front-end process vents that are ducted together before being routed to a control device that is in continuous operation.

Average flow rate, as used in conjunction with wastewater provisions, is defined in and determined by the specifications in § 63.144(c) of subpart G; or, as used in conjunction with the batch front-end process vent provisions, is defined in and determined by the specifications in § 63.488(e).

Back-end refers to the unit operations in an EPPU following the stripping operations. Back-end process operations include, but are not limited to, filtering, coagulation, blending, concentration, drying, separating, and other finishing operations, as well as latex and crumb storage.

Batch cycle means the operational step or steps, from start to finish, that occur as part of a batch unit operation.

Batch cycle limitation means an enforceable restriction on the number of batch cycles that can be performed in a year for an individual batch front-end process vent.

Batch emission episode means a discrete emission venting episode associated with a single batch unit operation. Multiple batch emission episodes may occur from a single batch unit operation.

Batch front-end process vent means a point of emission from a batch unit operation having a gaseous emission stream with annual organic HAP emissions greater than 225 kilograms per year and located in the front-end of a process unit. Batch front-end process vents exclude relief valve discharges and leaks from equipment regulated under § 63.502.

Batch process means a discontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of the process vary with time. Addition of raw material and withdrawal of product do not typically occur simultaneously in a batch process. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Batch unit operation means a unit operation operated in a batch process mode.

Butyl rubber means a copolymer of isobutylene and other monomers. Typical other monomers include isoprene and methylstyrenes. A typical composition of butyl rubber is approximately 85 to 99 percent isobutylene and one to fifteen percent other monomers. Most butyl rubber is produced by precipitation polymerization, although other methods may be used.

Compounding unit means a unit of operation which blends, melts, and resolidifies solid polymers for the purpose of incorporating additives, colorants, or stabilizers into the final elastomer product. A unit operation whose primary purpose is to remove residual monomers from polymers is not a compounding unit.

Continuous front-end process vent means a point of emission from a continuous process unit operation within an affected source having a gaseous emission stream with a flow rate greater than or equal to 0.005 standard cubic meter per minute and with a total organic HAP concentration greater than or equal to 50 parts per million by volume. Continuous front-end process vents exclude relief valve

discharges and leaks from equipment regulated under § 63.502.

Continuous process means a process where the inputs and outputs flow continuously through sequential manufacturing steps throughout the duration of the process. Continuous processes typically approach steady-state conditions. Continuous processes typically involve the simultaneous addition of raw material and withdrawal of product. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Continuous unit operation means a unit operation operated in a continuous process mode.

Control device is defined in § 63.111 of subpart G, except that the term "process vent" shall be replaced with the term "continuous front-end process vent" for the purpose of this subpart.

Crumb rubber dry weight means the weight of the polymer, minus the weight of water and residual organics.

Drawing unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then pulling it through an orifice to create a continuously extruded product.

Elastomer means any polymer having a glass transition temperature lower than −10°C, or a glass transition temperature between −10°C and 25°C that is capable of undergoing deformation (stretching) of several hundred percent and recovering essentially when the stress is removed. For the purposes of this subpart, resins are not considered to be elastomers.

Elastomer product means one of the following 12 types of products, as they are defined in this section:

(1) Butyl Rubber,
(2) Halobutyl Rubber,
(3) Epichlorohydrin Elastomers,
(4) Ethylene Propylene Rubber,
(5) Hypalon™,
(6) Neoprene,
(7) Nitrile Butadiene Rubber,
(8) Nitrile Butadiene Latex,
(9) Polybutadiene Rubber/Styrene Butadiene Rubber by Solution,
(10) Polysulfide Rubber,
(11) Styrene Butadiene Rubber by Emulsion, and
(12) Styrene Butadiene Latex.

Elastomer product process unit (EPPU) means a collection of equipment assembled and connected by pipes or ducts used to process raw materials and to manufacture an elastomer product as its primary product. This collection of equipment includes process vents; storage vessels, as determined in § 63.480(g); and the equipment (i.e., 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 elastomer product process unit) that are subject to the equipment leak provisions as specified in § 63.502. Compounding units, spinning units, drawing units, extruding units, and other finishing steps are not part of an EPPU. In addition, a solid state polymerization unit is not part of an EPPU.

Elastomer type means one of the elastomers defined under "elastomer product" in this section. Each elastomer identified in that definition represents a different elastomer type.

Emission point means an individual continuous front-end process vent, batch front-end process vent, back-end process vent, storage vessel, wastewater stream, or equipment leak.

Emulsion process means a process carried out with the reactants in an emulsified form (e.g., polymerization reaction).

Epichlorohydrin elastomer means an elastomer formed from the polymerization or copolymerization of epichlorohydrin (EPI). The main epichlorohydrin elastomers are polyepichlorohydrin, epi-ethylene oxide (EO) copolymer, epi-allyl glycidyl ether (AGE) copolymer, and epi-EO-AGE terpolymer. Epoxy resins produced by the copolymerization of EPI and bisphenol A are not epichlorohydrin elastomers.

Ethylene-propylene rubber means an ethylene-propylene copolymer or an ethylene-propylene terpolymer. Ethylene-propylene copolymers (EPM) result from the polymerization of ethylene and propylene and contain a saturated chain of the polymethylene type. Ethylene-propylene terpolymers (EPDM) are produced in a similar manner as EPM, except that a moderate amount of the third monomer is added to the reaction sequence. Typical third monomers include ethylidene norbornene, 1,4-hexadiene, or dicyclopentadiene. Ethylidene norbornene is the most commonly used. The production process includes, but is not limited to, polymerization, recycle, recovery, and packaging operations. The polymerization reaction may occur in either a solution process or a suspension process.

Extruding unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then forcing it through an orifice to create a continuously extruded product.

Front-end refers to the unit operations in an EPPU prior to, and including, the stripping operations. The process front-end includes all activity from raw material storage through the stripping operation, including pre-polymerization blending, reactions, etc. For all gas-phased reaction processes, all unit operations are considered to be front-end.

Gas-phased reaction process means an elastomer production process where the reaction occurs in a gas phase, fluidized bed.

Grade means the subdivision of an elastomer product type by different characteristics such as molecular weight, monomer composition, significant mooney values, and the presence or absence of extender oil and/or carbon black.

Group 1 batch front-end process vent means a batch front-end process vent releasing annual organic HAP emissions greater than or equal to 11,800 kg/yr and with a cutoff flow rate, calculated in accordance with § 63.488(f), greater than or equal to the annual average flow rate.

Group 2 batch front-end process vent means a batch front-end process vent that does not fall within the definition of a Group 1 batch front-end process vent.

Group 1 continuous front-end process vent means a continuous front-end process vent releasing a gaseous emission stream that has a total resource effectiveness index value, calculated according to § 63.115 of subpart G, less than or equal to 1.0.

Group 2 continuous front-end process vent means a continuous front-end process vent that does not fall within the definition of a Group 1 continuous front-end process vent.

Group 1 storage vessel means a storage vessel at an existing affected source that meets the applicability criteria specified in Table 3 of this subpart, or a storage vessel at a new affected source that meets the applicability criteria specified in Table 4 of this subpart.

Group 2 storage vessel means a storage vessel that does not fall within the definition of a Group 1 storage vessel.

Group 1 wastewater stream means a process wastewater stream from an elastomer product 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 subpart G 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

concentration greater than 1,000 parts per million by weight of compounds listed in table 9 of subpart G.

Group 2 wastewater stream means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

Halobutyl rubber means a butyl rubber elastomer produced using halogenated copolymers.

Halogenated aggregate batch vent stream means an aggregate batch vent stream determined to have a total mass emission rate of halogen atoms contained in organic compounds of 3,750 kg/yr or greater determined by the Procedures presented in § 63.488(h).

Halogenated batch front-end process vent means a batch front-end process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 3,750 kg/yr or greater determined by the procedures presented in § 63.488(h).

Halogenated continuous front-end process vent means a continuous front-end process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kg/hr or greater determined by the procedures presented in § 63.115(d)(2)(v) of subpart G.

High conversion latex means a latex where all monomers are reacted to at least 95 percent conversion.

Hypalon ™ means a chlorosulfonated polyethylene that is a synthetic rubber produced for uses such as wire and cable insulation, shoe soles and heels, automotive components, and building products.

Latex means a colloidal aqueous emulsion of elastomer. A latex may be further processed into finished products by direct use as a coating or as a foam, or it may be precipitated to separate the rubber particles, which are then used in dry state to prepare finished products.

Latex weight includes the weight of the polymer and the weight of the water solution.

Mass process means a process carried out through the use of thermal energy (e.g., polymerization reaction). Mass processes do not utilize emulsifying or suspending agents, but can utilize catalysts or other additives.

Material recovery section means the equipment that recovers unreacted or by-product materials from any process section for return to the EPPU, off-site purification or treatment, or sale. Equipment designed to separate unreacted or by-product material from the polymer product is to be included in this process section, provided that at the time of initial compliance some of the material is recovered for reuse in the process, off-site purification or treatment, or sale. Otherwise, such equipment is to be assigned to one of the other process sections, as appropriate. If equipment is used to recover unreacted or by-product material and return it directly to the same piece of process equipment from which it was emitted, then the recovery equipment is considered to be part of the process section that contains the process equipment. On the other hand, if equipment is used to recover unreacted or by-product material and return it to a different piece of process equipment in the same process section, the recovery equipment is considered to be part of a material recovery section. Equipment that treats recovered materials is to be included in this process section, but equipment that also treats raw materials is not to be included in this process section. The latter equipment is to be included in the raw materials preparation section.

Month means either a calendar month or a repeating 30-day period. For the purposes of compliance with the back-end limitations in § 63.506, a month can begin on any day of the month (i.e., starting on the 15th and ending on the 14th of the following month), as long as the month never contains more than 31 calendar days.

Neoprene means a polymer of chloroprene (2-chloro-1,3-butadiene). The free radical emulsion process is generally used to produce neoprene, although other methods may be used.

Nitrile butadiene latex means a polymer consisting primarily of unsaturated nitriles and dienes, usually acrylonitrile and 1,3-butadiene, that is sold as a latex.

Nitrile butadiene rubber means a polymer consisting primarily of unsaturated nitriles and dienes, usually acrylonitrile and 1,3-butadiene, not including those facilities that produce nitrile butadiene latex.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 5 of this subpart or any other chemical which:

(1) Is knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as EPCRA section 311, 312, or 313 or Title V; and

(2) Is listed in Table 2 of subpart F of this part.

Polybutadiene rubber/styrene butadiene rubber by solution means a polymer of 1,3-butadiene produced using a solution process, and/or a polymer that consists primarily of styrene and butadiene monomer units and is produced using a solution process.

Polymerization reaction section means the equipment designed to cause monomer(s) to react to form polymers, including equipment designed primarily to cause the formation of short polymer chains (e.g., oligomers or low polymers), but not including equipment designed to prepare raw materials for polymerization (e.g., esterification vessels). For the purposes of this subpart, the polymerization reaction section begins with the equipment used to transfer the materials from the raw materials preparation section and ends with the last vessel in which polymerization occurs.

Polysulfide rubber means a polymer produced by reacting sodium polysulfide and chloroethyl formal. Polysulfide rubber may be produced as latexes or solid product.

Primary product is defined in and determined by the procedures specified in § 63.480(f).

Process section means the equipment designed to accomplish a general but well-defined task in polymers production. Process sections include raw materials preparation, polymerization reaction, and material recovery. A process section may be dedicated to a single EPPU or may be common to more than one EPPU.

Process unit means a collection of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture a product.

Process vent means a point of emission from a unit operation having a gaseous emission stream. Typical process vents include condenser vents, dryer vents, vacuum pumps, steam ejectors, and atmospheric vents from reactors and other process vessels, but do not include pressure relief valves.

Product means a compound or material which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Raw materials preparation section means the equipment at a polymer manufacturing plant designed to prepare raw materials, such as monomers and solvents, for polymerization. For the purposes of this standard, this process section begins with the equipment used to transfer raw materials from storage and/or the equipment used to transfer recovered material from the material recovery process sections, and ends with the last piece of equipment that prepares the material for polymerization. The raw materials preparation section may include equipment that is used to purify, dry, or otherwise treat raw materials or raw and recovered

materials together; to activate catalysts; and to promote esterification including the formation of some short polymer chains (oligomers). The raw materials preparation section does not include equipment that is designed primarily to accomplish the formation of oligomers, the treatment of recovered materials alone, or the storage of raw materials.

Recovery operations equipment means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation units, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

Resin means a polymer that is not an elastomer. The following are characteristics of resins and the production of resins:

(1) The polymer is a block polymer;

(2) The manufactured polymer does not require vulcanization to make useful products;

(3) The polymer production process is operated to achieve at least 99 percent monomer conversion; and

(4) The polymer process unit does not recycle unreacted monomer back to the process.

Solid state polymerization unit means a unit operation which, through the application of heat, furthers the polymerization (i.e., increases the intrinsic viscosity) of polymer chips.

Solution process means a process where both the monomers and the resulting polymers are dissolved in an organic solvent.

Steady-state conditions means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values can occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP and that has been assigned, according to the procedures in § 63.480(g), to an EPPU that is subject to this subpart. Storage vessels do 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 and equipment storing and/or handling material that contains no organic HAP, or organic HAP as impurities only;

(5) Surge control vessels and bottoms receiver tanks; and

(6) Wastewater storage tanks.

Stripping technology means the removal of organic compounds from a raw elastomer product by the use of heat and/or vacuum. Stripping technology includes steam stripping, direct volatilization, chemical stripping, and other methods of devolatilization.

Styrene-butadiene latex means a polymer consisting primarily of styrene and butadiene monomer units produced using an emulsion process and sold as a latex.

Styrene-butadiene rubber by emulsion means a polymer consisting primarily of styrene and butadiene monomer units produced using an emulsion process. Styrene butadiene rubber by emulsion does not include styrene butadiene latex.

Suspension process means a process carried out with the reactants in a state of suspension, typically achieved through the use of water and/or suspending agents (e.g., polymerization reaction).

Total organic compounds (TOC) means those compounds, excluding methane and ethane, measured according to the procedures of Method 18 or Method 25A of 40 CFR part 60, appendix A.

Year means any consecutive 12-month period or 365 rolling days. For the purposes of emissions averaging, the term year applies to any 12-month period selected by the facility and defined in its Emissions Averaging Plan. For the purposes of batch cycle limitations, the term year applies to the 12-month period defined by the facility in its Notification of Compliance Status.

§ 63.483 Emission standards.

(a) Except as allowed under paragraphs (b) and (c) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:

(1) Section 63.484 for storage vessels;

(2) Section 63.485 for continuous front-end process vents;

(3) Sections 63.486 through 63.492 for batch front-end process vents;

(4) Sections 63.493 through 63.500 for back-end process operations;

(5) Section 63.501 for wastewater;

(6) Section 63.502 for equipment leaks;

(7) Section 63.504 for additional test methods and procedures;

(8) Section 63.505 for monitoring levels and excursions; and

(9) Section 63.506 for general reporting and recordkeeping requirements.

(b) Instead of complying with §§ 63.484, 63.485, 63.493, and 63.501, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, and back-end process emissions within the affected source, plus any or all process wastewater streams associated with the affected source, to different levels using an emissions averaging compliance approach that uses the procedures specified in § 63.503. An owner or operator electing to use emissions averaging must still comply with the provisions of §§ 63.484, 63.485, 63.486, 63.493, and 63.501 for affected source emission points not included in the emissions average.

(c) A State may decide not to allow the use of the emissions averaging compliance approach specified in paragraph (b) of this section as a compliance option for an existing affected source.

§ 63.484 Storage vessel provisions.

(a) For each storage vessel located at an affected source, except for those storage vessels exempted by paragraph (b) of this section, the owner or operator shall comply with the requirements of §§ 63.119 through 63.123 and § 63.148 of subpart G, with the differences noted in paragraphs (c) through (q) of this section.

(b) Storage vessels described in paragraphs (b)(1) through (b)(7) of this section are exempt from the storage vessel requirements of this section.

(1) Storage vessels containing styrene-butadiene latex;

(2) Storage vessels containing other latex products and located downstream of the stripping operations;

(3) Storage vessels containing high conversion latex products;

(4) Storage vessels located downstream of the stripping operations at affected sources subject to the back-end residual organic HAP limitation located in § 63.494, that are complying through the use of stripping technology, as specified in § 63.495;

(5) Storage vessels containing styrene;

(6) Storage vessels containing acrylamide; and

(7) Storage vessels containing epichlorohydrin.

(c) When the term "storage vessel" is used in §§ 63.119 through 63.123 and 63.148 of subpart G, the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(d) When the term "Group 1 storage vessel" is used in §§ 63.119 through 63.123 and § 63.148 of subpart G, the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(e) When the term "Group 2 storage vessel" is used in §§ 63.119 through

63.123 and § 63.148 of subpart G, the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(f) When the emissions averaging provisions of § 63.150 of subpart G are referred to in § 63.119 and § 63.123 of subpart G, the emissions averaging provisions contained in § 63.503 shall apply for the purposes of this subpart.

(g) When December 31, 1992 is referred to in § 63.119 of subpart G, it shall be replaced with June 12, 1995 for the purposes of this subpart.

(h) When April 22, 1994 is referred to in § 63.119 of subpart G, it shall be replaced with September 5, 1996 for the purposes of this subpart.

(i) Each owner or operator shall comply with this paragraph instead of § 63.120(d)(1)(ii) of subpart G for the purposes of this subpart. If the control device used to comply with this section is also used to comply with §§ 63.485 through § 63.501, the performance test required for these sections is acceptable for demonstrating compliance with § 63.119(e) of subpart G for the purposes of this subpart. The owner or operator will not be required to prepare a design evaluation for the control device as described in § 63.120(d)(1)(i) of subpart G, if the performance test meets the criteria specified in paragraphs (i)(1) and (i)(2) of this section.

(1) 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 § 63.119(e)(2) of subpart G, as applicable; and

(2) The performance test is submitted as part of the Notification of Compliance Status required by § 63.506(e)(5).

(j) When the term "operating range" is used in § 63.120(d)(3)(i) of subpart G, it shall be replaced with the term "level," for the purposes of this subpart. This level shall be established using the procedures specified in § 63.505.

(k) When the Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.120, 63.122, and 63.123 of subpart G, the Notification of Compliance Status requirements contained in § 63.506(e)(5) shall apply for the purposes of this subpart.

(l) When the Periodic Report requirements contained in § 63.152(c) of subpart G are referred to in §§ 63.120, 63.122, and 63.123 of subpart G, the Periodic Report requirements contained in § 63.506(e)(6) shall apply for the purposes of this subpart.

(m) When other reports as required in § 63.152(d) of subpart G are referred to in § 63.122 of subpart G, the reporting requirements contained in § 63.506(e)(7) shall apply for the purposes of this subpart.

(n) When the Implementation Plan requirements contained in § 63.151(c) of subpart G are referred to in § 63.119 through § 63.123 of subpart G, for the purposes of this subpart the owner or operator of an affected source need not comply.

(o) When the Initial Notification Plan requirements contained in § 63.151(b) of subpart G are referred to in § 63.119 through § 63.123 of subpart G, for the purposes of this subpart the owner or operator of an affected source need not comply.

(p) When the determination of equivalence criteria in § 63.102(b) of subpart F are referred to in § 63.121(a) of subpart G, the provisions in § 63.6(g) of subpart A shall apply for the purposes of this subpart.

(q) The compliance date for storage vessels at affected sources subject to the provisions of this section is specified in § 63.481.

§ 63.485 Continuous front-end process vent provisions.

(a) For each continuous front-end process vent located at an affected source, the owner or operator shall comply with the requirements of §§ 63.113 through 63.118 of subpart G, except as provided for in paragraphs (b) through (s) of this section. Continuous front-end process vents that are combined with one or more batch front-end process vents shall comply with paragraph (m) or (n) of this section.

(b) When the term "process vent" is used in §§ 63.113 through 63.118 of subpart G, it shall be replaced with the term "continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(c) When the term "halogenated process vent" is used in §§ 63.113 through 63.118 of subpart G, it shall be replaced with the term "halogenated continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(d) When the term "Group 1 process vent" is used in §§ 63.113 through 63.118 of subpart G, it shall be replaced with the term "Group 1 continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(e) When the term "Group 2 process vent" is used in §§ 63.113 through 63.118 of subpart G, it shall be replaced with the term "Group 2 continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(f) When December 31, 1992 is referred to in § 63.113 of subpart G, it shall be replaced with June 12, 1995 for the purposes of this subpart.

(g) When §§ 63.151(f), alternative monitoring parameters, and 63.152(e), submission of an operating permit, of subpart G are referred to in §§ 63.114(c) and 63.117(e) of subpart G, § 63.506(f), alternative monitoring parameters, and § 63.506(e)(8), submission of an operating permit, respectively, shall apply for the purposes of this subpart.

(h) When the Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.114, 63.117, and 63.118 of subpart G, the Notification of Compliance Status requirements contained in § 63.506(e)(5) shall apply for the purposes of this subpart.

(i) When the Periodic Report requirements contained in § 63.152(c) of subpart G are referred to in §§ 63.117 and 63.118 of subpart G, the Periodic Report requirements contained in § 63.506(e)(6) shall apply for the purposes of this subpart.

(j) When the definition of excursion in § 63.152(c)(2)(ii)(A) of subpart G is referred to in § 63.118(f)(2) of subpart G, the definition of excursion in § 63.505(g) and (h) shall apply for the purposes of this subpart.

(k) For the purposes of this subpart, owners and operators shall comply with § 63.505, parameter monitoring levels and excursions, instead of § 63.114(e) of subpart G. When the term "range" is used in § 63.117(f), § 63.118(a)(2)(iv), (b)(2)(iv), (f)(1), and (f)(6) of subpart G, it shall be replaced with the term "level." This level is determined in accordance with § 63.505.

(l) When reports of process changes are required under § 63.118 (g), (h), (i), and (j) of subpart G, paragraphs (l)(1) through (l)(4) of this section shall apply for the purposes of this subpart.

(1) Whenever a process change, as defined in § 63.115(e) of subpart G, is made that causes a Group 2 continuous front-end process vent to become a Group 1 continuous front-end process vent, the owner or operator shall submit the following information in the first periodic report following the process change, as specified in § 63.506(e)(6)(iii)(D)(2):

(i) A description of the process change; and

(ii) A schedule for compliance with § 63.113(a) of subpart G, as required under § 63.506(e)(6)(iii)(D)(2).

(2) Whenever a process change, as defined in § 63.115(e) of subpart G, is made that causes a Group 2 continuous front-end process vent with a TRE greater than 4.0 to become a Group 2

continuous front-end process vent with a TRE less than 4.0, the owner or operator shall submit the following information in the first periodic report following the process change, as specified in § 63.506(e)(6)(iii)(D)(2):

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of § 63.113(d) of subpart G, as required under § 63.506(e)(6)(iii)(D)(2).

(3) Whenever a process change, as defined in § 63.115(e) of subpart G, is made that causes a Group 2 continuous front-end process vent with a flow rate less than 0.005 standard cubic meter per minute (scmm) to become a Group 2 continuous front-end process vent with a flow rate of 0.005 scmm or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit the following information in the first periodic report following the process change, as specified in § 63.506(e)(6)(iii)(D)(2):

(i) A description of the process change; and

(ii) A schedule for compliance with two provisions of § 63.113(d) of subpart G, as required under § 63.506(e)(6)(iii)(D)(2).

(4) Whenever a process change, as defined in § 63.115(e) of subpart G, is made that causes a Group 2 continuous front-end process vent with an organic HAP concentration less than 50 parts per million by volume (ppmv) to become a Group 2 continuous front-end process vent with an organic HAP concentration of 50 ppmv or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit the following information in the first periodic report following the process change, as specified in § 63.506(e)(6)(iii)(D)(2):

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of § 63.113(d) of subpart G, as required under § 63.506(e)(6)(iii)(D)(2).

(m) If a batch front-end process vent is combined with a continuous front-end process vent prior to being routed to a control device, the combined vent stream shall comply with either paragraph (m)(1) or (m)(2) of this section, as appropriate.

(1) If the continuous front-end process vent is a Group 1 continuous front-end process vent, the combined vent stream shall comply with all requirements for a Group 1 continuous process vent stream in §§ 63.113 through 63.118 of subpart G, with the differences noted in paragraphs (b) through (l) of this section.

(2) If the continuous front-end process vent is a Group 2 continuous front-end process vent, the TRE index value shall be calculated during maximum representative operating conditions. For combined streams containing continuous front-end and batch front-end process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the control device resulting in the highest concentration of organic HAP in the combined vent stream.

(n) If a batch front-end process vent is combined with a continuous front-end process vent prior to being routed to a recovery device, the TRE index value shall be calculated at the exit of the recovery device at maximum representative operating conditions. For combined vent streams containing continuous front-end and batch front-end process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the recovery device resulting in the highest concentration of organic HAP in the combined vent stream.

(o) Group 1 halogenated continuous front-end process vents at affected existing sources producing butyl rubber, halobutyl rubber, or ethylene propylene rubber are exempt from the requirements to control hydrogen halides and halogens from the outlet of combustion devices contained in § 63.113(c) of subpart G, if the conditions in paragraphs (o)(1) and (o)(2) of this section are met. Affected new sources are not exempt from these provisions.

(1)(i) For affected sources producing butyl rubber, halobutyl rubber, or ethylene propylene rubber using a solution process, if the halogenated continuous front-end process vent stream was controlled by a combustion device prior to June 12, 1995, or

(ii) For affected sources producing ethylene propylene rubber using a gas-phased reaction process, if the halogenated continuous front-end process vent stream was controlled by a combustion device since startup.

(2) The combustion device meets the requirements of § 63.113(a)(1)(i), § 63.113(a)(2), § 63.113(a)(3), or § 63.113(b) of subpart G.

(p) The compliance date for continuous front-end process vents subject to the provisions of this section is specified in § 63.481. This replaces the reference to § 63.100 of subpart F in § 63.115(e)(2) of subpart G.

(q) *Internal combustion engines.* In addition to the three options for the control of a Group 1 continuous front-end process vent listed in § 63.113(a)(1)–(3) of subpart G, an owner or operator can route emissions of organic HAP to an internal combustion engine, provided the conditions listed in paragraphs (q)(1) through (q)(3) of this section are met.

(1) The vent stream routed to the internal combustion engine shall not be a halogenated continuous front-end process vent stream.

(2) The organic HAP is introduced with the primary fuel.

(3) The owner or operator continuously monitors the on/off status of the internal combustion engine.

(4) If an internal combustion engine meeting the requirements of paragraphs (q)(1) through (3) of this section is used to comply with the provisions of § 63.113(a) of subpart G, the internal combustion engine is exempt from the source testing requirements of § 63.116 of subpart G.

(r) When the provisions of § 63.116 (c)(3) and (c)(4) of subpart G specify that Method 18 shall be used, Method 18 or Method 25A may be used for the purposes of this subpart. The use of Method 25A shall comply with paragraphs (r)(1) and (r)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(2) The use of Method 25A 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.

(s) When the provisions of § 63.116(b) identify conditions under which a performance test is not required, for purposes of this subpart, the exemption in paragraph (s)(1) of this section shall also apply. Further, if a performance test meeting the conditions specified in paragraph (s)(2) of this section has been conducted by the owner or operator, the results of that performance test shall suffice, for the purposes of this section.

(1) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(2) Performance tests done for other subparts in part 60 or part 63 where total organic HAP or TOC was measured, provided that the owner or operator can demonstrate that operating conditions for the process and control or recovery device during the performance test are representative of current operating conditions.

§ 63.486 Batch front-end process vent provisions.

(a) *Batch front-end process vents.* Except as specified in paragraph (b) of this section, owners and operators of new and existing affected sources with batch front-end process vents shall comply with the requirements in §§ 63.487 through 63.492. The batch front-end process vent group status shall be determined in accordance with § 63.488. Batch front-end process vents classified as Group 1 shall comply with the reference control technology requirements for Group 1 batch front-end process vents in § 63.487, the monitoring requirements in § 63.489, the performance test methods and procedures to determine compliance requirements in § 63.490, the recordkeeping requirements in § 63.491, and the reporting requirements in § 63.492. All Group 2 batch front-end process vents shall comply with the applicable reference control technology requirements in § 63.487, the recordkeeping requirements in § 63.491, and the reporting requirements in § 63.492.

(b) *Aggregate batch vent streams.* Aggregate batch vent streams, as defined in § 63.482, are subject to the control requirements for individual batch front-end process vents, as specified in § 63.487(b), as well as the monitoring, testing, recordkeeping, and reporting requirements specified in § 63.489 through § 63.492.

§ 63.487 Batch front-end process vents—reference control technology.

(a) *Batch front-end process vents.* The owner or operator of a Group 1 batch front-end process vent, as determined using the procedures in § 63.488, shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each batch front-end process vent, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b) of subpart A.

(ii) Halogenated batch front-end process vents, as defined in § 63.482, shall not be vented to a flare.

(2) For each batch front-end process vent, reduce organic HAP emissions for the batch cycle by 90 weight percent using a control device. Owners or operators may achieve compliance with this paragraph through the control of selected batch emission episodes or the control of portions of selected batch emission episodes. Documentation demonstrating how the 90 weight percent emission reduction is achieved is required by § 63.490(c)(2).

(b) *Aggregate batch vent streams.* The owner or operator of an aggregate batch vent stream that contains one or more Group 1 batch front-end process vents shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each aggregate batch vent stream, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b) of subpart A.

(ii) Halogenated aggregate batch vent streams, as defined in § 63.482, shall not be vented to a flare.

(2) For each aggregate batch vent stream, reduce organic HAP emissions by 90 weight percent on a continuous basis using a control device.

(c) *Halogenated emissions.* Halogenated Group 1 batch front-end process vents, halogenated aggregate batch vent streams, and halogenated continuous front-end process vents that are combusted as part of complying with paragraph (a)(2) or (b)(2) of this section, shall be controlled according to either paragraph (c)(1) or (c)(2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2) or (b)(2) of this section for a halogenated batch front-end process vent or halogenated aggregate batch vent stream, the emissions shall be ducted from the combustion device to an additional control device that reduces overall emissions of hydrogen halides and halogens by 99 percent before those emissions are discharged to the atmosphere.

(2) A control device may be used to reduce the halogen atom mass emission rate to less than 3,750 kg/yr for batch front-end process vents or aggregate batch vent streams and thus make the batch front-end process vent or aggregate batch vent stream nonhalogenated. The nonhalogenated batch front-end process vent or aggregate batch vent stream must then comply with the requirements of either paragraph (a) or (b) of this section, as appropriate.

(d) If a boiler or process heater is used to comply with the percent reduction requirement specified in paragraph (a)(2) or (b)(2) of this section, the batch front-end process vent or aggregate batch vent stream shall be introduced into the flame zone of such a device.

(e) *Combination of batch front-end process vents or aggregate batch vent streams with continuous front-end process vents.* A batch front-end process vent or aggregate batch vent stream combined with a continuous front-end process vent stream is not subject to the provisions of §§ 63.488 through 63.492, providing the requirements of paragraphs (e)(1), (e)(2), and either (e)(3) or (e)(4) of this section are met.

(1) The batch front-end process vent is combined with a continuous front-end process vent prior to routing the continuous front-end process vent to a control or recovery device. In this paragraph, the definitions of control device and recovery device as they relate to continuous front-end process vents shall be used.

(2) The only emissions to the atmosphere from the batch front-end process vent or aggregate batch vent stream prior to being combined with the continuous front-end process vent are from equipment subject to and in compliance with § 63.502.

(3) If the batch front-end vent stream or aggregate batch vent stream is combined with a continuous front-end process vent stream prior to being routed to a control device, the combined vent stream shall comply with the requirements in § 63.485(m). In this paragraph, the definition of control device as it relates to continuous front-end process vents shall be used.

(4) If the batch front-end process vent or aggregate batch vent stream is combined with a continuous front-end process vent stream prior to being routed to a recovery device, the combined vent stream shall comply with the requirements in § 63.485(n). In this paragraph, the definition of recovery device as it relates to continuous front-end process vents shall be used.

(f) *Group 2 batch front-end process vents with annual emissions greater than or equal to the level specified in § 63.488(d).* The owner or operator of a Group 2 batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d) shall comply with the provisions of paragraphs (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures that the Group 2 batch front-end process vent does not become a Group 1 batch front-end process vent, and

(2) Comply with the recordkeeping requirements in § 63.491(d)(2), and the reporting requirements in § 63.492(a)(3) and (b).

(g) *Group 2 batch front-end process vents with annual emissions less than the level specified in § 63.488(d).* The owner or operator of a Group 2 batch front-end process vent with annual organic HAP emissions less than the level specified in § 63.488(d), shall comply with either paragraphs (g)(1) and (g)(2) of this section or with

paragraphs (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures emissions do not exceed the appropriate level specified in § 63.488(d), and

(2) Comply with the recordkeeping requirements in § 63.491(d)(1), and the reporting requirements in § 63.492(a)(2), (b), and (c).

§ 63.488 Methods and procedures for batch front-end process vent group determination.

(a) *General requirements.* Except as provided in paragraph (a)(3) of this section, the owner or operator of batch front-end process vents at affected sources shall determine the group status of each batch front-end process vent in accordance with the provisions of this section. This determination may be based on either organic HAP or TOC emissions.

(1) The procedures specified in paragraphs (b) through (i) shall be followed for the expected mix of products for a given batch front-end process vent, as specified in paragraph (a)(1)(i) of this section, or for the worst-case HAP emitting batch unit operation, as specified in paragraphs (a)(1)(ii) through (a)(1)(iv) of this section. "Worst-case HAP emitting product" is defined in paragraph (a)(1)(iii) of this section.

(i) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (i) of this section for the expected mix of products, an identification of the different products and the number of batch cycles accomplished for each is required as part of the group determination documentation.

(ii) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (i) of this section for the worst-case HAP emitting product, documentation identifying the worst-case HAP emitting product is required as part of the group determination documentation.

(iii) Except as specified in paragraph (a)(1)(iii)(B) of this section, the worst-case HAP emitting product is as defined in paragraph (a)(1)(iii)(A) of this section.

(A) The worst-case HAP emitting product is the one with the highest mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle.

(B) Alternatively, when one product is produced more than 75 percent of the time, accounts for more than 75 percent of the annual mass of product, and the owner or operator can show that the mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle can reasonably be expected to be similar to the mass emission rate for other products having emissions from the same batch front-end process vent, that product may be considered the worst-case HAP emitting product.

(C) An owner or operator shall determine the worst-case HAP emitting product for a batch front-end process vent as specified in paragraphs (a)(1)(iii)(C)(*1*) through (a)(1)(iii)(C)(*3*) of this section.

(*1*) The emissions per batch emission episode shall be determined using any of the procedures specified in paragraph (b) of this section. The mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle shall be determined by summing the emissions for each batch emission episode making up a complete batch cycle and dividing by the total duration in hours of the batch cycle.

(*2*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(A) of this section, the mass emission rate for each product shall be determined and compared.

(*3*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(B) of this section, the mass emission rate for the product meeting the time and mass criteria of paragraph (a)(1)(iii)(B) of this section shall be determined, and the owner or operator shall provide adequate information to demonstrate that the mass emission rate for said product is similar to the mass emission rates for the other products having emissions from the same batch process vent. In addition, the owner or operator shall provide information demonstrating that the selected product meets the time and mass criteria of paragraph (a)(1)(iii)(B) of this section.

(iv) The annual production of the worst-case HAP emitting product shall be determined by ratioing the production time of the worst-case product up to a 12 month period of actual production. It is not necessary to ratio up to a maximum production rate (i.e., 8,760 hours per year at maximum design production).

(2) The annual uncontrolled organic HAP or TOC emissions and average flow rate shall be determined at the exit from the batch unit operation. For the purposes of these determinations, the primary condenser operating as a reflux condenser on a distillation column, the primary condenser recovering monomer or solvent from a batch stripping operation, and the primary condenser recovering monomer or solvent from a batch distillation operation shall be considered part of the batch unit operation. All other devices that recover or oxidize organic HAP or TOC vapors shall be considered control devices as defined in § 63.482.

(3) The owner or operator of a batch front-end process vent complying with the flare provisions in § 63.487(a)(1) or § 63.487(b)(1) or routing the batch front-end process vent to a control device to comply with the requirements in § 63.487(a)(2) or § 63.487(b)(2) is not required to perform the batch front-end process vent group determination described in this section, but shall comply with all requirements applicable to Group 1 batch front-end process vents.

(b) *Determination of annual emissions.* The owner or operator shall calculate annual uncontrolled TOC or organic HAP emissions for each batch front-end process vent using the methods described in paragraphs (b)(1) through (b)(8) of this section. Paragraphs (b)(1) through (b)(4) of this section present procedures that can be used to calculate the emissions from individual batch emission episodes. Emissions from batch front-end processes involving multicomponent systems are to be calculated using the procedures in paragraphs (b)(1) through (b)(4) of this section. Individual HAP partial pressures in multicomponent systems shall be determined by the following methods: If the components are miscible in one another, use Raoult's law to calculate the partial pressures; if the solution is a dilute aqueous mixture, use Henry's law constants to calculate partial pressures; if Raoult's law or Henry's law are not appropriate or available, use experimentally obtained activity coefficients, Henry's law constants, or solubility data; if Raoult's law or Henry's law are not appropriate, use models, such as the group-contribution models, to predict activity coefficients; and if Raoult's law or Henry's law are not appropriate, assume the components of the system behave independently and use the summation of all vapor pressures from the HAP's as the total HAP partial pressure. Chemical property data can be obtained from standard reference texts. Paragraph (b)(5) of this section describes how direct measurement can be used to estimate emissions. If the owner or operator can demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions from a batch front-end process emission episode, emissions may be estimated using engineering assessment, as described in paragraph (b)(6) of this section. Owners or operators are not required to demonstrate that direct measurement is

not appropriate before utilizing engineering assessment. Paragraph (b)(6)(ii) of this section describes how an owner or operator shall demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate. Emissions from a batch cycle shall be calculated in accordance with paragraph (b)(7) of this section, and annual emissions from the batch front-end process vent shall be calculated in accordance with paragraph (b)(8) of this section.

(1) TOC or organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 1. This equation does not take into account evaporation of any residual liquid in the vessel.

$$E_{episode} = \frac{(V_{ves})(P)(MW_{WAVG})}{RT}\left(1 - 0.37^{m}\right) \quad \text{[Eq. 1]}$$

where:

$E_{episode}$=Emissions, kg/episode.

V_{ves}=Volume of vessel, m^3.

P=TOC or total organic HAP partial pressure, kPa.

MW_{WAVG}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 $m^3 \cdot kPa/kmol \cdot °K$.

T=Temperature of vessel vapor space, °K.

m=Number of volumes of purge gas used.

(2) TOC or organic HAP emissions from the purging of a filled vessel shall be calculated using Equation 2.

$$E_{episode} = \frac{(y)(V_{dr})(P)^2(MW_{WAVG})}{RT\left(P - \sum_{i=1}^{n} P_i x_i\right)}(T_m) \quad \text{[Eq. 2]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V_{dr}=Volumetric gas displacement rate, m^3/min.

P=Pressure in vessel vapor space, kPa.

MW_{WAVG}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 $m^3 \cdot kPa/kmol \cdot °K$.

T=Temperature of vessel vapor space, °K.

P_i=Vapor pressure of TOC or individual organic HAP i, kPa.

x_i=Mole fraction of TOC or organic HAP i in the liquid.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated.

T_m=Minutes/episode.

(3) Emissions from vapor displacement due to transfer of material into or out of a vessel shall be calculated using Equation 3.

$$E_{episode} = \frac{(y)(V)(P)(MW_{WAVG})}{RT} \quad \text{[Eq. 3]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V=Volume of gas displaced from the vessel, m^3.

P=Pressure of vessel vapor space, kPa.

MW_{WAVG}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 $m^3 \cdot kPa/kmol \cdot °K$.

T=Temperature of vessel vapor space, °K.

(4) Emissions caused by the heating of a vessel shall be calculated using the procedures in either paragraph (b)(4)(i), (b)(4)(ii), or (b)(4)(iii) of this section, as appropriate.

(i) If the final temperature to which the vessel contents is heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using the equations in paragraphs (b)(4)(i)(A) through (b)(4)(i)(D) of this section.

(A) Emissions caused by heating of a vessel shall be calculated using Equation 4. The assumptions made for this calculation are atmospheric pressure of 760 mm Hg and the displaced gas is always saturated with VOC vapor in equilibrium with the liquid mixture.

$$E_{episode} = \left[\frac{\sum_{i=1}^{n}(P_i)T1}{101.325 - \sum_{i=1}^{n}(P_i)T1} + \frac{\sum_{i=1}^{n}(P_i)T2}{101.325 - \sum_{i=1}^{n}(P_i)T2} \right] * (\Delta\eta) \left[\frac{(MW_{WAVG,T1}) + (MW_{WAVG,T2})}{2} \right] \quad \text{[Eq. 4]}$$

where:

$E_{episode}$=Emissions, kg/episode.

$(P_i)T1$, $(P_i)T2$=Partial pressure (kPa) TOC or each organic HAP in the vessel headspace at initial (T1) and final (T2) temperature.

n=Number of organic HAP in stream. Note: Summation not required if TOC emissions are being estimated.

$\Delta\eta$=Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (b)(4)(i)(B) of this section.

101.325=Constant, kPa.

$(MW_{WAVG,T1})$, $(MW_{WAVG,T2})$=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section.

(B) The moles of gas displaced, $\Delta\eta$, is calculated using equation 5.

$$\Delta\eta = \frac{V_{fs}}{R}\left[\left(\frac{Pa_1}{T_1}\right) - \left(\frac{Pa_2}{T_2}\right)\right] \quad \text{[Eq. 5]}$$

where:

$\Delta\eta$=Number of kg-moles of gas displaced.

V_{fs}=Volume of free space in the vessel, m^3.

R=Ideal gas constant, 8.314 $m^3 \cdot kPa/kmol \cdot K$.

Pa_1=Initial noncondensible gas pressure in the vessel, kPa.

Pa_2=Final noncondensible gas pressure, kPa.

T_1=Initial temperature of vessel, K.

T_2=Final temperature of vessel, K.

(C) The initial and final pressure of the noncondensible gas in the vessel shall be calculated using equation 6.

$$Pa = 101.325 - \sum_{i=1}^{n}(P_i)T \quad \text{[Eq. 6]}$$

where:

Pa=Initial or final partial pressure of noncondensible gas in the vessel headspace, kPa.

101.325=Constant, kPa.

$(P_i)T$=Partial pressure of TOC or each organic HAP i in the vessel headspace, kPa, at the initial or final temperature (T_1 or T_2).

n=Number of organic HAP in stream. Note: Summation not required if TOC emissions are being estimated.

(D) The weighted average molecular weight of organic HAP in the displaced gas, MW_{HAP}, shall be calculated using equation 7:

$$MW_{WAVG} = \frac{\sum_{i=1}^{n}(\text{mass of C})_i(\text{molecular weight of C})_i}{\sum_{i=1}^{n}(\text{mass of C})_i} \quad \text{[Eq. 7]}$$

where:

c=TOC or organic HAP component

n=Number of TOC or organic HAP components in stream.

(ii) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (b)(4)(ii)(A) and (b)(4)(ii)(B) of this section.

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 4, where T_2 is the temperature 50 K below the boiling point.

(B) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emissions for each increment shall be calculated using Equation 4.

(1) If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature for the heatup, even if the last increment is less than 5 K.

(2) If the final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(3) If the vessel contents are heated to the boiling point and the vessel is not operating with a condenser, the final temperature for the final increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(iii) If the vessel is operating with a condenser, and the vessel contents are heated to the boiling point, the primary condenser is considered part of the process, as described in § 63.488(a)(2). Emissions shall be calculated as the sum of Equation 4, which calculates emissions due to heating the vessel contents to the temperature of the gas

exiting the condenser, and Equation 3, which calculates emissions due to the displacement of the remaining saturated noncondensible gas in the vessel. The final temperature in Equation 4 shall be set equal to the exit gas temperature of the condenser. Equation 3 shall be used as written below in Equation 3a, using free space volume, and T_2 is set equal to the condenser exit gas temperature.

$$E_{episode} = \frac{(y_i)(V_{fs})(P_T)(MW_{HAP})}{(R)(T)} \quad \text{[Eq. 3a]}$$

where:

$E_{episode}$=Organic HAP emissions, kg/episode.

y_i=Saturated mole fraction of organic HAP in the vapor phase.

V_{fs}=Volume of the free space in the vessel, m^3.

P_T=Pressure of the vessel vapor space, kPa.

MW_{HAP}=Weighted average molecular weight of organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section.

R=Ideal gas constant, 8.314 $m^3 \cdot kPa/kmol \cdot K$.

T=Temperature of condenser exit stream K.

n=Number of organic HAP in stream.

(5) The owner or operator may estimate annual emissions for a batch emission episode by direct measurement. If direct measurement is used, the owner or operator shall either perform a test for the duration of a representative batch emission episode or perform a test during only those periods of the batch emission episode for which the emission rate for the entire episode can be determined or for which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions. Performance tests shall follow the procedures specified in paragraphs (b)(5)(i) through (b)(5)(iii) of this section. The procedures in either paragraph (b)(5)(iv) or (b)(5)(v) of this section shall be used to calculate the emissions per batch emission episode.

(i) Method 1 or 1A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D is used to determine gas stream volumetric flow rate.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in paragraph (e) of this section.

(iii) Method 18 or Method 25A, of 40 CFR part 60, appendix A, shall be used to determine the concentration of TOC or organic HAP, as appropriate. The use of Method 25A shall comply with paragraphs (b)(5)(iii)(A) and (b)(5)(iii)(B) of this section.

(A) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(B) The use of Method 25A 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.

(iv) If an integrated sample is taken over the entire batch emission episode to determine TOC or average total organic HAP concentration, emissions shall be calculated using Equation 8.

$$E_{episode} = K\left[\sum_{j=1}^{n}(C_j)(M_j)\right](AFR)(T_h) \quad \text{[Eq. 8]}$$

where:

$E_{episode}$=Emissions, kg/episode

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j=Average concentration of TOC or sample organic HAP component j of the gas stream for the batch emission episode, dry basis, ppmv.

M_j=Molecular weight of TOC or sample component j of the gas stream, dry basis, gm/gm-mole.

AFR=Average flow rate of gas stream, dry basis, scmm.

T_h=Hours/episode

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A.

(v) If grab samples are taken to determine TOC or average total organic HAP concentration, emissions shall be calculated according to paragraphs (b)(5)(v)(A) and (b)(5)(v)(B) of this section.

(A) For each measurement point, the emission rate shall be calculated using Equation 9.

$$E_{point} = K\left[\sum_{j=1}^{n} C_j M_j\right](FR) \quad \text{[Eq. 9]}$$

where:

E_{point}=Emission rate for individual measurement point, kg/hr.

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j=Concentration of TOC or sample component j of the gas stream, dry basis, ppmv.

M_j=Molecular weight of TOC or sample component j of the gas stream, gm/gm-mole.

FR=Flow rate of gas stream for the measurement point, dry basis, scmm.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A.

(B) The emissions per batch emission episode shall be calculated using Equation 10.

$$E_{episode} = (DUR)\left[\sum_{i=1}^{n}\frac{E_i}{n}\right] \quad \text{[Eq. 10]}$$

where:

$E_{episode}$=Emissions, kg/episode.

DUR=Duration of the batch emission episode, hr/episode.

E_i=Emissions for measurement point i, kg/hr.

n=Number of measurements.

(6) If the owner or operator can demonstrate that the methods in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions for a batch emissions episode, the owner or operator may use engineering assessment to estimate emissions as specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section. All data, assumptions, and procedures used in an engineering assessment shall be documented.

(i) Engineering assessment includes, but is not limited to, the following:

(A) Previous test results, provided the tests are representative of current operating practices.

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(C) Flow rate, TOC emission rate, or organic HAP emission rate specified or implied within a permit limit applicable to the batch front-end 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 includ but are not limited to:

(1) Use of material balances,

(2) Estimation of flow rate based on physical equipment design, such as pump or blower capacities, and

(3) Estimation of TOC or organic HAP concentrations based on saturation conditions.

(ii) The emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section shall be considered inappropriate for estimating emissions for a given batch emissions episode if one or more of the criteria in paragraphs (b)(6)(ii)(A) through (b)(6)(ii)(B) of this section are met.

(A) Previous test data are available that show a greater than 20 percent discrepancy between the test value and the estimated value.

(B) The owner or operator can demonstrate to the Administrator through any other means that the emissions estimation equations are not appropriate for a given batch emissions episode.

(C) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(A) of this section shall be reported in the Notification of Compliance Status, as required in § 63.506(e)(5).

(D) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(B) of this section shall be reported in the Precompliance Report, as required in § 63.506(e)(3).

(7) For each batch front-end process vent, the TOC or organic HAP emissions associated with a single batch cycle shall be calculated using Equation 11.

$$E_{cycle} = \sum_{i=1}^{n} E_{episode_i} \quad \text{[Eq. 11]}$$

where:

E_{cycle}=Emissions for an individual batch cycle, kg/batch cycle.

$E_{episode_i}$=Emissions from a batch emission episode i, kg/episode.

n=Number of batch emission episodes for the batch cycle.

(8) Annual TOC or organic HAP emissions from a batch front-end process vent shall be calculated using Equation 12.

$$AE = \sum_{i=1}^{n} \left(N_i\right)\left(E_{cycle_i}\right) \quad \text{[Eq. 12]}$$

where:

AE=Annual emissions from a batch front-end process vent, kg/yr.

N_i=Number of type i batch cycles performed annually, cycles/year.

E_{cycle_i}=Emissions from the batch front-end process vent associated with single type i batch cycle, as determined in paragraph (b)(7) of this section, kg/batch cycle.

n=Number of different types of batch cycles that cause the emission of TOC or organic HAP from the batch front-end process vent.

(c) [Reserved]

(d) *Minimum emission level exemption.* A batch front-end process vent with annual emissions less than 11,800 kg/yr is considered a Group 2 batch front-end process vent and the owner or operator of that batch front-end process vent shall comply with the requirements in § 63.487 (f) or (g). The owner or operator of that batch front-end process vent is not required to comply with the provisions in paragraphs (e) through (g) of this section.

(e) *Determination of average flow rate.* The owner or operator shall determine the average flow rate for each batch emission episode in accordance with one of the procedures provided in paragraphs (e)(1) through (e)(2) of this section. The annual average flow rate for a batch front-end process vent shall be calculated as specified in paragraph (e)(3) of this section.

(1) Determination of the average flow rate for a batch emission episode by direct measurement shall be made using the procedures specified in paragraphs (e)(1)(i) through (e)(1)(iii) of this section.

(i) The vent stream volumetric flow rate (Q_s) for a batch emission episode, in scmm at 20 °C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(ii) The volumetric flow rate of a representative batch emission episode shall be measured every 15 minutes.

(iii) The average flow rate for a batch emission episode shall be calculated using Equation 13.

$$AFR_{episode} = \frac{\sum_{i=1}^{n} FR_i}{n} \quad \text{[Eq. 13]}$$

where:

$AFR_{episode}$=Average flow rate for the batch emission episode, scmm.

FR_i=Flow rate for individual measurement i, scmm.

n=Number of flow rate measurements taken during the batch emission episode.

(2) The average flow rate for a batch emission episode may be determined by engineering assessment, as defined in paragraph (b)(6)(i) of this section. All data, assumptions, and procedures used shall be documented.

(3) The annual average flow rate for a batch front-end process vent shall be calculated using Equation 14.

$$AFR = \frac{\sum_{i=1}^{n} \left(DUR_i\right)\left(AFR_{episode,i}\right)}{\sum_{i=1}^{n} \left(DUR_i\right)} \quad \text{[Eq. 14]}$$

where:

AFR=Annual average flow rate for the batch front-end process vent, scmm.

DUR_i=Duration of type i batch emission episodes annually, hr/yr.

$AFR_{episode,i}$=Average flow rate for type i batch emission episode, scmm.

n=Number of types of batch emission episodes venting from the batch front-end process vent.

(f) *Determination of cutoff flow rate.* For each batch front-end process vent, the owner or operator shall calculate the cutoff flow rate using Equation 15.

$$CFR = (0.00437)(AE) - 51.6 \quad \text{[Eq. 15]}$$

where:

CFR=Cutoff flow rate, scmm.

AE=Annual TOC or organic HAP emissions, as determined in paragraph (b)(8) of this section, kg/yr.

(g) *Group 1/Group 2 status determination.* The owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (f) of this section, with the annual average flow rate, determined in accordance with paragraph (e)(3) of this section. The group determination status for each batch front-end process vent shall be made using the criteria specified in paragraphs (g)(1) and (g)(2) of this section.

(1) If the cutoff flow rate is greater than or equal to the annual average flow rate of the stream, the batch front-end process vent is classified as a Group 1 batch front-end process vent.

(2) If the cutoff flow rate is less than the annual average flow rate of the stream, the batch front-end process vent is classified as a Group 2 batch front-end process vent.

(h) *Determination of halogenation status.* To determine whether a batch front-end process vent or an aggregate batch vent stream is halogenated, the annual mass emission rate of halogen atoms contained in organic compounds shall be calculated using the procedures specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The concentration of each organic compound containing halogen atoms (ppmv, by compound) for each batch emission episode shall be determined based on the following procedures:

(i) Process knowledge that no halogens or hydrogen halides are present in the process may be used to demonstrate that a batch emission episode is nonhalogenated. Halogens or hydrogen halides that are unintentionally introduced into the process shall not be considered in making a finding that a batch emission episode is nonhalogenated.

(ii) Engineering assessment as discussed in paragraph (b)(6)(i) of this section.

(iii) Concentration of organic compounds containing halogens and hydrogen halides as measured by Method 26 or 26A of 40 CFR part 60, appendix A.

(iv) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(2) The annual mass emissions of halogen atoms for a batch front-end process vent shall be calculated using Equation 16.

$$E_{halogen} = K\left[\sum_{j=1}^{n}\sum_{i=1}^{m}\left(C_{avg_j}\right)\left(L_{j,i}\right)\left(M_{j,i}\right)\right]AFR \quad \text{[Eq. 16]}$$

where:

$E_{halogen}$=Mass of halogen atoms, dry basis, kg/yr.

K=Constant, 0.022 (ppmv)$^{-1}$ (kg-mole per scm) (min/yr), where standard temperature is 20°C.

AFR=Annual average flow rate of the batch front-end process vent, determined according to paragraph (e) of this section, scmm.

$M_{j,i}$=Molecular weight of halogen atom i in compound j, kg/kg-mole.

$L_{j,i}$=Number of atoms of halogen i in compound j.

n=Number of halogenated compounds j in the batch front-end process vent.

m=Number of different halogens i in each compound j of the batch front-end process vent.

C_{avg_j}=Average annual concentration of halogenated compound j in the batch front-end process vent, as determined by using Equation 17, dry basis, ppmv.

$$C_{avg_j} = \frac{\sum_{i=1}^{n}\left(DUR_i\right)\left(C_i\right)}{\sum_{i=1}^{n}\left(DUR_i\right)} \quad \text{[Eq. 17]}$$

where:

DUR_i=Duration of type i batch emission episodes annually, hr/yr.

C_i=Average concentration of halogenated compound j in type i batch emission episode, ppmv.

n=Number of types of batch emission episodes venting from the batch front-end process vent.

(3) The annual mass emissions of halogen atoms for an aggregate batch vent stream shall be the sum of the annual mass emissions of halogen atoms for all batch front-end process vents included in the aggregate batch vent stream.

(i) *Process changes affecting Group 2 batch front-end process vents.* Whenever process changes, as described in paragraph (i)(1) of this section, are made that affect one or more Group 2 batch front-end process vents, the owner or operator shall comply with paragraphs (i)(2) and (i)(3) of this section.

(1) 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 modification of recovery equipment considered part of the batch unit operation as specified in paragraph (a)(2) of this section. An increase in the annual number of batch cycles beyond the batch cycle limitation constitutes a process change. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the margin of variation on which the original group determination was based.

(2) For each batch front-end process vent affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (g) of this section, as applicable. Alternatively, engineering assessment, as described in paragraph (b)(6)(i) of this section, can be used to determine the effects of the process change.

(3) Based on the results of paragraph (i)(2) of this section, owners or operators shall comply with either paragraph (i)(3)(i), (ii), or (iii) of this section.

(i) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch front-end process vent has become a Group 1 batch front-end process vent as a result of the process change, the owner or operator shall submit a report as specified in § 63.492(b) and shall comply with the Group 1 provisions in § 63.487 through § 63.492 in accordance with the compliance schedule described in § 63.506(e)(6)(iii)(D)(2).

(ii) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch front-end process vent with annual emissions less than the applicable level specified in paragraph (d) of this section, and that is in compliance with § 63.487(g), now has annual emissions greater than or equal to the applicable level specified by paragraph (d) of this section but remains a Group 2 batch front-end process vent, the owner or operator shall submit a report as specified in § 63.492(c) and shall comply with § 63.487(f) in accordance with the compliance schedule required by § 63.506(e)(6)(iii)(D)(2).

(iii) If the redetermination described in paragraph (i)(2) of this section indicates no change in group status or no change in the relation of annual emissions to the levels specified in paragraph (d) of this section, the owner or operator is not required to submit a report, as described in § 63.492(d).

§ 63.489 Batch front-end process vents—monitoring requirements.

(a) *General requirements.* Each owner or operator of a batch front-end process vent or aggregate batch vent stream that uses a control device to comply with the

requirements in § 63.487(a)(2) or § 63.487(b)(2) shall install the monitoring equipment specified in paragraph (b) of this section.

(1) This monitoring equipment shall be in operation at all times when batch emission episodes, or portions thereof, that the owner or operator has selected to control are vented to the control device, or at all times when an aggregate batch vent stream is vented to the control device.

(2) The owner or operator shall operate control devices such that monitored parameters remain above the minimum level or below the maximum level, as appropriate, established as specified in paragraph (e) of this section.

(b) *Batch front-end process vent and aggregate batch vent stream monitoring parameters.* The monitoring equipment specified in paragraphs (b)(1) through (b)(8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 6 of this subpart.

(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, the 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, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all batch front-end process vents or aggregate batch 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 concert with the combustion of halogenated batch front-end process vents, the following monitoring equipment is required for the scrubber:

(i) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent; and

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent to monitor the scrubber liquid flow rate.

(5) Where an absorber is used, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(6) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is required.

(7) 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 carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(8) As an alternate to paragraphs (b)(5) through (b)(7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(c) *Alternative monitoring parameters.* An owner or operator of a batch front-end process vent or aggregate batch vent stream may request approval to monitor parameters other than those required by paragraph (b) of this section. The request shall be submitted according to the procedures specified in § 63.506(f). Approval shall be requested if the owner or operator:

(1) Uses a control device other than those included in paragraph (b) of this section; or

(2) Uses one of the control devices included in paragraph (b) of this section, but seeks to monitor a parameter other than those specified in Table 6 of this subpart and paragraph (b) of this section.

(d) *Monitoring of bypass lines.* The owner or operator of a batch front-end process vent or aggregate batch vent stream using a vent system that contains bypass lines that could divert emissions away from a control device used to comply with § 63.487(a) or § 63.487(b) shall comply with either paragraph (d)(1), (d)(2), or (d)(3) 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) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.491(e)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device and to the atmosphere; or

(2) Secure the bypass line valve in the non-diverting 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 non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.491(e)(4).

(3) Continuously monitor the bypass line damper or valve position using computer monitoring and record any periods when the position of the bypass line damper or valve has changed as specified in § 63.491(e)(4).

(e) *Establishment of parameter monitoring levels.* Parameter monitoring levels for batch front-end process vents and aggregate batch vent streams shall be established as specified in paragraphs (e)(1) through (e)(3) of this section.

(1) For each parameter monitored under paragraph (b) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 7 of this subpart, that indicates proper operation of the control device. The level shall be established in accordance with the procedures specified in § 63.505.

(i) For batch front-end process vents using a control device to comply with § 63.487(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.490(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with § 63.487(b)(2), the established level shall reflect the control efficiency requirement specified in § 63.487(b)(2).

(2) The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application as required in § 63.506(e)(5) or § 63.506(e)(8), respectively.

(3) The operating day shall be defined as part of establishing the parameter monitoring level and shall be submitted with the information in paragraph (e)(2) of this section. The definition of operating day shall specify the times at which an operating day begins and ends. The operating day shall not exceed 24 hours.

§ 63.490 Batch front-end process vents—performance test methods and procedures to determine compliance.

(a) *Use of a flare.* When a flare is used to comply with § 63.487(a)(1) or § 63.487(b)(1), the owner or operator shall comply with the flare provisions in § 63.11(b) of subpart A.

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a control device specified in paragraphs (b)(1) through (b)(4) of this section is used to comply with § 63.487(a)(2).

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater where the 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 a new source performance standard (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.

(5) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(6) Performance tests done for other subparts in part 60 or part 63 where total organic HAP or TOC was measured, provided that the owner or operator can demonstrate that operating conditions for the process and control device during the performance test are representative of current operating conditions.

(c) *Batch front-end process vent testing and procedures for compliance with § 63.487(a)(2).* Except as provided in paragraph (b) of this section, an owner or operator using a control device to comply with § 63.487(a)(2) shall conduct a performance test using the procedures specified in paragraph (c)(1) of this section in order to determine the control efficiency of the control device. An owner or operator shall determine the percent reduction for the batch cycle using the control efficiency of the control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section and the procedures specified in paragraph (c)(2) of this section. Compliance may be based on either total organic HAP or TOC. For purposes of this paragraph and all paragraphs that are part of paragraph (c) of this section, the term "batch emission episode" shall have the meaning "period of the batch emission episode selected for control," which may be the entire batch emission episode or may only be a portion of the batch emission episode.

(1) Performance tests shall be conducted as specified in paragraphs (c)(1)(i) through (c)(1)(v) of this section.

(i) Except as specified in paragraph (c)(1)(i)(A) of this section, a test shall be performed for the entire period of each batch emission episode in the batch cycle that the owner or operator selects to control as part of achieving the required 90 percent emission reduction for the batch cycle specified in § 63.487(a)(2). Only one test is required for each batch emission episode selected by the owner or operator for control. The owner or operator shall follow the procedures listed in paragraphs (c)(1)(i)(B) through (c)(1)(i)(D) of this section.

(A) Alternatively, an owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire episode can be determined or during which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used, provided the results are still relevant to the current batch front-end process vent conditions.

(B) Method 1 or 1A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D is used to determine gas stream volumetric flow rate. Inlet sampling sites shall be located as specified in paragraphs (c)(1)(i)(B)(*1*) and (c)(1)(i)(B)(*2*) of this section. Outlet sampling sites shall be located at the outlet of the final control device prior to release to the atmosphere.

(*1*) The control device inlet sampling site shall be located at the exit from the batch unit operation before any control device. Section 63.488(a)(2) describes those recovery devices considered part of the unit operation. Inlet sampling sites would be after these specified recovery devices.

(*2*) If a batch process vent 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 batch front-end process vents and primary and secondary fuels introduced into the boiler or process heater.

(C) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.488(e).

(D) Method 18 or Method 25A of 40 CFR part 60, Appendix A, shall be used to determine the concentration of organic HAP or TOC, as appropriate. The use of Method 25A shall comply with paragraphs (c)(1)(i)(D)(*1*) and (c)(1)(i)(D)(*2*) of this section.

(*1*) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(*2*) The use of Method 25A 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.

(ii) If an integrated sample is taken over the entire batch emission episode to determine TOC or average total organic HAP concentration, emissions per batch emission episode shall be calculated using Equations 18 and 19.

$$E_{episode,inlet} = K\left[\sum_{j=1}^{n}\left(C_{j,inlet}\right)\left(M_j\right)\right]\left(AFR_{inlet}\right)\left(T_h\right) \quad \text{[Eq. 18]}$$

$$E_{episode,outlet} = K\left[\sum_{j=1}^{n}\left(C_{j,outlet}\right)\left(M_j\right)\right]\left(AFR_{outlet}\right)\left(T_h\right) \quad \text{[Eq. 19]}$$

where:

$E_{episode}$=Inlet or outlet emissions, kg/episode.

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j=Average inlet or outlet concentration of TOC or sample component j of the gas stream for the batch emission episode, dry basis, ppmv.

M_j=Molecular weight of TOC or sample component j of the gas stream, gm/gm-mole.

AFR=Average inlet or outlet flow rate of gas stream for the batch emission episode, dry basis, scmm.

T_h=Hours/episode.

n=Number of organic HAP in stream. Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A.

(iii) If grab samples are taken to determine TOC or total organic HAP concentration, emissions shall be calculated according to paragraphs (c)(1)(iii)(A) and (c)(1)(iii)(B) of this section.

(A) For each measurement point, the emission rates shall be calculated using Equations 20 and 21.

$$E_{point,inlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{inlet} \quad \text{[Eq. 20]}$$

$$E_{point,outlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{outlet} \quad \text{[Eq. 21]}$$

where:

E_{point}=Inlet or outlet emission rate for the measurement point, kg/hr.

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j=Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j=Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

FR=Inlet or outlet flow rate of gas stream for the measurement point, dry basis, scmm.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A.

(B) The emissions per batch emission episode shall be calculated using Equations 22 and 23.

$$E_{episode,inlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,inlet,i}}{n}\right] \quad \text{[Eq. 22]}$$

$$E_{episode,outlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,outlet,i}}{n}\right] \quad \text{[Eq. 23]}$$

where:

$E_{episode}$=Inlet or outlet emissions, kg/episode.

DUR=Duration of the batch emission episode, hr/episode.

$E_{point,i}$=Inlet or outlet emissions for measurement point i, kg/hr.

n=Number of measurements.

(iv) The control efficiency for the control device shall be calculated using Equation 24.

$$R = \frac{\sum_{i=1}^{n} E_{inlet,i} - \sum_{i=1}^{n} E_{outlet,i}}{\sum_{i=1}^{n} E_{inlet,i}}(100) \quad \text{[Eq. 24]}$$

Where:

R=Control efficiency of control device, percent.

E_{inlet}=Mass rate of TOC or total organic HAP for batch emission episode i at the inlet to the control device as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

E_{outlet}=Mass rate of TOC or total organic HAP for batch emission episode i at the outlet of the control device, as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

n=Number of batch emission episodes in the batch cycle selected to be controlled.

(v) If the batch front-end process vent 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 across the device shall be determined by comparing the TOC or total organic HAP in all combusted batch front-end process vents and primary and secondary fuels with the TOC or total organic HAP exiting the combustion device, respectively.

(2) The percent reduction for the batch cycle shall be determined using Equation 25 and the control device efficiencies specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section. All information used to calculate the batch cycle percent reduction, including a definition of the batch cycle identifying all batch emission episodes, must be recorded as specified in § 63.491(b)(2). This information shall include identification of those batch emission episodes, or portions thereof, selected for control.

$$\text{Percent Reduction} = \frac{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con} - \sum_{i=1}^{n} (1-R)(E_{inlet,con})}{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con}} 100 \quad \text{[Eq. 25]}$$

where:

E_{unc}=Mass rate of TOC or total organic HAP for uncontrolled batch emission episode i, kg/hr.

$E_{inlet,con}$=Mass rate of TOC or total organic HAP for controlled batch emission episode i at the inlet to the control device, kg/hr.

R=Control efficiency of control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section.

n=Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of n is not necessarily the same for these three items.

(i) If a performance test is required by paragraph (c) of this section, the control efficiency of the control device shall be as determined in paragraph (c)(1)(iv) of this section.

(ii) If a performance test is not required by paragraph (c) of this section for a combustion control device, as specified in paragraph (b) of this section, the control efficiency of the control device shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(iii) If a performance test is not required by paragraph (c) of this section for a noncombustion control device, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(d) *Batch process vent and aggregate batch vent stream testing for compliance with § 63.487(c) [halogenated emission streams].* An owner or operator controlling halogenated emissions in compliance with § 63.487(c) shall conduct a performance test to determine compliance with the control efficiency specified in § 63.487(c)(1) or the emission limit specified in § 63.487(c)(2) for hydrogen halides and halogens.

(1) Sampling sites shall be located at the inlet and outlet of the scrubber or other control device used to reduce halogen emissions in complying with § 63.487(c)(1) or at the outlet of the control device used to reduce halogen emissions in complying with § 63.487(c)(2).

(2) The mass emissions of each hydrogen halide and halogen compound for the batch cycle or aggregate batch vent stream shall be calculated from the measured concentrations and the gas stream flow rate(s) determined by the procedures specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section, except as specified in paragraph (d)(5) of this section.

(i) Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in Mg per dry scm, of total hydrogen halides and halogens present in the emissions stream.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.488(e).

(3) To determine compliance with the percent reduction specified in § 63.487(c)(1), 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 any hydrogen halides or halogens present at the outlet of the scrubber or other control device shall be summed together. Percent reduction shall be determined by subtracting the outlet mass emissions from the inlet mass emissions and then dividing the result by the inlet mass emissions.

(4) To determine compliance with the emission limit specified in § 63.487(c)(2), the annual mass emissions for any hydrogen halides and halogens present at the outlet of the control device and prior to any combustion device shall be summed together and compared to the emission limit specified in § 63.487(c)(2).

(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.

(e) *Aggregate batch vent stream testing for compliance with § 63.487(b)(2).* Owners or operators of aggregate batch vent streams complying with § 63.487(b)(2) shall conduct a performance test using the performance testing procedures for continuous front-end process vents in § 63.116(c) of subpart G. For the purposes of this subpart, when the provisions of § 63.116(c) specify that Method 18 shall be used, Method 18 or Method 25A may be used. The use of Method 25A shall comply with paragraphs (e)(1) and (e)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(2) The use of Method 25A 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.

(f) *Batch cycle limitation.* The batch cycle limitation required by § 63.487(f)(1) and § 63.487(g)(1) shall be established as specified in paragraph (f)(1) of this section and shall include the elements specified in paragraph (f)(2) of this section.

(1) The batch cycle limitation shall be determined by the owner or operator such that annual emissions for the batch front-end process vent remain less than the level specified in § 63.488(d) when complying with § 63.487(g). Alternatively, when complying with § 63.487(f), the batch cycle limitation shall ensure that annual emissions remain at a level such that the batch front-end process vent remains a Group 2 batch front-end process vent, given the actual annual flow rate for that batch front-end process vent determined according to § 63.488(e)(3). The batch cycle limitation shall be determined using the same basis, as described in § 63.488(a)(1), used to make the group determination (i.e., expected mix of products or worst-case HAP emitting product). The establishment of the batch cycle limitation is not dependent upon any past production or activity level.

(i) If the expected mix of products serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that any foreseeable combination of products which the owner or operator desires the flexibility to manufacture shall be allowed. Combinations of products not accounted for in the documentation required by paragraph (f)(2)(iv) of this section shall not be allowed within the restrictions of the batch cycle limitation.

(ii) If, for a batch front-end process vent with more than one product, a single worst-case HAP emitting product serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that the maximum number of batch cycles the owner or operator desires the flexibility to accomplish, using the worst-case

HAP emitting product and ensuring that the batch front-end process vent remains a Group 2 batch front-end process vent or that emissions remain less than the level specified in § 63.488(d), shall be allowed. This value shall be the total number of batch cycles allowed within the restrictions of the batch cycle limitation regardless of which products are manufactured.

(2) Documentation supporting the establishment of the batch cycle limitation shall include the information specified in paragraphs (f)(2)(i) through (f)(2)(v) of this section, as appropriate.

(i) Identification that the purpose of the batch cycle limitation is to comply with § 63.487(f)(1) or (g)(1).

(ii) Identification that the batch cycle limitation is based on a single worst-case HAP emitting product or on the expected mix of products for the batch front-end process vent as allowed under § 63.488(a)(1).

(iii) Definition of the operating year, for the purposes of determining compliance with the batch cycle limitation.

(iv) If the batch cycle limitation is based on a single worst-case HAP emitting product, documentation specified in § 63.488(a)(1)(ii) describing how the single product meets the requirements for worst-case HAP emitting product, as specified in § 63.488(a)(1) and the number of batch cycles allowed under the batch cycle limitation for each product associated with the batch front-end process vent are required.

(v) If the batch cycle limitation is based on the expected mix of products, the owner or operator shall provide documentation that describes as many scenarios for differing mixes of products (i.e., how many of each type of product) that the owner or operator desires the flexibility to accomplish. Alternatively, the owner or operator shall provide a description of the relationship among the mix of products that will allow a determination of compliance with the batch cycle limitation under an infinite number of scenarios. For example, if a batch process vent has two products, each product has the same flow rate and emits for the same amount of time, and product No. 1 has twice the emissions as product No. 2, the relationship describing an infinite number of scenarios would be that the owner or operator can accomplish two batch cycles of product No. 2 for each batch cycle of product No. 1 within the restriction of the batch cycle limitation.

§ 63.491 Batch front-end process vents—recordkeeping requirements.

(a) *Group determination records for batch front-end process vents.* Except as provided in paragraphs (a)(7) through (a)(9) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (a)(1) through (a)(6) of this section for each batch front-end process vent subject to the group determination procedures of § 63.488. Except for paragraph (a)(1) of this section, the records required to be maintained by this paragraph are limited to the information developed and used to make the group determination under § 63.488(b) through § 63.488(g), as appropriate. The information required by paragraph (a)(1) of this section is required for all batch front-end process vents subject to the group determination procedures of § 63.488. If an owner or operator did not need to develop certain information (e.g., annual average flow rate) to determine the group status, this paragraph does not require that additional information be developed.

(1) An identification of each unique product that has emissions from one or more batch emission episodes venting from the batch front-end process vent.

(2) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle for each unique product identified in paragraph (a)(1) of this section that was considered in making the group determination under § 63.488.

(3) Total annual uncontrolled TOC or organic HAP emissions, determined at the exit from the batch unit operation before any emission control, as determined in accordance with § 63.488(b).

(i) For Group 2 batch front-end process vents, emissions shall be determined at the batch cycle limitation.

(ii) For Group 1 batch front-end process vents, emissions shall be those used to determine the group status of the batch front-end process vent.

(4) The annual average flow rate for the batch front-end process vent as determined in accordance with § 63.488(e).

(5) The cutoff flow rate, determined in accordance with § 63.488(f).

(6) The results of the batch front-end process vent group determination, conducted in accordance with § 63.488(g).

(7) If a batch front-end process vent is in compliance with § 63.487(a) or § 63.487(b), and the control device is operating at all times when batch emission episodes are venting from the batch front-end process vent, none of the records in paragraphs (a)(1) through (a)(6) of this section are required.

(8) If a batch front-end process vent is in compliance with § 63.487(a) or § 63.487(b), but the control device is operated only during selected batch emission episodes, only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(9) If the total annual emissions from the batch front-end process vent are less than the appropriate level specified in § 63.488(d), only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(b) *Compliance demonstration records.* Each owner or operator of a batch front-end process vent or aggregate batch vent stream complying with § 63.487(a) or (b), shall keep the following records, as applicable, up-to-date and readily accessible:

(1) The annual mass emissions of halogen atoms in the batch front-end process vent or aggregate batch vent stream determined according to the procedures specified in § 63.488(h)(2).

(2) If a batch front-end process vent is in compliance with § 63.487(a)(2), records documenting the batch cycle percent reduction as specified in § 62.486–4(c)(2).

(3) When using a flare to comply with § 63.487(a)(1):

(i) The 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 § 63.11(b) of subpart A; and

(iii) All periods during the compliance determination required by § 63.11(b) of subpart A when the pilot flame is absent.

(4) The following information when using a control device to achieve compliance with § 63.487(a)(2) or (b)(2):

(i) For an incinerator or non-combustion control device, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.490(c) for batch front-end process vents and § 63.490(e) for aggregate batch vent streams;

(ii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater;

(iii) 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 is used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC achieved, as determined

using the procedures specified in § 63.490(c) for batch front-end process vents and § 63.490(e) for aggregate batch vent streams; and

(iv) For a scrubber or other control device following a combustion device to control a halogenated batch front-end process vent or halogenated aggregate batch vent stream, the percent reduction of total hydrogen halides and halogens, as determined under § 63.490(d)(3) or the emission limit determined under § 63.490(d)(4).

(c) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.489(b) and Table 6 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.492(e) as allowed under § 63.489(c), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.489(e) for parameters specified in § 63.489(b) and as required by § 63.506(f) for alternate parameters. This documentation shall include the parameter monitoring data used to establish the level.

(d) *Group 2 batch front-end process vent continuous compliance records.* The owner or operator of a Group 2 batch front-end process vent shall comply with either paragraph (d)(1) or (d)(2) of this section, as appropriate.

(1) The owner or operator of a Group 2 batch front-end process vent complying with § 63.487(g) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.487(g)(1) and specified in § 63.490(f).

(ii) Records specifying the number and type of batch cycles accomplished.

(2) The owner or operator of a Group 2 batch front-end process vent complying with § 63.487(f) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.487(f)(1) and specified in § 63.490(f).

(ii) Records specifying the number and type of batch cycles accomplished for each three month period.

(e) *Controlled batch front-end process vent continuous compliance records.* Each owner or operator of a batch front-end process vent that uses a control device to comply with § 63.487(a) shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.489(b) as applicable, and listed in Table 6 of this subpart, or specified by the Administrator in accordance with § 63.492(e) as allowed under § 63.489(c). These records shall be kept as specified under § 63.506(d), except as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For flares, the records specified in Table 6 of this subpart shall be kept rather than averages.

(ii) For carbon adsorbers, the records specified in Table 6 of this subpart shall be kept rather than averages.

(2) Records of the batch cycle daily average value of each continuously monitored parameter, except as provided in paragraphs (e)(2)(iii) of this section, as calculated using the procedures specified in paragraphs (e)(2)(i) through (e)(2)(ii) of this section.

(i) The batch cycle daily average shall be calculated as the average of all parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control.

(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 batch cycle daily averages.

(iii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum level established in accordance with § 63.489(e), the owner or operator may record that all values were above the minimum or below the maximum level established, rather than calculating and recording a batch cycle daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified under § 63.489(d)(1) was operating and whether flow was detected at any time during the hour. Also, records of the times and durations of all periods when the vent is diverted from the control device, or the flow indicator specified in § 63.489(d)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.489(d)(2) or where computer monitoring of the position of the bypass damper or valve is used to comply with § 63.489(d)(3), hourly records of flow are not required.

(i) For compliance with § 63.489(d)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanism has been done, and shall record the occurrence 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 configuration has been checked out, and records of any car-seal that has been broken.

(ii) For compliance with § 63.489(d)(3), the owner or operator shall record the times of all periods when the bypass line valve position has changed.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(f) *Aggregate batch vent stream continuous compliance records.* In addition to the records specified in paragraphs (b) and (c) of this section, each owner or operator of an aggregate batch vent stream using a control device to comply with § 63.487(b) shall keep records in accordance with the requirements for continuous process vents in § 63.118(a) and § 63.118(b) of subpart G, as applicable and appropriate, except that when complying with § 63.118(b), owners or operators shall disregard statements concerning TRE index values for the purposes of this subpart.

§ 63.492 Batch front-end process vents—reporting requirements.

(a) The owner or operator of a batch front-end process vent at an affected source shall submit the information specified in paragraphs (a)(1) through (a)(4) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(1) For each batch front-end process vent complying with § 63.487(a) and each aggregate batch vent stream complying with § 63.487(b), the information specified in § 63.491(b) and § 63.491(c), as applicable.

(2) For each Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d), the information specified in § 63.491(d)(1)(i).

(3) For each Group 2 batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d), the information specified in § 63.491(d)(2)(i).

(4) For each batch process vent subject to the group determination procedures, the information specified in § 63.491(a), as appropriate.

(b) Whenever a process change, as defined in § 63.488(i)(1), is made that causes a Group 2 batch front-end process vent to become a Group 1 batch front-end process vent, the owner or operator shall submit a report within 180 operating days after the process

change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.506(e)(6)(iii)(D)(2). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.487(a) or § 63.487(b), as appropriate, as required under § 63.506(e)(6)(iii)(D)(2).

(c) Whenever a process change, as defined in § 63.488(f)(1), is made that causes a Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d) that is in compliance with § 63.487(g) to have annual emissions greater than or equal to the levels specified in § 63.488(d) but remains a Group 2 batch front-end process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.506(e)(6)(iii)(D)(2). The following information shall be submitted:

(1) A description of the process change;

(2) The results of the redetermination of the annual emissions, average flow rate, and cutoff flow rate required under § 63.488(f) and recorded under § 63.491 (a)(3) through (a)(5); and

(3) The batch cycle limitation determined in accordance with § 63.487(f)(1).

(d) The owner or operator is not required to submit a report of a process change if one of the conditions specified in paragraphs (d)(1) and (d)(2) of this section is met.

(1) The process change does not meet the description of a process change in § 63.488(i).

(2) The redetermined group status remains Group 2 for an individual batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d), or a Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d) complying with § 63.487(g) continues to have emissions less than the level specified in § 63.488(d).

(e) If an owner or operator uses a control device other than those specified in § 63.489(b) and listed in Table 6 of this subpart or requests approval to monitor a parameter other than those specified in § 63.489(c) and listed in Table 6 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.506(f), as part of the Precompliance Report as required under § 63.506(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

(f) Owners or operators complying with § 63.489(d), shall comply with paragraph (f)(1) or (f)(2) of this section, as appropriate.

(1) Reports of the times of all periods recorded under § 63.491(e)(3) when the batch front-end process vent is diverted away from the control device through a bypass line.

(2) Reports of all occurrences recorded under § 63.491(e)(4) 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.

§ 63.493 Back-end process provisions.

Owners and operators of new and existing affected sources shall comply with the requirements in § 63.494 through § 63.500. Owners and operators of affected sources that produce only latex products, liquid rubber products, or products in a gas-phased polymerization reaction are not subject to the provisions of these sections. Section 63.494 contains residual organic HAP limitations. Compliance with these residual organic HAP limitations may be achieved by using either stripping technology, or by using control or recovery devices. If compliance with these limitations is achieved using stripping technology, the procedures to determine compliance are specified in § 63.495. If compliance with these limitations is achieved using control or recovery devices, the procedures to determine compliance are specified in § 63.496, and associated monitoring requirements are specified in § 63.497. Recordkeeping requirements are contained in § 63.498, and reporting requirements in § 63.499. Section 63.500 contains a limitation on carbon disulfide emissions from affected sources that produce styrene butadiene rubber using an emulsion process. Table 8 contains a summary of compliance alternative requirements for these sections.

§ 63.494 Back-end process provisions—residual organic HAP limitations.

(a) The monthly weighted average residual organic HAP content of all grades of elastomer processed, measured immediately after the stripping operation [or the reactor(s) if the plant has no stripper(s)] is completed, shall not exceed the limits provided in paragraphs (a)(1) through (a)(4) of this section, as applicable. Owners or operators shall comply with the requirements of this paragraph using either stripping technology or control/recovery devices.

(1) For styrene butadiene rubber produced by the emulsion process:

(i) A monthly weighted average of 0.40 kg styrene per megagram (Mg) latex for existing sources; and

(ii) A monthly weighted average of 0.23 kg styrene per Mg latex for new sources.

(2) For polybutadiene rubber and styrene butadiene rubber produced by the solution process:

(i) A monthly weighted average of 10 kg total organic HAP per Mg crumb rubber (dry weight) for existing sources; and

(ii) A monthly weighted average of 6 kg total organic HAP per Mg crumb rubber (dry weight) for new sources.

(3) For ethylene-propylene rubber produced by the solution process:

(i) A monthly weighted average of 8 kg total organic HAP per Mg crumb rubber (dry weight) for existing sources; and

(ii) A monthly weighted average of 5 kg total organic HAP per Mg crumb rubber (dry weight) for new sources.

(4) There are no back-end process operation residual organic HAP limitations for neoprene, Hypalon ™, nitrile butadiene rubber, butyl rubber, halobutyl rubber, epichlorohydrin elastomer, and polysulfide rubber.

(5) For EPPU that produce both an elastomer product with a residual organic HAP limitation listed in this section, and a product listed in paragraphs (a)(5) (i) through (iv) of this section, only the residual HAP content of the elastomer product with a residual organic HAP limitation shall be used in determining the monthly average residual organic HAP content.

(i) Resins;

(ii) Liquid rubber products;

(iii) Latexes from which crumb rubber is not coagulated; or

(iii) Elastomer products listed in paragraph (a)(4) of this section.

(b) If an owner or operator complies with the residual organic HAP limitations in paragraph (a) of this section using stripping technology, compliance shall be demonstrated in accordance with § 63.495. The owner or operator shall also comply with the recordkeeping provisions in § 63.498, and the reporting provisions in § 63.499.

(c) If an owner or operator complies with the residual organic HAP limitations in paragraph (a) of this section using control or recovery devices, compliance shall be

demonstrated using the procedures in § 63.496. The owner or operator shall also comply with the monitoring provisions in § 63.497, the recordkeeping provisions in § 63.498, and the reporting provisions in § 63.499.

§ 63.495 Back-end process provisions—procedures to determine compliance using stripping technology.

(a) If an owner or operator complies with the residual organic HAP limitations in § 63.494(a) using stripping technology, compliance shall be demonstrated using the periodic sampling procedures in paragraph (b) of this section, or using the stripper parameter monitoring procedures in paragraph (c) of this section. The owner or operator shall determine the monthly weighted average residual organic HAP content for each month in which any portion of the back-end of an elastomer production process is in operation. A single monthly weighted average shall be determined for all back-end process operations at the affected source.

(b) If the owner or operator is demonstrating compliance using periodic sampling, this demonstration shall be in accordance with paragraphs (b)(1) through (b)(5) of this section.

(1) The location of the sampling shall be in accordance with paragraph (d) of this section.

(2) The frequency of the sampling shall be in accordance with paragraphs (b)(2)(i) or (b)(2)(ii) of this section.

(i) If batch stripping is used, at least one representative sample is to be taken from every batch of elastomer produced, at the location specified in paragraph (d) of this section, and identified by elastomer type and by the date and time the batch is completed.

(ii) If continuous stripping is used, at least one representative sample is to be taken each operating day. The sample is to be taken at the location specified in paragraph (d) of this section, and identified by elastomer type and by the date and time the sample was taken.

(3) The residual organic HAP content in each sample is to be determined using specified methods.

(4) The quantity of material (weight of latex or dry crumb rubber) represented by each sample shall be recorded. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(5) The monthly weighted average shall be determined using the equation in paragraph (f) of this section. All samples taken and analyzed during the month shall be used in the determination of the monthly weighted average.

(c) If the owner or operator is demonstrating compliance using stripper parameter monitoring, this demonstration shall be in accordance with paragraphs (c)(1) through (c)(4) of this section.

(1) The owner or operator shall establish stripper operating parameter levels for each grade in accordance with § 63.505(e).

(2) The owner or operator shall monitor the stripper operating parameters at all times the stripper is in operation. Readings of each parameter shall be made at intervals no greater than 15 minutes.

(3) The residual organic HAP content for each grade shall be determined in accordance with either paragraph (c)(3)(i) or (c)(3)(ii) of this section.

(i) If during the processing of a grade in the stripper, all hourly average parameter values are in accordance with operating parameter levels established in paragraph (c)(1) of this section, the owner or operator shall use the residual organic HAP content determined in accordance with § 63.505(e)(1).

(ii) If during the processing of a grade in the stripper, the hourly average of any stripper monitoring parameter is not in accordance with an established operating parameter level, the residual organic HAP content shall be determined using the procedures in paragraphs (b)(1) and (b)(3) of this section.

(4) The monthly weighted average shall be determined using the equation in paragraph (f) of this section.

(d) The location of the sampling shall be in accordance with paragraph (d)(1) or (d)(2) of this section.

(1) For styrene butadiene rubber produced by the emulsion process, the sample shall be a sample of the latex taken at the location specified in either paragraph (d)(1)(i), (d)(1)(ii), or (d)(1)(iii) of this section.

(i) When the latex is not blended with other materials or latexes, the sample shall be taken at a location meeting all of the following criteria:

(A) After the stripping operation,

(B) Prior to entering the coagulation operations, and

(C) Before the addition of carbon black or oil extenders.

(ii) When two or more latexes subject to this subpart are blended, samples may be taken in accordance with either paragraph (d)(1)(ii) (A) or (B) of this section, at a location meeting the requirements of paragraphs (d)(1)(i) (A) through (C) of this section.

(A) Individual samples may be taken of each latex prior to blending, or

(B) A sample of the blended latex may be taken.

(iii) When a latex subject to this subpart is blended with a latex or material not subject to this subpart, a sample shall be taken of the latex prior to blending at a location meeting the requirements of paragraphs (d)(1)(i) (A) through (C) of this section.

(2) For styrene butadiene rubber produced by the solution process, polybutadiene rubber produced by the solution process, and ethylene-propylene rubber produced by the solution process, the sample shall be a sample of crumb rubber taken as soon as safe and feasible after the stripping operation, but no later than the entry point for the first unit operation following the stripper (e.g., the dewatering screen).

(e) Reserved.

(f) The monthly weighted average residual organic HAP content shall be calculated using Equation 26.

$$HAPCONT_{avg,wk} = \frac{\sum_{i=1}^{n}(C_i)(P_i)}{P_{wk}} \quad [Eq. 26]$$

where:

$HAPCONT_{avg,wk}$ = Monthly weighted average organic HAP content for all rubber processed at the affected source, kg organic HAP per Mg latex or dry crumb rubber.

n = Number of samples in the month.

C_i = Residual organic HAP content of sample i, determined in accordance with (b)(3) or (c)(3) of this section, kg organic HAP per Mg latex or dry crumb rubber.

P_i = Weight of latex or dry crumb rubber represented by sample i.

P_{wk} = Weight of latex or dry crumb rubber (Mg) processed in the month.

§ 63.496 Back-end process provisions—procedures to determine compliance using control or recovery devices.

(a) If an owner or operator complies with the residual organic HAP limitations in § 63.494(a) using control or recovery devices, compliance shall be demonstrated using the procedures in paragraphs (b) and (c) of this section. Previous test results conducted in accordance with paragraphs (b)(1) through (b)(8) of this section may be used to determine compliance in accordance with paragraph (c) of this section.

(b) Compliance shall be demonstrated using the provisions in paragraphs (b)(1) through (b)(10) of this section, as applicable.

(1) A test shall be conducted, the duration of which shall be in accordance with either paragraph

(b)(1)(i) or (b)(1)(ii) of this section, as appropriate.

(i) If the back-end process operations are continuous, the test shall consist of three separate one hour runs.

(ii) If the back-end process operations are batch, the test shall consist of three separate one-hour runs, unless the duration of the batch cycle is less than one-hour, in which case the run length shall equal the complete duration of the back-end process batch cycle.

(2) The test shall be conducted when the grade of elastomer product with the highest residual organic HAP content leaving the stripper is processed in the back-end operations.

(3) The uncontrolled residual organic HAP content in the latex or dry crumb rubber shall be determined in accordance with § 63.495(b)(1) and (b)(3). A separate sample shall be taken and analyzed for each test run. The sample shall be representative of the material being processed in the back-end operation during the test, and does not need to be taken during the test.

(4) The quantity of material (weight of latex or dry crumb rubber) processed during the test run shall be recorded. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(5) The inlet and outlet emissions from the control or recovery device shall be determined using the procedures in paragraphs (b)(5)(i) through (b)(5)(v) of this section, with the exceptions noted in paragraphs (b)(6) and (b)(7) of this section. The inlet and outlet emissions shall be determined when the material for which the uncontrolled residual organic HAP content is determined in accordance with paragraph (b)(3) of this section, is being processed in the equipment controlled by the control or recovery device.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites. Sampling sites shall be located at the inlet of the control or recovery device as specified in paragraphs (b)(5)(i)(A) or (b)(5)(i)(B) of this section, and at the outlet of the control or recovery device.

(A) The inlet sampling site shall be located at the exit of the back-end process unit operation before any opportunity for emission to the atmosphere, and before any control or recovery device.

(B) If back-end process vent streams are combined prior to being routed to control or recovery devices, the inlet sampling site may be for the combined stream, as long as there is no opportunity for emission to the atmosphere from any of the streams prior to being combined.

(ii) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(iii) To determine the inlet and outlet total organic HAP concentrations, the owner or operator shall use Method 18 or Method 25A 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 may be used. The minimum sampling time for each run shall be in accordance with paragraph (b)(1) of this section, during which either an integrated sample or grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals during the run, with the time between samples no greater than 15 minutes.

(iv) The mass rate of total organic HAP shall be computed using Equations 27 and 28.

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij}M_{ij}\right)Q_i \qquad \text{[Eq. 27]}$$

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj}M_{oj}\right)Q_o \qquad \text{[Eq. 28]}$$

where:

C_{ij}, C_{oj}=Concentration of sample component j of the gas stream at the inlet and outlet of the control or recovery device, respectively, dry basis, ppmv.

E_i, E_o=Mass rate of total organic HAP at the inlet and outlet of the control or recovery device, respectively, dry basis, kg per hour (kg/hr).

M_{ij}, M_{oj}=Molecular weight of sample component j of the gas stream at the inlet and outlet of the control or recovery device, respectively, gm/gm-mole.

Q_i, Q_o=Flow rate of gas stream at the inlet and outlet of the control or recovery device, respectively, dry standard m³/min.

K_2=Constant, 2.494×10^{-6} (ppmv)$^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

(v) Inlet and outlet organic HAP emissions for the run shall be calculated by multiplying the mass rate total inlet and outlet emissions determined in accordance with paragraph (b)(5)(iv) of this section by the duration of the run (in hours).

(6) If a back-end 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, the inlet and outlet emissions shall be determined in accordance with paragraphs (b)(6)(i) through (b)(6)(iv) of this section.

(i) The inlet organic HAP emissions for the back-end process unit operation shall be determined in accordance with paragraph (b)(5) of this section.

(ii) The owner or operator shall also measure total organic HAP (or TOC, minus methane and ethane) emissions in all process vent streams and primary and secondary fuels introduced into the boiler or process heater, using the procedures in paragraph (b)(5) of this section, with the exceptions noted in paragraphs (b)(6)(ii)(A) through (b)(6)(ii)(C) of this section.

(A) Selection of the location of the inlet sampling sites shall ensure the measurement of total organic HAP concentrations in all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(B) Paragraph (b)(5)(iii) of this section is applicable, except that TOC (minus methane and ethane) may be measured instead of total organic HAP.

(C) The mass rates shall be calculated in accordance with paragraph (b)(5)(iv) of this section, except that C_j at the inlet and outlet of the control device shall be the sum of all total organic HAP (or TOC, minus methane and ethane) concentrations for all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(iii) The control efficiency of the boiler or process heater shall be calculated using Equation 29.

$$R = \frac{\sum_{i=1}^{n} E_{inlet_i} - \sum_{i=1}^{n} E_{outlet_i}}{\sum_{i=1}^{n} E_{inlet_i}}(100) \qquad \text{(Eq. 29)}$$

where:

R=Control efficiency of boiler or process heater, percent.

E_{inlet}=Mass rate of total organic HAP or TOC (minus methane and ethane) for all process vent streams and primary and secondary fuels at the inlet to the boiler or process heater, kg organic HAP/hr or kg TOC/hr.

E_{outlet}=Mass rate of total organic HAP or TOC (minus methane and ethane) for all process vent streams and primary and secondary fuels at the outlet to the boiler or process heater, kg organic HAP/hr or kg TOC/hr.

(iv) The outlet total organic HAP emissions associated with the back-end process unit operation shall be calculated using the equation in paragraph (b)(8) of this section.

(7) An owner or operator is not required to conduct a source test to determine the outlet organic HAP emissions if any control device specified in paragraphs (b)(7)(i) through (b)(7)(v) of this section is used. For these devices, the inlet emissions associated with the back-end process unit operation shall be determined in accordance with paragraph (b)(5) of this section, and the outlet emissions shall be calculated using the equation in paragraph (b)(8) of this section.

(i) A flare, provided the owner or operator complies with the flare provisions in § 63.11(b) of subpart A. The compliance determination required by § 63.6(h) of subpart A shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions. Compliance determinations are not necessary for flares already deemed to be in compliance with the flare provisions in § 63.11(b) of subpart A.

(ii) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(iii) A boiler or process heater into which the process vent stream is introduced with the primary fuel or is used as the primary fuel.

(iv) 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.

(v) 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.

(8) If one of the control devices listed in paragraph (b)(6) or (b)(7) of this section is used, the outlet emissions shall be calculated using Equation 30.

$$E_o = E_i(1-R) \qquad [Eq. 30]$$

where:

E_o=Mass rate of total organic HAP at the outlet of the control or recovery device, respectively, dry basis, kg/hr.

E_i=Mass rate of total organic HAP at the inlet of the control or recovery device, respectively, dry basis, kg/hr, determined using the procedures in paragraph (b)(5)(iv) of this section.

R=Control efficiency of control device, as specified in paragraph (b)(8) (i), (ii), or (iii) of this section.

(i) If a back-end 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, the control efficiency of the boiler or process heater shall be determined using the procedures in paragraph (b)(6)(iii) of this section.

(ii) If a back-end process vent is controlled using a control device specified in paragraph (b)(7) (i), (ii), (iii), or (v) of this section, the control device efficiency shall be assumed to be 98 percent.

(iii) If a back-end process vent is controlled using a control device specified in paragraph (b)(7)(iv) of this section, the control device efficiency shall be the efficiency determined in the previous performance test.

(c) Compliance shall be determined using the procedures in this paragraph.

(1) For each test run, the residual organic HAP content, adjusted for the control or recovery device emission reduction, shall be calculated using Equation 31.

Where:

$$HAPCONT_{run} = \frac{(C)(P) - (E_{i,run}) + (E_{o,run})}{(P)} \qquad [Eq. 31]$$

$HAPCONT_{run}$=Factor, kg organic HAP per kg elastomer (latex or dry crumb rubber).

C=Total uncontrolled organic HAP content, determined in accordance with paragraph (b)(3) of this section, kg organic HAP per kg latex or dry crumb rubber.

P=Weight of latex or dry crumb rubber processed during test run.

$E_{i,run}$=Mass rate of total organic HAP at the inlet of the control or recovery device, respectively, dry basis, kg per test run.

$E_{o,run}$=Mass rate of total organic HAP at the outlet of the control or recovery device, respectively, dry basis, kg per test run.

(2) A facility is in compliance if the average of the organic HAP contents calculated for all three test runs is below the residual organic HAP limitations in § 63.494(a).

(d) An owner or operator complying with the residual organic HAP limitations in § 63.494(a) using a control or recovery device, shall redetermine the compliance status through the requirements described in paragraph (b) of this section whenever process changes are made. The owner or operator shall report the results of the redetermination in accordance with § 63.499(d). For the purposes of this section, a process change is any action that would reasonably be expected to impair the performance of the control or recovery device. For the purposes of this section, the production of an elastomer with a residual organic HAP content greater than the residual organic HAP content of the elastomer used in the compliance demonstration constitutes a process change, unless the overall effect of the change is to reduce organic HAP emissions from the source as a whole. Other examples of process changes may include changes in production capacity or production rate, or removal or addition of equipment. For the purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; or changes that reduce the residual organic HAP content of the elastomer.

§ 63.497 Back-end process provisions—monitoring provisions for control and recovery devices.

(a) An owner or operator complying with the residual organic HAP limitations in § 63.494(a) using control

or recovery devices, or a combination of stripper technology and control or recovery devices, shall install the monitoring equipment specified in paragraphs (a)(1) through (a)(6) 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, the 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, the 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, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity 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 primary fuel or are used as the primary fuel is exempt from this requirement.

(4) For an absorber, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(5) For a condenser, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder is required.

(6) For a carbon adsorber, an integrating regeneration stream flow monitoring device having an accuracy of at least ±10 percent, capable of recording the total regeneration stream 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 are required.

(b) An owner or operator may request approval to monitor parameters other than those required by paragraph (a) of this section. The request shall be submitted according to the procedures specified in § 63.506(f) or (g). Approval shall be requested if the owner or operator:

(1) Uses a control or recovery device other than those listed in paragraph (a) of this section; or

(2) Uses one of the control or recovery devices listed in paragraph (a) of this section, but seeks to monitor a parameter other than those specified in paragraph (a) of this section.

(c) The owner or operator shall establish a level, defined as either a maximum or minimum operating parameter, that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a)(1) through (a)(6) of this section. This level is determined in accordance with § 63.505. The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application, as required in § 63.506 (e)(5) or (e)(8), respectively. The owner or operator shall operate control and recovery devices above or below the established level, as required, to ensure continued compliance with the standard.

(d) The owner or operator of a controlled back-end process vent using a vent system that contains bypass lines that could divert a vent stream away from the control or recovery device used to comply with § 63.494(a) shall comply with paragraph (d)(1), (d)(2), or (d)(3) 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) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.498(d)(5)(iii). 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 non-diverting 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 non-diverting position and the vent stream is not diverted through the bypass line.

(3) Continuously monitor the bypass line damper or valve position using computer monitoring and record any periods when the position of the bypass line valve has changes as specified in § 63.498(d)(5)(iv).

§ 63.498 Back-end process provisions—recordkeeping.

(a) Each owner or operator shall maintain the records specified in paragraphs (a)(1) through (a)(3) of this section for each back-end process operation at an affected source.

(1) The type of elastomer product processed in the back-end operation.

(2) The type of process (solution process, emulsion process, etc.)

(3) If the back-end process operation is subject to an emission limitation in § 63.494(a), whether compliance will be achieved by stripping technology, or by control or recovery devices.

(b) Each owner or operator of a back-end process operation using stripping technology to comply with an emission limitation in § 63.494(a), and demonstrating compliance using the periodic sampling procedures in § 63.495(b), shall maintain the records specified in paragraph (b)(1), and in paragraph (b)(2) or (b)(3) of this section, as appropriate.

(1) Records associated with each sample taken in accordance with § 63.495(b). These records shall include the following for each sample:

(i) Elastomer type.

(ii) The date and time the sample was collected.

(iii) The corresponding quantity of elastomer processed over the time period represented by the sample. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(A) For emulsion processes, this quantity shall be the weight of the latex leaving the stripper.

(B) For solution processes, this quantity shall be the crumb rubber dry weight of the rubber leaving the stripper.

(iv) The organic HAP content of each sample.

(2) The monthly weighted average organic HAP content, calculated in accordance with § 63.495(f).

(3) If the organic HAP contents for all samples analyzed during a month are below the appropriate level in § 63.494(a), the owner or operator may record that all samples were in accordance with the residual organic HAP limitations in § 63.494(a), rather than calculating and recording a monthly weighted average.

(c) Each owner or operator of a back-end process operation using stripping technology to comply with an emission limitation in § 63.494(a), and demonstrating compliance using the stripper parameter monitoring procedures in § 63.495(c), shall maintain the records specified in paragraphs (c)(1) through (c)(3) of this section.

(1) Records associated with the initial, and subsequent, determinations of the organic HAP content of each grade of elastomer produced. These records shall include the following:

(i) An identification of the elastomer type and grade;

(ii) The results of the residual organic HAP analyses, conducted in accordance with § 63.505(e)(1);

(iii) The stripper monitoring parameters required to be established in § 63.495(c)(1).

(iv) If re-determinations are made of the organic HAP content, and re-establishment of the stripper monitoring parameters, records of the initial determination are no longer required to be maintained.

(2) Records associated with each grade or batch. These records shall include the following for each grade or batch:

(i) Elastomer type and grade;

(ii) The quantity of elastomer processed;

(A) For emulsion processes, this quantity shall be the weight of the latex leaving the stripper.

(B) For solution processes, this quantity shall be the crumb rubber dry weight of the crumb rubber leaving the stripper.

(iii) The hourly average of all stripper parameter results;

(iv) If one or more hourly average stripper monitoring parameters is not in accordance with the established levels, the results of the residual organic HAP analysis.

(3) The monthly weighted average organic HAP content, calculated in accordance with § 63.495(f).

(d) Each owner or operator of a back-end process operation using control or recovery devices to comply with an organic HAP emission limitation in § 63.494(a) shall maintain the records specified in paragraphs (d)(1) through (d)(5) of this section.

(1) Results of the testing required by § 63.496(b). These results shall include the following, for each of the three required test runs:

(i) The uncontrolled residual organic HAP content in the latex or dry crumb rubber, as required to be determined by § 63.496(b)(3), including the test results of the analysis;

(ii) The total quantity of material (weight of latex or dry crumb rubber) processed during the test run, recorded in accordance with § 63.496(b)(4),

(iii) The organic HAP emissions at the inlet and outlet of the control or recovery device, determined in accordance with § 63.496 (b)(5) through (b)(8), including all test results and calculations,

(iv) The residual organic HAP content, adjusted for the control or recovery device emission reduction, determined in accordance with § 63.496(c)(1).

(2) The operating parameter level established in accordance with § 63.497(c), along with supporting documentation.

(3) The following information when using a flare:

(i) The 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; and

(iii) All periods during the compliance determination when the pilot flame is absent.

(4) When using a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(5) Each owner or operator using a control or recovery device shall keep the following records up-to-date and readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under § 63.497(a) or specified by the Administrator in accordance with § 63.497(b). For flares, the hourly records and records of pilot flame outages shall be maintained in place of continuous records.

(ii) Records of the daily average value of each continuously monitored parameter for each operating day, except as provided in paragraphs (d)(5)(ii)(D) and (d)(5)(ii)(E) of this section.

(A) 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 (d)(5)(ii)(B) 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.

(B) 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.

(C) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status in § 63.506(e)(8) or (e)(5). It may be from midnight to midnight or another 24-hour period.

(D) If all recorded values for a monitored parameter during an operating day are below the maximum, or above the minimum, level established in the Notification of Compliance Status in § 63.506(e)(5) or in the operating permit, the owner or operator may record that all values were below the maximum or above the minimum level, rather than calculating and recording a daily average for that operating day.

(E) 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. The records specified in this paragraph are not required during periods when emissions are not routed to the flare, or during startups, shutdowns, or malfunctions when the owner or operator complies with the applicable requirements of subpart A of this part, as directed by § 63.506(b)(1).

(iii) Hourly records of whether the flow indicator specified under § 63.497(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(iv) Where a seal mechanism is used to comply with § 63.497(d)(2), or where computer monitoring of the position of the bypass damper or valve is used to comply with § 63.497(d)(3), hourly records of flow are not required.

(A) For compliance with § 63.497(d)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record instances when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(B) For compliance with § 63.497(d)(3), the owner or operator shall record the times of all periods when the bypass line damper or valve position has changed.

§ 63.499 Back-end process provisions—reporting.

(a) The owner or operator of an affected source with back-end process operations shall submit the information required in § 63.498(a) as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(b) Each owner or operator of a back-end process operation using stripping to comply with an emission limitation in § 63.494(a), and demonstrating compliance by stripper parameter monitoring, shall submit reports as specified in paragraphs (b)(1) and (b)(2) of this section.

(1) As part of the Notification of Compliance Status specified in

§ 63.506(e)(5), the owner or operator shall submit the information specified in § 63.498(c)(1).

(2) For organic HAP content/stripping monitoring parameter re-determinations, and the addition of new grades, the information specified in § 63.498(c)(1) shall be submitted in the next periodic report specified in § 63.506(e)(6).

(c) Each owner or operator of a back-end process operation control or recovery devices that must comply with an emission limitation in § 63.494(a) shall submit the information specified in paragraphs (c)(1) through (c)(3) of this section as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(1) The residual organic HAP content, adjusted for the control or recovery device emission reduction, determined in accordance with § 63.496(c)(1), for each test run in the compliance determination.

(2) The operating parameter level established in accordance with § 63.497(c), along with supporting documentation.

(3) The information specified in § 63.498(d)(3) regarding flares and § 63.498(d)(4) regarding boilers and process heaters, if applicable.

(d) Whenever a process change, as defined in § 63.496(d), is made that causes the redetermination of the compliance status for the back-end process operations, the owner or operator shall submit a report within 180 calendar days after the process change as specified in § 63.506(e)(7)(iii). The report shall include:

(1) A description of the process change;

(2) The results of the redetermination of the compliance status, determined in accordance with § 63.496(b), and recorded in accordance with § 63.498(d)(1), and

(3) Documentation of the re-establishment of a parameter level for the control or recovery device, defined as either a maximum or minimum operating parameter, that indicates proper operation of the control or recovery device, in accordance with § 63.497(c) and recorded in accordance with § 63.498(d)(2).

(e) If an owner or operator uses a control or recovery device other than those listed in § 63.497(a) or requests approval to monitor a parameter other than those specified in § 63.497(a), the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under § 63.506(e)(3) or (e)(8). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report or Operating Permit application.

§ 63.500 Back-end process provisions—carbon disulfide limitations for styrene butadiene rubber by emulsion processes.

(a) Owners or operators of sources subject to this subpart producing styrene butadiene rubber using an emulsion process shall operate the process such that the carbon disulfide concentration in each crumb dryer exhausts shall not exceed 45 ppmv.

(1) The owner or operator shall develop standard operating procedures for the addition of sulfur containing shortstop agents to ensure that the limitation in paragraph (a) of this section is maintained. There shall be a standard operating procedure representing the production of every grade of styrene butadiene rubber produced at the affected source using a sulfur containing shortstop agent.

(2) A validation of each standard operating procedure shall be conducted in accordance with paragraph (c) of this section, except as provided in paragraph (b) of this section, to demonstrate compliance with the limitation in paragraph (a) of this section.

(3) The owner or operator shall operate the process in accordance with a validated standard operating procedure at all times when styrene butadiene rubber is being produced using a sulfur containing shortstop agent. If a standard operating procedure is changed, it must be re-validated.

(4) Records specified in paragraph (d) of this section shall be maintained.

(5) Reports shall be submitted in accordance with paragraph (e) of this section.

(b) Crumb dryers that are vented to a combustion device are not subject to the provisions in this section.

(c) The owner or operator shall validate each standard operating procedure to determine compliance with the limitation in paragraph (a) of this section using the testing procedures in paragraph (c)(1) of this section or engineering assessment, as described in paragraph (c)(2) of this section.

(1) The owner or operator shall conduct a performance test using the procedures in paragraphs (c)(1)(i) through (c)(1)(iii) of this section to demonstrate compliance with the carbon disulfide concentration limitation in paragraph (a) of this section. One test shall be conducted for each standard operating procedure.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as required, shall be used for selection of the sampling sites.

(ii) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as required.

(iii) To determine compliance with the carbon disulfide concentration limit in paragraph (a) of this section, the owner or operator shall use Method 18 or Method 25A of 40 CFR part 60, appendix A, to measure carbon disulfide. 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 carbon disulfide concentration:

(A) 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.

(B) The concentration of carbon disulfide shall be calculated using Equation 32.

$$C_{CS2} = \frac{\sum_{i=1}^{n} (C_{CS2i})}{n} \quad \text{[Eq. 32]}$$

where:

C_{CS2}=Concentration of carbon disulfide, dry basis, ppmv.

C_{CS2i}=Concentration of carbon disulfide of sample i, dry basis, ppmv.

n=Number of samples in the sample run.

(2) The owner or operator shall use engineering assessment to demonstrate compliance with the carbon disulfide concentration limitation in paragraph (a) of this section. Engineering assessment includes, but is not limited to, the following:

(i) Previous test results, provided the tests are representative of current operating practices at the process unit.

(ii) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(iii) Flow rate and/or carbon disulfide emission rate specified or implied within an applicable permit limit.

(iv) 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:

(A) Use of material balances,

(B) Estimation of flow rate based on physical equipment design such as pump or blower capacities, and

(C) Estimation of carbon disulfide concentrations based on saturation conditions.

(v) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(d) Owners and operators of sources subject to this section shall maintain the records specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Documentation of the results of the testing required by paragraph (c) of this section.

(2) A description of the standard operating procedure used during the testing. This description shall include, at a minimum, an identification of the sulfur containing shortstop added to the styrene butadiene rubber prior to the dryers, an identification of the point and time in the process where the sulfur containing shortstop is added, and an identification of the amount of sulfur containing shortstop added per unit of latex.

(e) Owners and operators shall submit the reports as specified in paragraphs (e)(1) and (e)(2) of this section.

(1) As part of the Notification of Compliance Status specified in § 63.506(e)(5), documentation of the results of the testing required by paragraph (c) of this section.

(2) If changes are made in the standard operating procedure used during the compliance test and recorded in accordance with paragraph (d)(2) of this section, and if those changes have the potential for increasing the concentration of carbon disulfide in the crumb dryer exhaust to above the 45 ppmv limit, the owner or operator shall:

(i) Redetermine compliance using the test procedures in paragraph (c) of this section, and

(ii) Submit documentation of the testing results in the next periodic report required by § 63.506(e)(6).

§ 63.501 Wastewater provisions.

(a) For each process wastewater stream originating at an affected source, except those wastewater streams exempted by paragraph (c) of this section, the owner or operator shall comply with the requirements of §§ 63.131 through 63.148 of subpart G, with the differences noted in paragraphs (a)(1) through (a)(11) of this section, for the purposes of this subpart.

(1) When the determination of equivalence criteria in § 63.102(b) of subpart F is referred to in §§ 63.132, 63.133, and 63.137 of subpart G, the provisions in § 63.6(g) of subpart A shall apply for the purposes of this subpart.

(2) When the storage tank requirements contained in §§ 63.119 through 63.123 of subpart G are referred to in §§ 63.132 through 63.148 of subpart G, §§ 63.119 through 63.123 of subpart G are applicable, with the exception of the differences referred to in § 63.484, for the purposes of this subpart.

(3) When the Implementation Plan requirements contained in § 63.151 in subpart G are referred to in § 63.146 of subpart G, the owner or operator of an affected source subject to this subpart need not comply.

(4) When the Initial Notification Plan requirements in § 63.151(b) of subpart G are referred to in § 63.146 of subpart G, the owner or operator of an affected source subject to this subpart need not comply.

(5) When the owner or operator requests to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions referred to in § 63.151(g) of subpart G, or the owner or operator submits an operating permit application instead of an Implementation Plan as specified in § 63.152(e) of subpart G, as referred to in § 63.146(a)(3) of subpart G, § 63.506(f) and § 63.506(e)(8), respectively, shall apply for the purposes of this subpart.

(6) When the Notification of Compliance Status requirements contained in § 63.152(b) of subpart G are referred to in §§ 63.146 and 63.147 of subpart G, the Notification of Compliance Status requirements contained in § 63.506(e)(5) shall apply for the purposes of this subpart.

(7) When the Periodic Report requirements contained in § 63.152(c) of subpart G are referred to in §§ 63.146 and 63.147 of subpart G, the Periodic Report requirements contained in § 63.506(e)(6) shall apply for the purposes of this subpart.

(8) When the term "range" is used in § 63.143(f) of subpart G, the term "level" shall be used instead, for the purposes of this subpart. This level shall be determined using the procedures specified in § 63.505.

(9) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(e)(2) of subpart G which specify that owners or operators shall demonstrate that 95 percent of the mass of HAP, as listed in Table 9 of subpart G, is removed from the wastewater stream or combination of wastewater streams by the procedure specified in § 63.145(i) of subpart G for a biological treatment unit.

(10) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(j)(3) of subpart G which specify that owners or operators shall use the procedures specified in Appendix C of subpart G to demonstrate compliance when using a biological treatment unit.

(11) When the provisions of § 63.139(c)(1)(ii) of subpart G or the provisions of § 63.145(e)(2)(ii)(B) specif that Method 18 shall be used, Method 18 or Method 25A may be used for the purposes of this subpart. The use of Method 25A shall comply with paragraphs (a)(11)(i) and (a)(11)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A 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.

(b) Except for those streams exempted by paragraph (c) of this section, the owner or operator of each affected source shall comply with the requirements for maintenance wastewater in § 63.105 of subpart F, except that when § 63.105(a) refers to "organic HAPs," the definition of organic HAP in § 63.482 shall apply for the purposes of this subpart.

(c) The following wastewater streams are exempt from the requirements of paragraphs (a) and (b) of this section:

(1) Back-end wastewater streams originating from equipment that only produces latex products.

(2) Back-end wastewater streams at affected sources that are subject to a residual organic HAP limitation in § 63.494(a), and that are complying with these limitations through the use of stripping technology.

(d) The compliance date for the affected source subject to the provisions of this section is specified in § 63.481.

§ 63.502 Equipment leak provisions.

(a) The owner or operator of each affected source, shall comply with the requirements of subpart H of this part for all equipment in organic HAP service, with the exception noted in paragraphs (b) through (h) of this section.

(b) Surge control vessels and bottoms receivers described in paragraphs (b)(1) through (b)(6) of this section are exempt from the requirements contained in § 63.170 of subpart H.

(1) Surge control vessels and bottoms receivers containing styrene-butadiene latex;

(2) Surge control vessels and bottoms receivers containing other latex products and located downstream of t stripping operations;

(3) Surge control vessels and bottoms receivers containing high conversion latex products;

(4) Surge control vessels and bottoms receivers located downstream of the stripping operations at affected sources subject to the back-end residual organic HAP limitation located in § 63.494, that are complying through the use of stripping technology, as specified in § 63.495;

(5) Surge control vessels and bottoms receivers containing styrene;

(6) Surge control vessels and bottoms receivers containing acrylamide; and

(7) Surge control vessels and bottoms receivers containing epichlorohydrin.

(c) The compliance date for the equipment leak provisions in this section is provided in § 63.481.

(d) For an affected source producing polybutadiene rubber and styrene-butadiene rubber by solution, the (1) indications of liquids dripping, as defined in subpart H of this part, from bleed ports in pumps and agitator seals in light liquid service, shall not be considered a leak. For the purposes of this subpart, a "bleed port" is a technologically-required feature of the pump or seal whereby polymer fluid used to provide lubrication and/or cooling of the pump or agitator shaft exits the pump, thereby resulting in a visible dripping of fluid.

(e) Affected sources subject to subpart I of this part shall continue to comply with subpart I until the compliance date specified in § 63.481. After the compliance date for this section, the source shall be subject to subpart H of this part and shall no longer be subject to subpart I.

(f) The owner or operator of each affected source shall comply with the requirements of § 63.104 of subpart F for heat exchange systems.

(g) Owners and operators of an affected source subject to this subpart are not required to submit the Initial Notification required by § 63.182(a)(1) and § 63.182(b) of subpart H.

(h) The Notification of Compliance Status required by § 63.182(a)(2) and § 63.182(c) of subpart H shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in § 63.481 for the equipment leak provisions. The notification can be submitted as part of the Notification of Compliance Status required by § 63.506(e)(5).

(i) The Periodic Reports required by § 63.182(a)(3) and § 63.182(d) of subpart H shall be submitted as part of the Periodic Reports required by § 63.506(e)(6).

§ 63.503 Emissions averaging provisions.

(a) This section applies to owners or operators of existing affected sources who seek to comply with § 63.483(b) by using emissions averaging rather than following the provisions of §§ 63.484, 63.485, 63.486, 63.494, and 64.488.

(1) The following emission point limitations apply to the use of these provisions:

(i) All emission points included in an emissions average shall be from the same affected source. There may be an emissions average for each individual affected source located at a plant site.

(ii)(A) If a plant site has only one affected source for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed to be included in the emission average is limited to twenty. This number may be increased by up to five additional points if pollution prevention measures are used to control five or more of the emission points included in the emissions average.

(B) If a plant site has two or more affected sources for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions average for those affected sources is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions averages.

(2) Compliance with the provisions of this section can be based on either organic HAP or TOC.

(3) For the purposes of these provisions, whenever Method 18 is specified within the paragraphs of this section or is specified by reference through provisions outside this section, Method 18 or Method 25A may be used. The use of Method 25A shall comply with paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A 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.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all of the information required in § 63.506(e)(4) for all emission points to be included in an emissions average.

(c) Paragraphs (c)(1) through (c)(4) of this section describe the emission points that 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. Paragraph (c)(5) of this section discusses the use of pollution prevention in generating emissions averaging credits.

(1) Storage vessels, batch front-end process vents, aggregate batch vent streams, continuous front-end process vents, and process wastewater streams that are determined to be Group 2 emission points.

(2) Storage vessels, continuous front-end process vents, and process wastewater steams that are determined to be Group 1 emission points and 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) Batch front-end process vents and aggregate batch vent streams that are determined to be Group 1 emission points and that are controlled to a level more stringent than the applicable standard.

(4) Back-end process operations that are controlled such that organic HAP emissions from the back-end process operation are less than would be achieved by meeting the residual organic HAP limits in § 63.494. For the purposes of the emission averaging provisions in this section, all back-end process operations at an affected facility shall be considered a single emission point.

(5) The percent reduction for any storage vessel, batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, and process wastewater stream shall be determined using the procedures specified in paragraph (j) of this section.

(i) For a Group 1 storage vessel, batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, or process wastewater stream, the pollution prevention measure must reduce emissions more than if the reference control technology or standard had been applied to the emission point instead of the pollution prevention measure, except as provided in paragraph (c)(5)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 storage vessel,

batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, or process wastewater stream, the pollution prevention measure alone does not have to reduce emissions more than the reference control technology or standard, but the combination of the pollution prevention measure and other controls must reduce emissions more than if the applicable reference control technology or standard had been applied instead of the pollution prevention measure.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990 cannot be used to generate credits unless the level of control was increased after November 15, 1990. In this case, credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points, as identified in paragraph (c)(2) of this section, that are controlled by a reference control technology cannot be used to generate credits 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.

(3) Emission points on nonoperating EPPU cannot be used to generate credits. EPPU that are shutdown cannot be used to generate credits or debits.

(4) Maintenance wastewater cannot be used to generate credits. Wastewater streams treated in biological treatment units cannot be used to generate credits. 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 cannot be used to generate credits, unless the level of control has been increased after November 15, 1990 to a level 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 emission point is subsequently made subject to a State or Federal rule other than this subpart, the emission point can continue to generate emissions averaging credit for the purpose of complying with the previously approved emissions average.

(e) For all emission points included in an emissions average, the owner or operator shall perform the following tasks:

(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 or standard for those emission points. The Group 1 emission points are identified in paragraphs (c)(2) through (c)(4) of this section. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 and 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 emissions average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Emissions Averaging 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 § 63.506(e)(6). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.506(e)(6)(vi)(D)(2).

(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 during the following periods:

(1) Emissions during periods of startup, shutdown, and malfunction as described in the Startup, Shutdown, and Malfunction Plan.

(2) Emissions during periods of monitoring excursions, as defined in § 63.505 (g) or (h). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

(i) No credits would be assigned to th 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 (i) 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 applicable reference control technology or standard and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) Source-wide debits shall be calculated using Equation 33. Debits and all terms of the equation are in units of megagrams per month (Mg/month).

$$\text{Debits} = \sum_{i=1}^{n}\left(ECFEPV_{iACTUAL} - (0.02)ECFEPV_{iu}\right) + \sum_{i=1}^{n}\left(ES_{iACTUAL} - (0.05)ES_{iu}\right) + \left(EBEP_{ACTUAL} - EBEP_{c}\right) + \sum_{i=1}^{n}\left(EWW_{iACTUAL} - EWW_{ic}\right) + \sum_{i=1}^{n}\left(EBFEPV_{iACTUAL} - (0.1)EBFEPV_{iu}\right) + \sum_{i=1}^{n}\left(EABV_{iACTUAL} - (0.1)EABV_{iu}\right) \quad \text{[Eq. 33]}$$

where:

$ECFEPV_{iACTUAL}$=Emissions from each Group 1 continuous front-end process vent i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $ECFEPV_{iACTUAL}$ is calculated according to paragraph (g)(2)(iii) of this section.

$(0.02)ECFEPV_{iu}$=Emissions from each Group 1 continuous front-end process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $ECFEPV_{iu}$ is calculated according to paragraph (g)(2)(ii) 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 applicable reference control technology or standard. $ES_{iACTUAL}$ is calculated according to paragraph (g)(3) of this section.

$(0.05)ES_{iu}$=Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. ES_{iu} is calculated according to paragraph (g)(3) of this section.

$EBEP_{ACTUAL}$=Emissions from back-end process operations that do not meet the residual organic HAP limits in § 63.494. $EBEP_{ACTUAL}$ is calculated according to paragraph (g)(4)(i) of this section.

$EBEP_c$=Emissions from back-end process operations if the residual organic HAP limits in § 63.494(a) were met. $EBEP_c$ is calculated according to paragraph (g)(4)(ii) 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 applicable reference control technology. $EWW_{2iACTUAL}$ is calculated according to paragraph (g)(5) of this section.

EWW_{ic}=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. EWW_{ic} is calculated according to paragraph (g)(5) of this section.

$EBFEPV_{iACTUAL}$=Emissions from each Group 1 batch front-end process vent stream i that is uncontrolled or is controlled to a level less stringent than the reference control technology. $EBFEPV_{iACTUAL}$ is calculated according to paragraph (g)(6)(ii) of this section.

$(0.1)EBFEPV_{iu}$=Emissions from each Group 1 batch front-end process vent i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. $EBFEPV_{iu}$ is calculated according to paragraph (g)(6)(i) of this section.

$EABV_{iACTUAL}$=Emissions from each Group 1 aggregate batch vent stream i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EABV_{iACTUAL}$ is calculated according to paragraph (g)(7)(iii) of this section.

$(0.1)EABV_{iu}$=Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EABV_{iu}$ is calculated according to paragraph (g)(7)(ii) of this section.

n=The number of emission points being included in the emissions average.

(2) Emissions from continuous front-end process vents shall be calculated as follows:

(i) For purposes of determining continuous front-end 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 continuous front-end process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere. Method 1 or 1A of 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) $ECFEPV_{iu}$ for each continuous front-end process vent i shall be calculated using Equation 34.

$$ECFEPV_{iu} = \left(2.494\times10^{-9}\right)Qh\left(\sum_{j=1}^{n}C_jM_j\right) \quad \text{[Eq. 34]}$$

where:

$ECFEPV_{iu}$=Uncontrolled continuous front-end process vent emission rate from continuous front-end process vent i, Mg/month.

Q=Vent stream flow rate, dry standard m^3/min, measured using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the continuous front-end process vent, hr/month.

C_j=Concentration, ppmv, dry basis, of organic HAP j as measured by Method 18 or Method 25A of 40 CFR part 60, appendix A.

M_j=Molecular weight of organic HAP j, gram per gram-mole.
n=Number of organic HAP in stream.

(A) The values of Q and C_j shall be determined during a performance test conducted under representative operating conditions. The values of Q and C_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 and C_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C_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 $ECFEPV_{iACTUAL}$:

(A) If the continuous front-end process vent is not controlled by a control device or pollution prevention measure, $ECFEPV_{iACTUAL} = ECFEPV_{iu}$, where $ECFEPV_{iu}$ is calculated according to the procedures contained in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous front-end process vent is controlled using a control device or a pollution prevention measure achieving less than 98-percent reduction, $ECFEPV_{iACTUAL}$ is calculated using Equation 35.

$$ECFEPV_{iACTUAL} = ECFEPV_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 35]$$

Where:

$ECFEPV_{iACTUAL}$ = Emissions from each Group 1 continuous front-end process vent i that is uncontrolled or is controlled to a level less stringent than the reference control technology.

$ECFEPV_{iu}$ = Uncontrolled continuous front-end process vent emission rate from continuous front-end process vent i, Mg/month.

(1) The percent reduction shall be measured according to the procedures in § 63.116 of subpart G if a combustion control device is used. For a flare meeting the criteria in § 63.116(a) of subpart G, or a boiler or process heater meeting the criteria in § 63.116(b) of subpart G, the percent reduction shall be 98 percent. If a noncombustion 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 continuous front-end process vents, product recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating $ECFEPV_{iACTUAL}$. The sampling site for measurement of uncontrolled emissions is after the final product recovery device. However, as provided in § 63.113(a)(3) of subpart G, a Group 1 continuous front-end process vent may add sufficient product recovery to raise the TRE index value above 1.0, thereby becoming a Group 2 continuous front-end process vent. Such a continuous front-end process vent would not be a Group 1 continuous front-end process vent and would, therefore, not be included in determining debits under this paragraph.

(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 using the procedure specified in § 63.150(g)(3) of subpart G.

(4) Emissions from back-end process operations shall be calculated as follows:

(i) Equation 36 shall be used to calculate $EBEP_{ACTUAL}$:

$$EBEP_{ACTUAL} = (1{,}000)\sum_{i=1}^{n}(C_i)(P_i) \quad [Eq. 36]$$

where:

$EBEP_{ACTUAL}$ = Actual emissions from back-end process operations, Mg/month.

C_i = Residual organic HAP content of sample i, kg organic HAP per Mg latex or dry crumb rubber.

P_i = Weight of latex or dry crumb rubber leaving the stripper represented by sample i, Mg.

(ii) Equation 37 shall be used to calculate $EBEP_c$:

$$EBEP_C = (1{,}000)(HAP_{limit})(P_{month}) \quad [Eq. 37]$$

where:

$EBEP_c$ = Emissions from back-end process operations if the residual organic HAP limits in § 63.494(a) were met, Mg/month.

HAP_{limit} = Residual organic HAP limits in § 63.494 of this subpart, kg organic HAP per Mg latex or dry crumb rubber.

P_{month}=Weight of latex or dry crumb rubber leaving the stripper in the month, Mg.

(5) Emissions from wastewater shall be calculated using the procedures specified in § 63.150(g)(5) of subpart G.

(6) Emissions from batch front-end process vents shall be calculated as follows:

(i) $EBFEPV_{iu}$ for each batch front-end process vent i shall be calculated using the procedures specified in § 63.488(b).

(ii) The following procedures and equations shall be used to determine $EBFEPV_{iACTUAL}$:

(A) If the batch front-end process ve is not controlled by a control device o pollution prevention measure,

$EBFEPV_{iACTUAL}$=$EBFEPV_{iu}$, where $EBFEPV_{iu}$ is calculated according to the procedures in § 63.488(b).

(B) If the batch front-end process vent is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction for the batch cycle, calculate $EBFEPV_{iACTUAL}$ using Equation 38, where percent reduction is for the batch cycle.

$$EBFEPV_{iACTUAL} = EBFEPV_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 38]}$$

(*1*) The percent reduction for the batch cycle shall be measured according to the procedures in § 63.490(c)(2).

(*2*) The percent reduction for control devices shall be calculated according to the procedures in § 63.490 (c)(2)(i) through (c)(2)(iii).

(*3*) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(*7*) Emissions from aggregate batch vents shall be calculated as follows:

(i) For purposes of determining aggregate batch vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be before any control device and before discharge to the atmosphere. Method 1 or 1A of 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) $EABV_{iu}$ for each aggregate batch vent i shall be calculated using Equation 39.

$$EABV_{iu} = \left(2.494 \times 10^{-7}\right) Qh \left(\sum_{j=1}^{n} C_j M_j\right) \quad \text{[Eq. 39]}$$

where:

$EABV_{iu}$=Uncontrolled aggregate batch vent emission rate from aggregate batch vent i, Mg/month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present from the aggregate batch vent stream, hr/month.

C_j=Concentration, ppmv, dry basis, of organic HAP j as measured by Method 18 of 40 CFR part 60, appendix A.

M_j=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in the stream.

(A) The values of Q and C_j shall be determined during a performance test conducted under representative operating conditions. The values of Q and C_j shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(7)(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 and C_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C_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 $EABV_{iACTUAL}$:

(A) If the aggregate batch vent is not controlled by a control device or pollution prevention measure, $EABV_{iACTUAL}$ = $EABV_{iu}$, where $EABV_{iu}$ is calculated according to the procedures in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction, calculate $EABV_{iACTUAL}$ using Equation 40.

$$EABV_{iACTUAL} = EABV_{iu} \times \left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 40]}$$

(*1*) The percent reduction for control devices shall be determined according to the procedures in § 63.490(e).

(*2*) The percent reduction of pollution prevention measures shall be calculated according to the procedures specified in paragraph (j) 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 that 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) Source-wide credits shall be calculated using Equation 41. Credits and all terms of the equation are in units of Mg/month, and the baseline date is November 15, 1990.

$$\text{Credits} = D\sum_{i=1}^{n}\left((0.02)\text{ECFEPV1}_{iu} - \text{ECFEPV1}_{i\text{ACTUAL}}\right) + D\sum_{i=1}^{m}\left(\text{ECFEPV2}_{i\text{BASE}} - \text{ECFEPV2}_{i\text{ACTUAL}}\right)$$

$$+D\sum_{i=1}^{n}\left((0.05)\text{ES1}_{iu} - \text{ES1}_{i\text{ACTUAL}}\right) + D\sum_{i=1}^{m}\left(\text{ES2}_{i\text{BASE}} - \text{ES2}_{i\text{ACTUAL}}\right) + D\left(\text{EBEP}_{c} - \text{EBEP}_{\text{ACTUAL}}\right)$$

$$+D\sum_{i=1}^{n}\left(\text{EWW1}_{ic} - \text{EWW1}_{i\text{ACTUAL}}\right) + D\sum_{i=1}^{m}\left(\text{EWW2}_{i\text{BASE}} - \text{EWW2}_{i\text{ACTUAL}}\right) \qquad \text{[Eq. 41]}$$

$$+D\sum_{i=1}^{n}\left((0.1)\text{EBFEPV1}_{iu} - \text{EBFEPV1}_{i\text{ACTUAL}}\right) + D\sum_{i=1}^{n}\left((0.1)\text{EABV1}_{iu} - \text{EABV1}_{i\text{ACTUAL}}\right)$$

$$+D\sum_{i=1}^{m}\left(\text{EBFEPV2}_{i\text{BASE}} - \text{EBFEPV2}_{i\text{ACTUAL}}\right) + D\sum_{i=1}^{m}\left(\text{EABV2}_{i\text{BASE}} - \text{EABV2}_{i\text{ACTUAL}}\right)$$

where:

D = Discount factor = 0.9 for all credit generating emission points, except those controlled by a pollution prevention measure; discount factor = 1.0 for each credit generating emission point controlled by a pollution prevention measure (i.e., no discount provided).

$ECFEPV1_{iACTUAL}$ = Emissions for each Group 1 continuous front-end process vent i that is controlled to a level more stringent than the reference control technology. $ECFEPV1_{iACTUAL}$ is calculated according to paragraph (h)(2)(ii) of this section.

$(0.02)ECFEPV1_{iu}$ = Emissions from each Group 1 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions. $ECFEPV1_{iu}$ is calculated according to paragraph (h)(2)(i) of this section.

$ECFEPV2_{iACTUAL}$ = Emissions from each Group 2 continuous front-end process vent i that is controlled. $ECFEPV2_{iACTUAL}$ is calculated according to paragraph (h)(2)(iii) of this section.

$ECFEPV2_{iBASE}$ = Emissions from each Group 2 continuous front-end process vent i at the baseline date. $ECFEPV1_{iBASE}$ is calculated in paragraph (h)(2)(iv) 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 or standard. $ES1_{iACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$(0.05)\ ES1_{iu}$ = Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions. $ES1_{iu}$ is calculated according to paragraph (h)(3) of this section.

$ES2_{iACTUAL}$ = Emissions from each Group 2 storage vessel i that is controlled. $ES2_{iACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$ES2_{iBASE}$ = Emissions from each Group 2 storage vessel i at the baseline date. $ES2_{iBASE}$ is calculated in paragraph (h)(3) of this section.

$EBEP_{ACTUAL}$ = Actual emissions from back-end process operations, Mg/month. $EBEP_{ACTUAL}$ is calculated in paragraph (h)(4)(i) of this section.

$EBEP_c$ = Emissions from back-end process operations if the residual organic HAP limits in § 63.494(a) were met, Mg/month. $EBEP_c$ is calculated in paragraph (h)(4)(ii) 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. $EWW1_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW1_{ic}$ = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. $EWW1_{ic}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iACTUAL}$ = Emissions from each Group 2 wastewater stream i that is controlled. $EWW2_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iBASE}$ = Emissions from each Group 2 wastewater stream i at the baseline date. $EWW2_{iBASE}$ is calculated according to paragraph (h)(5) of this section.

$(0.1)\ EBFEPV1_{iu}$ = Emissions from each Group 1 batch front-end process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBFEPV_{iu}$ is calculated according to paragraph (h)(6)(i) of this section.

$EBFEPV1_{iACTUAL}$ = Emissions from each Group 1 batch front-end process vent i that is controlled to a level more stringent than the reference control technology. $EBFEPV1_{iACTUAL}$ is calculated according to paragraph (h)(6)(ii) of this section.

$(0.1)EABV1_{iu}$ = Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EABV1_{iu}$ is calculated according to paragraph (h)(7)(i) of this section.

$EABV1_{iACTUAL}$ = Emissions from each Group 1 aggregate batch vent stream i that is controlled to a level more stringent than the reference control technology or standard. $EABV1_{iACTUAL}$ is calculated according to paragraph (h)(7)(ii) of this section.

$EBFEPV2_{iBASE}$ = Emissions from each Group 2 batch front-end process vent i at the baseline date. $EBFEPV2_{iBASE}$ is calculated according to paragraph (h)(6)(iv) of this section.

$EBFEPV2_{iACTUAL}$ = Emissions from each Group 2 batch front-end process vent i that is controlled. $EBFEPV2_{iACTUAL}$ is calculated according to paragraph (h)(6)(iii) of this section.

$EABV2_{iBASE}$ = Emissions from each Group 2 aggregate batch vent stream i at the baseline date. $EABV2_{iBASE}$ is calculated according to paragraph (g)(7)(iv) of this section.

$EABV2_{iACTUAL}$ = Emissions from each Group 2 aggregate batch vent stream i that is controlled. $EABV2_{iACTUAL}$ is calculated according to paragraph (g)(7)(iii) 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 continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

m = Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

(i) Except as specified in paragraph (h)(1)(iv) of this section, 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. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedure in paragraph (i) of this section.

(iii) For an emission point controlled using a pollution prevention measure, except for back-end process operation emissions, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section. Emissions for back-end process operations shall be determined as described in paragraph (h)(4) of this section.

(iv) For Group 1 and Group 2 batch front-end process vents and Group 1 and Group 2 aggregate batch vent streams, the percent reduction for calculating credits shall be the percent reduction determined according to the procedures in paragraphs (h)(6)(ii) and (h)(6)(iii) of this section for batch front-end process vents and paragraphs (h)(7)(ii) and (h)(7)(iii) of this section for aggregate batch vent streams.

(2) Emissions from continuous front-end process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 continuous front-end process vents, $ECFEPV1_{iu}$, shall be calculated according to the procedures and equation for $ECFEPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 continuous front-end 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, $ECFEPV1_{iACTUAL}$, shall be calculated using Equation 42.

$$ECFEPV1_{iACTUAL} = ECFEPV1_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right) \quad \text{[Eq. 42]}$$

Where:

$ECFEPV1_{iACTUAL}$ = Emissions for each Group 1 continuous front-end process vent i that is controlled to a level more stringent than the reference control technology.

$ECFEPV1_{iu}$ = Emissions from each Group 1 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions.

(iii) The following procedures shall be used to calculate actual emissions from Group 2 continuous front-end process vents, $ECFEPV2_{iACTUAL}$:

(A) For a Group 2 continuous front-end process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, where the control achieves a percent reduction less than or equal to 98 percent reduction, Equation 43 shall be used.

$$ECFEPV2_{iACTUAL} = ECFEPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 43]}$$

Where:

$ECFEPV2_{iACTUAL}$=Emissions from each Group 2 continuous front-end process vent i that is controlled.

$ECFEPV2_{iu}$=Emissions from each Group 2 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions.

(1) $ECFEPV2_{iu}$ shall be calculated according to the equations and procedures for $ECFEPV_{iu}$ 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, $ECFEPV2_{iu}$ shall be calculated prior to that recovery device. The equation for $ECFEPV_{iu}$ in paragraph (g)(2)(ii) of this section shall be used to calculate $ECFEPV2_{iu}$; 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 continuous front-end 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, Equation 44 shall be used.

$$ECFEPV2_{iACTUAL} = ECFEPV2_{iu}\left(1-\frac{\text{Nominal efficiency \%}}{100\%}\right) \quad [Eq. 44]$$

Where:

$ECFEPV2_{iACTUAL}$=Emissions from each Group 2 continuous front-end process vent i that is controlled.

$ECFEPV2_{iu}$=Emissions from each Group 2 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions.

(iv) Emissions from Group 2 continuous front-end process vents at baseline, $ECFEPV2_{iBASE}$, shall be calculated as follows:

(A) If the continuous front-end process vent was uncontrolled on November 15, 1990, $ECFEPV2_{iBASE}=ECFEPV2_{iu}$ and shall be calculated according to the procedures and equation for $ECFEPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous front-end process vent was controlled on November 15, 1990, Equation 45 shall be used.

$$ECFEPV2_{iBASE} = ECFEPV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 45]$$

(*1*) $ECFEPV2_{iu}$ is calculated according to the procedures and equation for $ECFEPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(*2*) 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 as part of a pollution prevention project initiated after November 15, 1990, $ECFEPV2_{iBASE}=ECFEPV2_{iu}$, where $ECFEPV2_{iu}$ is calculated according to paragraph (h)(2)(iii)(A)(*3*) of this section.

(3) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(h)(3) of subpart G.

(4) Emissions from back-end process operations shall be calculated as follows:

(i) $EBEP_{ACTUAL}$ shall be calculated according to the equation for $EBEP_{ACTUAL}$ contained in paragraph (g)(4)(i) of this section.

(ii) $EBEP_c$ shall be calculated according to the equation for $EBEP_c$ contained in paragraph (g)(4)(ii) of this section.

(5) Emissions from wastewater streams shall be calculated using the procedures specified in § 63.150(h)(5) of subpart G.

(6) Emissions from batch front-end process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 batch front-end process vents ($EBFEPV1_{iu}$) shall be calculated according using the procedures specified in § 63.488(b).

(ii) Actual emissions from Group 1 batch front-end process vents controlled to a level more stringent than the reference control technology ($EBFEPV1_{iACTUAL}$) shall be calculated using Equation 46, where percent reduction is for the batch cycle.

$$EBFEPV1_{iACTUAL} = EBFEPV1_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 46]$$

(A) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.490(c)(2).

(B) The percent reduction for control devices shall be determined according to the procedures in § 63.490(c)(2)(i) through (c)(2)(iii).

(C) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 batch front-end process vents ($EBFEPV2_{iACTUAL}$) shall be calculated using Equation 47 and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBFEPV2_{iu}$ shall be calculated using the procedures specified in § 63.488(b).

$$EBFEPV2_{iACTUAL} = EBFEPV2_{iu}\times\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 47]$$

(iv) Emissions from Group 2 batch front-end process vents at baseline shall be calculated as follows:

(A) If the batch front-end process vent was uncontrolled on November 15, 1990, $EBFEPV2_{iBASE}=EBFEPV2_{iu}$ and shall be calculated according to the procedures using the procedures specified in § 63.488(b).

(B) If the batch front-end process vent was controlled on November 15, 1990, use Equation 48 and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBFEPV2_{iu}$ shall be calculated using the procedures specified in § 63.488(b).

$$EBFEPV2_{iBASE} = EBFEPV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad [Eq. 48]$$

(7) Emissions from aggregate batch vent streams shall be determined as follows:

(i) Uncontrolled emissions from Group 1 aggregate batch vent streams ($EABV1_{iu}$) shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(ii) Actual emissions from Group 1 aggregate batch vent streams controlled to a level more stringent than the reference control technology ($EABV1_{iACTUAL}$) shall be calculated using Equation 49.

$$EABV1_{iACTUAL} = EABV1_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 49]}$$

(A) The percent reduction for control devices shall be determined according to the procedures in § 63.490(e).

(B) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 aggregate batch vents streams ($EABV2_{iACTUAL}$) shall be calculated using Equation 50 and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iACTUAL} = EABV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 50]}$$

(iv) Emissions from Group 2 aggregate batch vent streams at baseline shall be calculated as follows:

(A) If the aggregate batch vent stream was uncontrolled on November 15, 1990, $EABV2_{iBASE}=EABV2_{iu}$ and shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraph (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream was controlled on November 15, 1990, use Equation 51 and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iBASE} = EABV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 51]}$$

(i) The following procedures shall be followed to establish nominal efficiencies for emission controls for storage vessels, continuous front-end process vents, and process wastewater streams. 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 subpart G.

(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. 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 operating 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 operating 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 grant permission to take emission credits for use of the control technology. The Administrator may also impose 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 paragraph (i)(1)(i) can be submitted to the permitting authority for the affected 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 that 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 for storage vessels, continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, and wastewater streams:

(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 organic 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 is used in the equations in paragraphs (g)(2) through (g)(7) of this section and paragraphs (h)(2) through (h)(7) 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) Equation 52 shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = E_B - \frac{\left(E_{pp} \times P_B\right)}{P_{pp}} \times 100 \qquad \text{[Eq. 52]}$$

where:

Percent reduction=Efficiency of pollution prevention measure (percent organic HAP reduction).

E_B=Monthly emissions before the pollution prevention measure, Mg/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, Mg/month, as determined for the most recent month, determined as specified in either paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.

P_B=Monthly production before the pollution prevention measure, Mg/month, during the same period over which E_B is calculated.

P_{pp}=Monthly production after the pollution prevention measure, Mg/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 paragraph (g)(2) of this section for continuous front-end process vents, paragraph (g)(3) of this section for storage vessels, paragraph (g)(6) of this section for batch front-end process vents, and paragraph (g)(7) of this section for aggregate batch vent streams.

(B) For wastewater, E_B shall be calculated according to § 63.150(j)(2)(ii)(B) of subpart G.

(C) If the pollution prevention measure was implemented prior to September 5, 1996, 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 according to § 63.150(j)(2)(ii)(E) of subpart G.

(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)(7) 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 an affected 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 emissions 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 §§ 63.484, 63.485, 63.486, 63.493, and 63.501.

(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 Emissions Averaging 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 emissions 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 §§ 63.484, 63.485, 63.486, 63.493, and 63.501.

(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 monitoring 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)(2)(i) and (f)(2)(ii) of this section.

(1) The owner or operator shall notify the Administrator of monitoring excursions in the Periodic Reports as required in § 63.506(e)(6).

(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 for demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other types 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 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 §§ 63.484, 63.485, 63.486, 63.493, and 63.501, as applicable. If back-end process operations are included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for back-end process operations complying with § 63.493. The specific requirements for continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, back-end process operations, and wastewater are identified in paragraphs (m)(1) through (m)(6) of this section.

(1) For each continuous front-end process vent equipped with a flare, incinerator, boiler, or process heater, as appropriate to the control technique:

(i) Determine whether the continuous front-end process vent is Group 1 or Group 2 according to the procedures specified in § 63.115 of subpart G and as required by § 63.485;

(ii) Conduct initial performance tests to determine percent reduction as specified in § 63.116 of subpart G and as required by § 63.485; and

(iii) Monitor the operating parameters, keep records, and submit reports as specified in § 63.114, § 63.117(a), and § 63.118(a), (f), and (g) of subpart G, as required, for the specific control device as required by § 63.485.

(2) For each continuous front-end process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device, as appropriate to the control technique:

(i) Determine the flow rate, organic HAP concentration, and TRE index value according to the procedures specified in § 63.115 of subpart G; and

(ii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.114, § 63.117(a), and § 63.118 (b), (f), and (g) of subpart G, as required, for the specific recovery device, and as required by § 63.485.

(3) 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 according to the procedures specified in § 63.120 of subpart G, and as required by § 63.484;

(ii) Perform the reporting and recordkeeping procedures according to the procedures specified in §§ 63.122 and 63.123 of subpart G, and as required by § 63.484; and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan according to the procedures specified in § 63.120(d) and § 63.122(a)(2) and (b) of subpart G, and as required by § 63.484.

(4) For back-end process operations included in an emissions average:

(i) If stripping technology, and no control or recovery device, is used to reduce back-end process operation emissions, the owner or operator shall implement the following portions of this subpart:

(A) Paragraphs (b)(1), (b)(2), and (b)(3) of § 63.495, paragraph (b) of § 63.498, and the applicable provisions of § 63.499, or

(B) Paragraphs (c) (1), (2), and (3) of § 63.495, paragraph (c) of § 63.498, and the applicable provisions of § 63.499;

(ii) If a control or recovery device is used to reduce back-end process operation emissions, the owner or operator shall comply with §§ 63.496, 63.497, 63.498(d), and the applicable provisions of 63.499, and shall

implement the provisions of these sections.

(5) For wastewater emission points, as appropriate to the control techniques:

(i) For wastewater treatment processes, conduct tests according to the procedures specified in § 63.138(i) and (j) of subpart G, and as required by § 63.501;

(ii) Conduct inspections and monitoring according to the procedures specified in § 63.143 of subpart G, and as required by § 63.501;

(iii) Implement a recordkeeping program according to the procedures specified in § 63.147 of subpart G, and as required by § 63.501; and

(iv) Implement a reporting program according to the procedures specified in § 63.146 of subpart G, and as required by § 63.501.

(6) For each batch front-end process vent and aggregate batch vent stream equipped with a control device, as appropriate to the control technique:

(i) Determine whether the batch front-end process vent or aggregate batch vent stream is Group 1 or Group 2 according to the procedures specified in § 63.488;

(ii) Conduct performance tests according to the procedures specified in § 63.490;

(iii) Conduct monitoring according to the procedures specified in § 63.489; and

(iv) Perform the recordkeeping and reporting procedures according to the procedures specified in §§ 63.491 and 63.492.

(7) 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 required by §§ 63.484, 63.485, 63.486, 63.493, or § 63.501, the owner or operator shall submit the information specified in § 63.506(f) for alternate monitoring parameters or inspection procedures in the Emissions Averaging Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for 5 years.

(o) Precompliance Reports, Emission Averaging Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.506.

§ 63.504 Additional test methods and procedures.

(a) Performance testing shall be conducted in accordance with § 63.7 (a)(3), (d), (e), (g), and (h) of subpart A, with the exceptions specified in paragraphs (a)(1) through (a)(4) of this section and the additions specified in paragraph (b) of this section. Sections 63.484 through 63.501 also contain specific testing requirements.

(1) Performance tests shall be conducted according to the provisions of § 63.7(e) of subpart A, except that performance tests shall be conducted at maximum representative operating conditions for the process.

(2) References in § 63.7(g) of subpart A to the Notification of Compliance Status requirements in § 63.9(h) shall refer to the requirements in § 63.506(e)(5).

(3) Because the site-specific test plans in § 63.7(c)(3) of subpart A are not required, § 63.7(h)(4)(ii) is not applicable.

(4) 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.

(b) 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.

§ 63.505 Parameter monitoring levels and excursions.

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter using the procedures specified in paragraph (b), (c), or (d) of this section. The procedures specified in paragraph (b) have been approved by the Administrator. The procedures in paragraphs (c) and (d) of this section have not been approved by the Administrator, and determination of the parameter monitoring level using the procedures in paragraphs (c) or (d) of this section and is subject to review and approval by the Administrator. The determination and supporting documentation shall be included in the Precompliance Report.

(1) The owner or operator shall operate control and recovery devices such that monitored parameters remain above the minimum established level or below the maximum established level.

(2) As specified in § 63.506(e)(5) and § 63.506(e)(8), all established levels, along with their supporting documentation and the definition of an operating day, shall be approved as part of and incorporated into the Notification of Compliance Status or operating permit, respectively.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of subparts A, F, or G of this part.

(b) *Establishment of parameter monitoring levels based on performance tests.* The procedures specified in paragraphs (b)(1) through (b)(3) of this section shall be used, as applicable, in establishing parameter monitoring levels. Level(s) established under this paragraph shall be based on the parameter values measured during the performance test.

(1) *Storage tanks and wastewater.* The maximum and/or minimum monitoring levels shall be based on the parameter values measured during the performance test, supplemented, if desired, by engineering assessments and/or manufacturer's recommendations.

(2) *Continuous front-end process vents and back-end process operations complying using control or recovery devices.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(3) *Batch front-end process vents.* The monitoring level(s) shall be established using the procedures specified in paragraphs (b)(3)(i) through (b)(3)(iii) of this section, as appropriate. The procedures specified in this paragraph may only be used if the batch emission episodes, or portions thereof, selected to be controlled were tested, and monitoring data were collected, during the entire period in which emissions were vented to the control device, as specified in § 63.490(c)(1)(i). If the owner or operator chose to test only a portion of the batch emission episode, or portion thereof, selected to be controlled, as specified in § 63.490(c)(1)(i)(A), the procedures in paragraph (c) of this section must be used.

(i) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(A) During initial compliance testing, the appropriate parameter shall be

monitored continuously at all times when batch emission episodes, or portions thereof, selected to be controlled are vented to the control device.

(B) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(C) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(D) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(E) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values measured during each batch emission episode, or portion thereof, selected to be controlled.

(ii) Instead of establishing a single level for the batch cycle, as described in paragraph (b)(3)(i) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section.

(iii) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.506(e)(5). The definition shall include an identification of each batch emission episode and the information required to determine parameter monitoring compliance for partial batch cycles (i.e., when part of a batch cycle is accomplished during two different operating days).

(4) *Aggregate batch vent streams.* For aggregate batch vent streams, the monitoring level shall be established in accordance with paragraph (b)(2) of this section.

(c) *Establishment of parameter monitoring levels based on performance tests, engineering assessments, and/or manufacturer's recommendations.* As required in paragraph (a) of this section, the information specified in paragraphs (c)(2) and (c)(3) of this section shall be provided in the Precompliance Report.

(1) Parameter monitoring levels established under this paragraph 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 expected parameter values.

(2) The specific level of the monitored parameter(s) for each emission point.

(3) The rationale for the specific level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control or recovery device.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* If a performance test is not required by this subpart for a control or recovery device, the maximum or minimum level may be based solely on engineering assessments and/or manufacturer's recommendations. As required in paragraph (a) of this section, the determined level and all supporting documentation shall be provided in the Precompliance Report.

(e) *Demonstration of compliance with back-end process provisions using stripper parameter monitoring.* If the owner or operator is demonstrating compliance with § 63.495 using stripper parameter monitoring, stripper parameter levels shall be established for each grade in accordance with paragraphs (e)(1) and (e)(2) of this section. A single set of stripper parameter levels can be representative of multiple grades.

(1) For each grade, the owner or operator shall calculate the residual organic HAP content using the procedures in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) The location of the sampling shall be in accordance with § 63.495(d).

(ii) The residual organic HAP content in each sample is to be determined using specified methods.

(2) For each grade, the owner or operator shall establish stripper operating parameter levels that represent stripper operation during the residual organic HAP content determination in paragraph (e)(1) of this section. The stripper operating parameters shall include, at a minimum, temperature, pressure, steaming rates (for steam strippers), and some parameter that is indicative of residence time.

(3) After the initial determinations, an owner or operator can add a grade, with corresponding stripper parameter levels, using the procedures in paragraphs (e)(1) and (e)(2) of this section. The results of this determination shall be submitted in the next periodic report.

(4) An owner or operator complying with the residual organic HAP limitations in paragraph (a) of § 63.494 using stripping, and demonstrating compliance by stripper parameter monitoring, shall redetermine the residual organic HAP content for all affected grades whenever process changes are made. For the purposes of this section, a process change is any action that would reasonably be expected to impair the performance of the stripping operation. For the purposes of this section, examples of process changes may include changes in production capacity or production rate, or removal or addition of equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; or changes that reduce the residual organic HAP content of the elastomer.

(f) *Compliance determinations.* The provisions of this paragraph apply only to emission points and control or recovery devices for which continuous monitoring is required under this subpart.

(1) The parameter monitoring data for storage vessels, front-end process vents, back-end process operations complying through the use of control or recovery devices, process wastewater streams, and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance for the monitored control or recovery devices.

(2) Except as provided in paragraph (f)(3) and (i) of this section, for each excursion, as defined in paragraphs (g) and (h) of this section, the owner or operator shall be deemed out of compliance with the provisions of this subpart.

(3) If the daily average value of a monitored parameter is above the maximum level or below the minimum level established, or if monitoring data cannot be collected during monitoring device calibration check or monitoring device malfunction, but the affected source is operated during the periods of startup, shutdown, or malfunction in accordance with the affected source's Startup, Shutdown, and Malfunction Plan, then the event shall not be considered a monitoring parameter excursion.

(g) *Parameter monitoring excursion definitions.* (1) For storage vessels, continuous front-end process vents, aggregate batch vent streams, back-end process operations complying through the use of control or recovery devices, and wastewater streams, an excursion

means any of the three cases listed in paragraphs (g)(1)(i) through (g)(1)(iii) of this section. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (g)(1)(i) through (g)(1)(iii) of this section, this is considered a single excursion for the control or recovery device.

(i) When the daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

(ii) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in paragraph (g)(1)(iv) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(iii) When the period of control or recovery device operation is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (g)(1)(iv) of this section.

(iv) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (g)(1)(ii) and (g)(1)(iii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under §63.506(g)(3), monitoring data are insufficient to calculate a valid hour of data if there are less than four data measurements made during the hour.

(2) For batch front-end process vents, an excursion means one of the two cases listed in paragraphs (g)(2)(i) and (g)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in either paragraph (g)(2)(i) or (g)(2)(ii) of this section, this is considered a single excursion for the control device.

(i) When the batch cycle daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters.

(ii) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the 15-minute periods when batch emission episodes, or portions thereof, selected to be controlled are being vented to the control device during the operating day.

(h) *Excursion definitions for back-end operations complying through stripping.* (1) For back-end process operations complying through the use of stripping technology, and demonstrating compliance by sampling, an excursion means one of the two cases listed in paragraphs (h)(1)(i) and (h)(1)(ii) of this section.

(i) When the monthly weighted average residual organic HAP content is above the applicable residual organic HAP limitation in §63.494; or

(ii) When less than 75 percent of the samples required in 1 month are taken and analyzed in accordance with the provisions of §63.495(b).

(2) For back-end process operations complying through the use of stripping technology, and demonstrating compliance by stripper parameter monitoring, an excursion means one of the three cases listed in paragraphs (h)(2)(i), (h)(2)(ii), and (h)(2)(iii) of this section.

(i) When the monthly weighted average residual organic HAP content is above the applicable residual organic HAP limitation in §63.494;

(ii) When an owner or operator fails to sample and analyze the organic HAP content of a sample for a grade with an hourly average stripper operating parameter value not in accordance with the established monitoring parameter levels for that parameter; or

(iii) When an owner or operator does not collect sufficient monitoring data for at least 75 percent of the grades or batches processed during a month. Stripper monitoring data are considered insufficient if monitoring parameters are obtained for less than 75 percent of the 15-minute periods during the processing of a grade, and a sample of that grade or batch is not taken and analyzed to determine the residual organic HAP content.

(i) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (i)(1) through (i)(6) of this section. This paragraph applies to affected 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.

§ 63.506 General recordkeeping and reporting provisions.

(a) *Data retention.* Each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, unless otherwise specified in this subpart.

(b) *Subpart A requirements.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in 40 CFR part 63, subpart A as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Startup, shutdown, and malfunction plan.* The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan as specified in §63.6(e)(3) of subpart A. This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with this subpart. The affected source shall keep this plan onsite and shall incorporate it by reference into their operating permit. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section. Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

(i) *Records of startup, shutdown, and malfunction.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

(A) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with this subpart.

(B) For each startup, shutdown, or malfunction, a statement that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed; or alternatively, documentation of any actions taken that are not consistent with the plan.

(C) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks and maintenance of continuous monitoring

systems that are specified in the manufacturer's instructions.

(D) Records specified in paragraphs (b)(1)(i)(B) and (b)(1)(i)(C) of this section are not required if they pertain solely to Group 2 emission points that are not included in an emissions average.

(ii) *Reports of startup, shutdown, and malfunction.* For the purposes of this subpart, the semiannual startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of the schedule specified in § 63.10(d)(5)(i) of subpart A. The reports shall include the information specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 of subpart A regarding construction and reconstruction, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii) of subpart A.

(c) *Subpart H requirements.* Owners or operators of affected sources shall comply with the reporting and recordkeeping requirements in subpart H, except as specified in § 63.502(g) through § 63.502(i).

(d) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(8) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (f), (g), or (h) of this section. Documentation requirements are specified in paragraphs (d)(9) and (d)(10) of this section.

(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 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values; or

(iii) For batch front-end process vents, each batch cycle average or batch emission episode average, as appropriate, in addition to each measured data value recorded as required in paragraph (d)(2)(i) of this section.

(3) Daily average (or batch cycle daily average) values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (d)(3)(ii) of this section, except as specified in paragraph (d)(6) of this section.

(i) The daily average value or batch cycle daily average shall be calculated as the average of all parameter values recorded during the operating day. As specified in § 63.491(e)(2)(i), only parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has chosen to control shall be used to calculate the average. The calculated 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 that the owner or operator specifies in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another 24-hour period.

(4) *Records required when out of compliance.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is below the minimum level or above the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (d)(2) of this section.

(5) *Records required when in compliance for daily average value or batch cycle daily average value.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block average values for 1 hour or shorter periods for that operating day; or

(ii) Retain the data recorded in paragraphs (d)(2)(i) and (d)(2)(iii) of this section.

(6) *Records required when all recorded values are in compliance.* If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day. For these operating days, the records required in paragraph (d)(5) of this section are required.

(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.

(8) In addition to the periods specified in paragraph (d)(7) of this section, records shall be kept of the times and durations of any other periods during process operation or control device operation when monitors are not operating. For batch front-end process vents, this paragraph only applies during batch emission episodes, or portions thereof, that the owner or operator has selected for control.

(9) For each EPPU that is not part of the affected source because it does not use any organic HAP, the owner or operator shall maintain the documentation specified in § 63.480(b)(1).

(10) For each flexible operation unit in which the primary product is determined to be something other than an elastomer product, the owner or operator shall maintain the documentation specified in § 63.480(f)(6).

(e) *Reporting and notification.* (1) In addition to the reports and notifications required by subparts A and H, as specified in this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(8) of this section, as applicable.

(2) All reports required under this subpart shall be sent to the Administrator at the addresses listed in § 63.13 of subpart A of this part. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(3) *Precompliance Report.* Affected sources requesting an extension for compliance, or requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls, shall submit a Precompliance Report according to the schedule described in paragraph (e)(3)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(3)(ii) through (e)(3)(vi) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later

than 12 months prior to the compliance date. For new sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section.

(ii) A request for an extension for compliance must be submitted in the Precompliance Report, if it has not been submitted to the operating permit authority as part of the operating permit application. The request for a compliance extension will include the data outlined in § 63.6(i)(6)(i)(A), (B), and (D) of subpart A, as required in § 63.481(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in subpart G of this part, or seeks to comply by monitoring a different parameter than those specified in this subpart or in subpart G of this part.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the information requested in paragraph (e)(3)(iv)(A) or (e)(3)(iv)(B) of this section must be submitted in the Precompliance Report.

(A) The owner or operator must submit notification of the intent to use the provisions specified in paragraph (h) of this section; or

(B) The owner or operator must submit a request for approval to use alternative continuous monitoring and recordkeeping provisions as specified in paragraph (g) of this section.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart. Alternative controls must be deemed by the Administrator to be equivalent to the controls required by the standard, under the procedures outlined in § 63.6(g) of subpart A.

(4) *Emissions Averaging Plan.* For all existing affected sources using emissions averaging, an Emissions Averaging Plan shall be submitted for approval according to the schedule and procedures described in paragraph (e)(4)(i) of this section. The Emissions Averaging Plan shall contain the information specified in paragraph (e)(4)(ii) of this section, unless the information required in paragraph (e)(4)(ii) of this section is submitted with an operating permit application. An owner or operator of an affected source who submits an operating permit application instead of an Emissions Averaging Plan shall submit the information specified in paragraph (e)(8) of this section. In addition, a supplement to the Emissions Averaging Plan, as required under paragraph (e)(4)(iii) of this section, is to be submitted whenever alternative controls or operating scenarios may be used to comply with this subpart. Updates to the Emissions Averaging Plan shall be submitted in accordance with paragraph (e)(4)(iv) of this section.

(i) *Submittal and approval.* The Emissions Averaging Plan shall be submitted no later than 18 months prior to the compliance date, and is subject to Administrator approval. The Administrator shall determine within 120 operating days whether the Emissions Averaging Plan submitted presents sufficient information. The Administrator shall either approve the Emissions Averaging 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 operating days.

(ii) *Information required.* The Emissions Averaging Plan shall contain the information listed in paragraphs (e)(4)(ii)(A) through (e)(4)(ii)(M) of this section for all emission points included in an emissions average.

(A) The required information shall include the identification of all emission points and process back-end operations in the planned emissions average and, where applicable, notation of whether each storage vessel, continuous front-end process vent, batch front-end process vent, aggregate batch vents stream, and process wastewater stream is a Group 1 or Group 2 emission point, as defined in § 63.482 or as designated under § 63.503(c)(2).

(B) The required information shall include the projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.503. The projected credits must be greater than or equal to the projected debits, as required under § 63.503(e)(3).

(C) The required information shall include 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.

(D) The required information shall include the specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.503(j)(1) 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.

(E) The required information shall include a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.503(m), (n), and (o) that are applicable to each emission point in the emissions average will be implemented beginning on or before the date of compliance.

(F) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(F)(*1*) through (e)(4)(ii)(F)(*5*) of this section for each storage vessel and continuous front-end process vent included in the average.

(*1*) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Where a TRE index value is used for continuous front-end process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) of subpart G and the resulting TRE index value shall be submitted.

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.503 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported in an update to the Emissions Averaging Plan, as required by paragraph (e)(4)(iv)(B)(*2*) of this section.

(*3*) The required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(*4*) The required documentation shall include 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 § 63.503(i) shall be followed to apply for a nominal efficiency.

(*5*) The required documentation shall include the information specified in § 63.120(d)(2)(i) and in either

§ 63.120(d)(2)(ii) or (d)(2)(iii) of subpart G for each storage vessel controlled with a closed-vent system using a control device other than a flare.

(G) The information specified in paragraph (f) of this section shall be included in the Emissions Averaging Plan for:

(*1*) Each continuous front-end process vent controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114 of subpart G, and

(*2*) 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.

(H) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(H)(*1*) through (e)(4)(ii)(H)(*4*) of this section for each process wastewater stream included in the average.

(*1*) The required documentation shall include the data used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream and the information specified in table 14b of subpart G of this part for wastewater streams at new and existing sources.

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.503(g)(5) and (h)(5). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv)(B)(*2*) of this section.

(*3*) The required documentation shall include the estimated percent reduction if:

(*i*) A control technology that achieves an emission reduction less than or equal to the emission reduction that would otherwise have been achieved by a steam stripper designed to the specifications found in § 63.138(g) of subpart G is or will be applied to the wastewater stream, or external floating roof or a closed vent system with a control device.

(*ii*) 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

(*iii*) A pollution prevention measure is or will be applied.

(*4*) The required documentation shall include the anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.503(i). A nominal efficiency shall be applied for if:

(*i*) A control technology that achieves an emission reduction greater than the emission reduction that would have been achieved by a steam stripper designed to the specifications found in § 63.138(g) of subpart G, is or will be applied to the wastewater stream; or

(*ii*) 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.

(I) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143 of subpart G, the information specified in paragraph (f) of this section (Alternative Monitoring Parameters) shall be included in the Emissions Averaging Plan.

(J) The required information shall include documentation of the data required by estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.503 (g) and (h) for each process back-end operation included in an emissions average. These values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv)(B)(*2*) of this section.

(K) The required information shall include documentation of the information required by § 63.503(k). The documentation 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 not included in an emissions average.

(L) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(L)(*1*) through (e)(4)(ii)(L)(*3*) of this section for each batch front-end process vent and aggregate batch vent stream included in the average.

(*1*) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2.

(*2*) The required information shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.503(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(*3*) For batch front-end process vents, the required documentation shall include the estimated percent reduction for the batch cycle. For aggregate batch vent streams, the required documentation shall include the estimated percent reduction achieved on a continuous basis.

(M) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from batch front-end process vents or batch vent streams and for which no monitoring parameters or inspection procedures are specified in § 63.489, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(iii) *Supplement to Emissions Averaging Plan.* The owner or operator required to prepare an Emissions Averaging Plan under paragraph (e)(4) of this section shall also prepare a supplement to the Emissions Averaging Plan for any alternative controls or operating scenarios that may be used to achieve compliance.

(iv) *Updates to Emissions Averaging Plan.* The owner or operator of an affected source required to submit an Emissions Averaging Plan under paragraph (e)(4) of this section shall also submit written updates of the Emissions Averaging Plan to the Administrator for approval under the circumstances described in paragraphs (e)(4)(iv)(A) and (e)(4)(iv)(B) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(A) The owner or operator who plans to make a change listed in either paragraph (e)(4)(iv)(A)(*1*) or (e)(4)(iv)(A)(*2*) of this section shall submit an Emissions Averaging Plan update at least 120 operating days prior to making the change.

(*1*) An Emissions Averaging Plan update shall be submitted whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.503 by using a control technique other than that specified in the Emissions Averaging Plan, or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Emissions Averaging Plan.

(*2*) An Emissions Averaging Plan update shall be submitted whenever an emission point or an EPPU is added to an existing affected 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 Emissions Averaging Plan is to be added to an emissions average. The information in paragraph (e)(4) of this section shall be updated to include the additional emission point.

(B) The owner or operator who has made a change as defined in paragraph (e)(4)(iv)(B)(*1*) or (e)(4)(iv)(B)(*2*) of this section shall submit an Emissions Averaging Plan update within 90 operating days after the information regarding the change is known to the affected 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.

(*1*) An Emissions Averaging Plan update shall be submitted whenever a process change is made such that the group status of any emission point in an emissions average changes.

(*2*) An Emissions Averaging Plan update shall be submitted whenever a value of a parameter in the emission credit or debit equations in § 63.503(g) or (h) changes such that it is below the minimum or above the maximum established level specified in the Emissions Averaging Plan and causes a decrease in the projected credits or an increase in the projected debits.

(C) The Administrator shall approve or request changes to the Emissions Averaging Plan update within 120 operating days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 operating days after the compliance dates specified in § 63.481. The notification shall contain the information listed in paragraphs (e)(5)(i) through (e)(5)(vii) of this section.

(i) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, continuous monitoring system performance evaluations, any other information used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in the Notification of Compliance Status under § 63.122 of subpart G for storage vessels, § 63.117 of subpart G for continuous front-end process vents, § 63.492 for batch front-end process vents, § 63.499 for back-end process operations, § 63.146 of subpart G for process wastewater, and § 63.503 for emission points included in an emissions average. In addition, each owner or operator shall comply with paragraphs (e)(5)(i)(A) and (e)(5)(i)(B) of this section.

(A) For performance tests, and group determinations, and process section applicability determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(5)(i)(B) of this section, 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 required information shall be submitted, but a complete test report is not required.

(B) 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.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.120(d)(3) of subpart G for storage vessels, § 63.485(k) for continuous front-end process vents, § 63.489 for batch front-end process vents and aggregate batch vent streams, § 63.497 for back-end process operations, § 63.143(f) of subpart G for process wastewater, § 63.503(m) for emission points in emissions averages, paragraph (e)(8) of this section, or paragraph (f) of this section, the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(E) of this section, unless this information has been established and provided in the operating permit.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values of monitored parameters.

(D) For batch front-end process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in § 63.490(c)(2) and 63.505(b)(3)(ii).

(E) The required information shall include a definition of the affected source's operating month for the purposes of determining monthly average values of residual organic HAP.

(iii) For emission points included in an emissions average, the values of all parameters needed for input to the emission credit and debit equations in § 63.503 (g) and (h), calculated or measured according to the procedures in § 63.503 (g) and (h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified.

(iv) For batch front-end process vents required to establish a batch cycle limitation under § 63.490(f), the owner or operator must define the 12-month period over which that source's "year" will be said to occur, as required by the definition of "year" in § 63.482.

(v) The determination of applicability for flexible operation units as specified in § 63.480(f)(6).

(vi) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in § 63.480(f)(7).

(vii) The results for each predominant use determination for storage vessels belonging to an affected source subject to this subpart that is made under § 63.480(g)(6).

(viii) The results for each predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.480(h)(6).

(ix) For owners and operators of Group 2 batch front-end process vents establishing a batch cycle limitation, as specified in § 63.490(f), the affected source's operating year for purposes of determining compliance with the batch cycle limitation.

(6) *Periodic Reports.* For existing and new affected sources, each owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (e)(6)(xi) of this section.

(i) Except as specified in paragraphs (e)(6)(x) and (e)(6)(xi) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or paragraphs (e)(6)(iii) through (e)(6)(ix) this section, as appropriate, shall be

submitted semiannually no later than 60 operating days after the end of each 180 day period. The first report shall be submitted no later than 240 days 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. Subsequent reports shall cover each preceding 6-month period.

(ii) If none of the compliance exceptions in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that the affected source was in compliance for the preceding 6-month period and that none of the activities specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.484 through 63.501 for any emission point, Periodic Reports shall include:

(A) All information specified in § 63.122(a)(4) of subpart G for storage vessels, §§ 63.117(a)(3) and 63.118(f) of subpart G for continuous front-end process vents, § 63.492 for batch front-end process vents and aggregate batch vent streams, § 63.499 for back-end process operations, § 63.104(b)(4) of subpart F for heat exchange systems, and § 63.146(c) through § 63.146(f) of subpart G for process wastewater.

(B) The daily average values or batch cycle daily average values of monitored parameters for all excursions, as defined in § 63.505(g) and § 63.505(h).

(C) The periods when monitoring data were not collected shall be specified; and

(D) The information in paragraphs (e)(6)(iii)(D)(*1*) through (e)(6)(iii)(D)(*3*) of this section, as applicable:

(*1*) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section;

(*2*) Notification if 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 paragraphs (e)(6)(iii)(D)(*2*)(*i*) and (e)(6)(iii)(D)(*2*)(*ii*) of this section, for emission points that change from Group 2 to Group 1, or for continuous front-end process vents under the conditions listed in § 63.485(l)(1) through § 63.485(l)(4), or for batch front-end process vents under the conditions listed in § 63.492 (b) or (c).

(*i*) The owner of operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

(*ii*) The Administrator shall approve the compliance schedule or request changes within 120 operating days of receipt of the compliance schedule and justification.

(*3*) Notification if one or more emission points or one or more EPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(*3*)(*i*) through (e)(6)(iii)(D)(*3*)(*iii*) of this section.

(*i*) A description of the addition to the affected source;

(*ii*) Notification of the group status of the additional emission point or all emission points in the EPPU;

(*iii*) A compliance schedule, as required under paragraph (e)(6)(iii)(D)(*2*) of this section.

(*4*) Notification if a standard operating procedure, as defined in § 63.500(l), is changed. This shall also include test results of the carbon disulfide concentration resulting from the new standard operating procedure.

(E) The information in paragraph (b)(1)(ii) of this section for reports of startup, shutdown, and malfunction.

(iv) For each batch front-end process vent with a batch cycle limitation, the owner or operator shall include the number of batch cycles accomplished during the preceding 12-month period once per year in a Periodic Report.

(v) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) 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 (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using the same method, results and any other information required shall be submitted, but a complete test report is not required.

(vi) The results for each change made to a primary product determination for an elastomer product made under § 63.480(f)(6).

(vii) The results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under § 63.480(g)(6).

(viii) The results for each change made to a predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.480(h)(6).

(ix) The Periodic Report required by § 63.502(i) shall be submitted as part of the Periodic Report required by paragraph (e)(6) of this section.

(x) The owner or operator of an affected source shall submit quarterly reports for all emission points included in an emissions average.

(A) The quarterly reports shall be submitted no later than 60 operating days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 150 days after the compliance date.

(B) The quarterly reports shall include the information specified in paragraphs (e)(6)(x)(B)(*1*) through (e)(6)(x)(B)(*7*) of this section for all emission points included in an emissions average.

(*1*) The credits and debits calculated each month during the quarter;

(*2*) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.503(e)(4);

(*3*) The values of any inputs to the debit and credit equations in § 63.503(g) and (h) that change from month to month during the quarter or that have changed since the previous quarter;

(*4*) 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 (e)(6)(v) of this section;

(*5*) Reports of daily average values or batch cycle daily averages of monitored parameters for excursions as defined in § 63.505(g) or (h);

(*6*) For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified; and

(*7*) Any other information the affected source is required to report under the operating permit or Emissions Averaging Plan for the affected source.

(C) § 63.505 shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 emission points included in emissions averages.

(D) Every fourth quarterly report shall include the following:

(*1*) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.503(e)(3); and

(*2*) A certification of compliance with all the emissions averaging provisions in § 63.503.

(xi) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in paragraphs (e)(6)(xi)(A) through (e)(6)(xi)(E) of this section.

(A) If requested by the Administrator, the owner or operator of an affected

source shall submit quarterly reports for a period of 1 year for an emission point or process section that is not included in an emissions average if either the conditions in paragraph (e)(6)(xi)(A)(*1*) or (e)(6)(xi)(A)(*2*) of this section are met.

(*1*) An emission point has any excursions, as defined in § 63.505(g) or § 63.505(h) for a semiannual reporting period.

(*2*) The process section is out of compliance with its applicable standard.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) and (e)(6)(ix) of this section, as applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(ix)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 operating days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year, the owner or operator may return to semiannual reporting for the emission point or process section unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(E) § 63.505 shall govern the use of monitoring data to determine compliance for Group 1 emission points.

(7) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) and (e)(7)(ii) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.484 shall be submitted, as specified in § 63.122(h)(1) and (h)(2) of subpart G.

(ii) For owners or operators of affected sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.503(i) shall be submitted.

(iii) For back-end process operations complying using control or recovery devices, the recompliance determination report required by § 63.499(d) shall be submitted within 180 days after the process change.

(8) *Operating Permit.* An owner or operator who submits an operating permit application instead of an Emissions Averaging Plan or a Precompliance Report shall submit the following information with the operating permit application:

(i) The information specified in paragraph (e)(4) of this section for points included in an emissions average; and

(ii) The information specified in paragraph (e)(3) of this section, Precompliance Report, as applicable.

(f) *Alternative monitoring parameters.* 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 § 63.484 for storage vessels, § 63.114 of subpart G for continuous front-end process vents, § 63.489 for batch front-end process vents and aggregate batch vent streams, § 63.497 for back-end process operations, or § 63.143 of subpart G for process wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(3) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery device, control device, 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) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

(3) The required information shall include a description of the proposed monitoring, recordkeeping, and recording system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (f)(3)(ii) of this section are met:

(i) If monitoring and recordkeeping is not continuous, or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the continuous parameter operating and recordkeeping provisions listed in § 63.485 for continuous front-end process vents, § 63.486 for batch front-end process vents and aggregate batch vent streams, § 63.493 for back-end process operations, and § 63.501 for wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (g)(4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(3)(iv) of this section, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in § 63.8(f)(5)(i) of subpart A shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(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 or batch cycle 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 affected 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.

(3) 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 that records all values that meet set criteria for variation from previously

recorded values, in accordance with paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes;

(B) Except for the monitoring of batch front-end process vents, 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) Calculate daily average or batch cycle daily average values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.505 (g) or (h), 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) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f)(4) of subpart A.

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (h)(1) or (h)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in § 63.484 for storage vessels, § 63.485 for continuous front-end process vents, § 63.486 for batch front-end process vents and aggregate batch vent streams, § 63.493 for back-end processes, and § 63.501 for wastewater. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section.

(1) The owner or operator may retain only the daily average or the batch cycle daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(iv) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns or malfunctions (e.g., a temperature reading of −200°C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) through (h)(1)(ii)(C) of this section. All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits;

(B) The running average is based on at least six one-hour periods; and

(C) The running average reflects a period of operation other than a startup, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, shutdowns or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C) of this section. The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (h)(1)(vi)(C) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (h) of this section.

(B) A description of the applicable monitoring system(s), and how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (h)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (h)(1) of this section.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average or batch cycle daily average value, for any operating day when the daily average or batch cycle daily average value is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average or batch cycle

daily average values, the owner or operator shall notify the Administrator in the next Periodic Report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the owner or operator has ceased recording daily average or batch cycle daily average values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average or batch cycle daily average value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average or batch cycle daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iv) of this section, for the duration specified in paragraph (h) of this section. For any calendar month, if compliance with paragraphs (h)(1)(i) through (h)(1)(iv) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a startup, shutdown, or malfunction.

(iv) For the purposes of paragraph (h) of this section, an excursion means that the daily average or batch cycle daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section.

(A) The daily average or batch cycle daily average value during any startup, shutdown, or malfunction shall not be considered an excursion for purposes of paragraph (h)(2) of this section, if the owner or operator follows the applicable provisions of the startup, shutdown, and malfunction plan required by § 63.6(e)(3) of subpart A.

(B) An excused excursion, as described in § 63.505(i), shall not be considered an excursion for the purposes of paragraph (h)(2) of this section.

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART U AFFECTED SOURCES

Reference	Applies to subpart U	Comment
63.1(a)(1)	Yes	§ 63.482 of Subpart U specifies definitions in addition to or that supersede definitions in § 63.2.
63.1(a)(2)–63.1(a)(3)	Yes	
63.1(a)(4)	Yes	Subpart U (this table) specifies the applicability of each paragraph in subpart A to subpart U.
63.1(a)(5)	No	Reserved.
63.1(a)(6)–63.1(a)(8)	Yes	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	No	Subpart U and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)	Yes	
63.1(a)(12)–63.1(a)(14)	Yes	
63.1(b)(1)	Yes	§ 63.480(a) contains specific applicability criteria.
63.1(b)(2)	Yes	
63.1(b)(3)	No	§ 63.480(b) of subpart U provides documentation requirements for EPPUs not considered affected sources.
63.1(c)(1)	Yes	Subpart U (this table) specifies the applicability of each paragraph in subpart A to subpart U.
63.1(c)(2)	No	Area sources are not subject to subpart U.
63.1(c)(3)	No	Reserved.
63.1(c)(4)	Yes	
63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications overridden by this table.
63.1(d)	No	Reserved.
63.1(e)	Yes	
63.2	Yes	§ 63.482 of subpart U specifies those subpart A definitions that apply to subpart U.
63.3	Yes	
63.4(a)(1)–63.4(a)(3)	Yes	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)	Yes	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes	
63.5(b)(4)	Yes	
63.5(b)(5)	Yes	
63.5(b)(6)	No	§ 63.480(i) of subpart U specifies requirements.
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes	
63.5(d)(1)(ii)	Yes	Except that for affected sources subject to subpart U, emission estimates specified in § 63.5(d)(1)(ii)(H) are not required.
63.5(d)(1)(iii)	No	§ 63.506(e)(5) of subpart U specifies Notification of Compliance Status requirements.
63.5(d)(2)	xINo.	
63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply.
63.5(d)(4)	Yes	
63.5(e)	Yes	
63.5(f)(1)	Yes	
63.5(f)(2)	Yes	Except that where § 63.5(d)(1) is referred to, § 63.5(d)(1)(i) does not apply.
63.6(a)	Yes	
63.6(b)(1)	Yes	

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART U AFFECTED SOURCES—Continued

Reference	Applies to subpart U	Comment
63.6(b)(2)	Yes	
63.6(b)(3)	Yes	
63.6(b)(4)	Yes	
63.6(b)(5)	Yes	
63.6(b)(6)	No	Reserved.
63.6(b)(7)	Yes	
63.6(c)(1)	Yes	§ 63.481 of subpart U specifies the compliance date.
63.6(c)(2)	Yes	
63.6(c)(3)	No	Reserved.
63.6(c)(4)	No	Reserved.
63.6(c)(5)	Yes	
63.6(d)	No	Reserved.
63.6(e)	Yes	Except the plan, and any records or reports of startup, shutdown and malfunction do not apply to Group 2 emission points, unless they are included in an emissions average.
63.6(f)(1)	Yes	
63.6(f)(2)	Yes	Except that in § 63.6(f)(2)(iii)(D), paragraph 63.7(c) does not apply.
63.6(f)(3)	Yes	Except that § 63.6(f)(2)(iii)(D) is not applicable.
63.6(g)	Yes	
63.6(h)	No	Subpart U does not require opacity and visible emission standards.
63.6(i)	Yes	Except for § 63.6(i)(15), which is reserved, and except that the requests for extension shall be submitted no later than the date on which the Precompliance Report is required to be submitted in § 63.506(e)(3)(i).
63.6(j)	Yes	
63.7(a)(1)	Yes	
63.7(a)(2)	No	§ 63.506(e)(5) of subpart U specifies submittal dates.
63.7(a)(3)	Yes	
63.7(b)	No	§ 63.504(a)(4) of subpart U specifies notification requirements.
63.7(c)	No	Except if the owner or operator chooses to submit an alternative nonopacity emission standard for approval under § 63.6(g).
63.7(d)	Yes	
63.7(e)	Yes	Except that performance tests must be conducted at maximum representative operating conditions. In addition, some of the testing requirements specified in subpart U are not consistent with § 63.7(e)(3).
63.7(f)	No	Subpart U specifies applicable test methods and provides alternatives.
63.7(g)	Yes	Except that references to the Notification of Compliance Status report in 63.9(h) of subpart A are replaced with the requirements in § 63.506(e)(5) of subpart U.
63.7(h)	Yes	Except § 63.7(h)(4)(ii) is not applicable, since the site-specific test plans in § 63.7(c)(3) are not required.
63.8(a)(1)	Yes	
63.8(a)(2)	No	
63.8(a)(3)	No	Reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	Subpart U specifies locations to conduct monitoring.
63.8(b)(3)		
63.8(c)(1)(i)	Yes	
63.8(c)(1)(ii)	No	
63.8(c)(1)(iii)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	§ 63.505 of subpart U specifies monitoring frequency.
63.8(c)(5)–63.8(c)(8)	No	
63.8(d)	No	
63.8(e)	No	
63.8(f)(1)–63.8(f)(3)	Yes	
63.8(f)(4)(i)	No	Timeframe for submitting request is specified in § 63.506(f) of subpart U.
63.8(f)(4)(ii)	No	
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	Subpart U does not require CEM's.
63.8(g)	No	Data reduction procedures specified in § 63.506(d) of subpart U.
63.9(a)	Yes	
63.9(b)	No	Subpart U does not require an initial notification.
63.9(c)	Yes	
63.9(d)	Yes	
63.9(e)	No	
63.9(f)	No	Subpart U does not require opacity and visible emission standards.
63.9(g)	No	
63.9(h)	No	§ 63.506(e)(5) of subpart U specifies Notification of Compliance Status requirements.

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART U AFFECTED SOURCES—Continued

Reference	Applies to subpart U	Comment
63.9(i)	Yes	
63.9(j)	No	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)	Yes	
63.10(b)(3)	No	§63.480(b) of subpart U requires documentation of sources that are not affected sources.
63.10(c)	No	§63.506 of subpart U specifies recordkeeping requirements.
63.10(d)(1)	Yes	
63.10(d)(2)	No	
63.10(d)(3)	No	Subpart U does not require opacity and visible emission standards.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	Except that reports required by §63.10(d)(5)(i) shall be submitted at the same time as Periodic Reports specified in §63.506(e)(6) of subpart U. The startup, shutdown, and malfunction plan, and any records or reports of startup, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.
63.10(e)	No	
63.10(f)	Yes	
63.10(d)(4)	Yes	
63.11	Yes	
63.12	Yes	
63.13	Yes	
63.14	Yes	
63.15	Yes	

TABLE 2. APPLICABILITY OF SUBPARTS F, G, & H TO SUBPART U AFFECTED SOURCES

Reference	Applies To subpart U	Comment	Applicable section of subpart U
Subpart F			
63.100	No		
63.101	Yes	Several definitions from 63.101 are incorporated by reference into 63.482	63.482
63.102–63.109	No		
Subpart G			
63.110	No		
63.111	Yes	Several definitions from 63.111 are incorporated by reference into 63.482	63.482
63.112	No		
63.113–63.118	Yes	With the differences noted in 63.485(b) through 63.485(k)	63.485
63.119–63.123	Yes	With the differences noted in 63.484(c) through 63.484(q)	63.484
63.124–63.125	No	Reserved	
63.126–63.130	No		
63.131–63.147	Yes	With the differences noted in 63.501(a)(1) through 63.501(a)(8)	63.501
63.148	Yes	With the differences noted in 63.484(c) through 63.484(q) and 63.501(a)(1) through 63.501(a)(8).	63.484 and 63.501
63.149	No	Reserved	
63.150(a) through 63.150(f).	No		
63.150(g)(1) and 63.150(g)(2).	No		
63.150(g)(3)	Yes		63.503(g)(3)
63.150(g)(4)	No		
63.150(g)(5)	Yes		63.503(g)(5)
63.150(h)(1) and 63.150(h)(2).	No		
63.150(h)(3)	Yes		63.503(h)(3)
63.150(h)(4)	No		
63.150(h)(5)	Yes		63.503(h)(5)
63.150(i) through 63.150(o).	No		
63.151–63.152	No		
Subpart H			
63.160–63.193	Yes	Subpart U affected sources must comply with all requirements of subpart H	63.502

TABLE 3.—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure[a] (kilopascals)
75 ≤ capacity < 151	≥13.1
151 ≤ capacity	≥5.2

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 4.—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 5.—KNOWN ORGANIC HAP FROM ELASTOMER PRODUCTS

Organic HAP/chemical name (CAS No.)	Elastomer Product/Subcategory											
	BR	EPI	EPR	HBR	HYP	NEO	NBL	NBR	PBR/SBRS	PSR	SBL	SBRE
Acrylonitrile (107131)							✔	✔				
1,3 Butadiene (106990)							✔	✔	✔		✔	✔
Carbon Tetrachloride (56235)					✔							
Chlorobenzene (108907)					✔							
Chloroform (67663)					✔							
Chloroprene (126998)						✔						
Epichlorohydrin (106898)		✔										
Ethylbenzene (100414)	✔										✔	
Ethylene Dichloride (75343)												
Ethylene Oxide (75218)		✔								✔		
Formaldehyde (50000)										✔		
Hexane (100543)	✔		✔						✔		✔	✔
Methanol (67561)	✔								✔			
Methyl Chloride (74873)	✔				✔							
Propylene Oxide (75569)		✔										
Styrene (100425)									✔		✔	✔
Toluene (108883)		✔	✔			✔			✔		✔	✔
Xylenes (1330207)	✔										✔	

AAAACAS No. = Chemical Abstract Service Number.
BR = Butyl Rubber.
EPI = Epichlorohydrin Rubber.
EPR = Ethylene Propylene Rubber.
HBR = Halobutyl Rubber.
HYP = Hypalon™.
NEO = Neoprene.
NBL = Nitrile Butadiene Latex.
NBR = Nitrile Butadiene Rubber.
PBR/SBRS = Polybutadiene and Styrene Butadiene Rubber by Solution.
PSR = Polysulfide Rubber.
SBL = Styrene Butadiene Latex.
SBR = Styrene Butadiene Rubber by Emulsion or Solution.
[a] 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:
$R-(OCH_2CH_2)_n-OH$

TABLE 6.—GROUP 1 BATCH FRONT-END PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature[a]	1. Continuous records as specified in §63.491(e)(1)[b]. 2. Record and report the average firebox temperature measured during the performance test—NCS.[c]

TABLE 6.—GROUP 1 BATCH FRONT-END PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Carbon Adsorber[f]	Total regeneration stream mass flow during carbon bed regeneration cycle(s), 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 performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is above the maximum mass flow rate established in the NCS or operating permit—PR.[d,e]
Carbon Adsorber[f]	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s). 2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s) measured during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum temperature established in the NCS or operating permit—PR.[d,e]
All Control Devices	Presence of flow diverted to the atmosphere from the control device *or*.	1. Hourly records of whether the flow indicator was operating during batch emission episodes selected for control and whether flow was detected at any time during the hour, as specified in §63.491(e)(3). 2. Record and report the times and durations of all periods during batch emission episodes selected for control when emission are diverted through a bypass line or the flow indicator is not operating—PD.[d]
All Control Devices	Monthly inspections of sealed valves	1. Records that monthly inspections were performed as specified in §63.491(e)(4)(i). 2. Record and report all monthly inspections that show the valves are not closed or the seal has been changed—PR.[d]
Absorber, Condenser, and Carbon Adsorber (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 as specified in §63.491(e)(1).[b] 2. Record and report the average concentration level or reading measured during the performance test—NCS. 3. Record the batch cycle daily average concentration level or reading as specified in §63.491(e)(2). 4. Report all batch cycle daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d,e]

[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 records" is defined in §63.111 of subpart G.
[c] NCS = Notification of Compliance Status described in §63.506(e)(5).
[d] PR = Periodic Reports described in §63.506(e)(6) of this subpart.
[e] The periodic reports shall include the duration of periods when monitoring data are not collected as specified in §63.506(e)(6)(iii)(C) of this subpart.
[f] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 7.—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR CONTINUOUS AND BATCH FRONT-END PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS

Control/Recovery device	Parameters to be monitored	Established operating parameter(s)
Thermal Incinerator	Firebox temperature	Minimum temperature.

TABLE 7.—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR CONTINUOUS AND BATCH FRONT-END PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS—Continued

Control/Recovery device	Parameters to be monitored	Established operating parameter(s)
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed.	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater	Firebox temperature	Minimum temperature.
Scrubber for halogenated vents	Ph of scrubber effluent; and scrubber liquid flow rate.	Minimum pH; and minimum flow rate.
Absorber	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Minimum temperature; and minimum specific gravity.
Condenser	Exit temperature	Maximum temperature.
Carbon absorber	Total regeneration stream mass flow during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum mass flow; and maximum temperature.
Other devices (or as an alternate to the above)[a].	HAP concentration level or reading at outlet of device.	Maximum HAP concentration or reading.

[a] Concentration is measured instead of an operating parameter.

TABLE 8.—SUMMARY OF COMPLIANCE ALTERNATIVE REQUIREMENTS FOR THE BACK-END PROCESS PROVISIONS

Compliance alternative	Parameter to be monitored	Requirements
Compliance Using Stripping Technology, Demonstrated through Periodic Sampling [§ 63.495(b)].	Residual organic HAP content in each sample of crumb or latex.	(1) If batch stripping is used, at least one representative sample is to be taken from every batch. (2) If continuous stripping is used, at least one representative sample is to be taken each operating day.
	Quantity of Material (weight of latex or dry crumb rubber) represented by each sample.	(1) Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.
Compliance Using Stripping Technology, Demonstrated through Stripper Parameter Monitoring [§ 63.495(c)].	At a minimum, temperature, pressure, steaming rates (for steam strippers), and some parameter that is indicative of residence time..	(1) Establish stripper operating parameter levels for each grade in accordance with § 63.505(e). (2) Continuously monitor stripper operating parameters. (3) If hourly average parameters are outside of the established operating parameter levels, a crumb or latex sample shall be taken in accordance with § 63.495(c)(3)(ii).
Determining Compliance Using Control or Recovery Devices [§ 63.496].	Parameters to be monitored are described in Table 3 of subpart G..	Comply with requirements listed in Table 3 of subpart G, except for the requirements for halogenated vent stream scrubbers.

[FR Doc. 96–21941 Filed 9–4–96; 8:45 am]
BILLING CODE 6560–50–P

G. Submission to Congress and the General Accounting Office

Under section 801(a)(1)(A) of the APA, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), EPA submitted, by the effective date of this rule, a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller General of the General Accounting Office. This rule is not a "major rule" as defined by APA § 804(2), as amended.

As noted above, EPA is issuing this action as rulemaking. There is a question as to whether this action is a rule of "particular applicability", under section 804(3)(A) of APA as amended by SBREFA—and thus exempt from the congressional submission requirements—because this rule applies only to named states. In this case, EPA has decided to err on the side of submitting this rule to Congress, but will continue to consider this issue of the scope of the exemption for rules of "particular applicability".

H. Paperwork Reduction Act

This rule does not contain any information collection requirements which require OMB approval under the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

I. Judicial Review

Under CAA Section 307(b)(1), a petition to review today's action may be filed in the Court of Appeals for the District of Columbia within 60 days of July 10, 1996.

Dated: July 3, 1996.

Mary D. Nichols,

Assistant Administrator.

[FR Doc. 96–17545 Filed 7–9–96; 8:45 am]

BILLING CODE 6560–50–M

40 CFR Part 63

[AD–FRL–5531–3]

NESHAPS

Approval of State Programs and Delegation of Federal Authorities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: This action revises the "Approval of State Programs and Delegation of Federal Authorities" (subpart E). The amendments are being made to clarify regulatory text, reduce administrative burden and provide more flexibility to States using this rulemaking. Additionally, today's action does not have any environmental impact. As a result, the Agency does not anticipate receiving adverse comments. Consequently, the amendments are being issued as a direct final rule.

DATES: The direct final rule will be effective August 19, 1996 unless significant, adverse comments are received by August 9, 1996. If significant, timely adverse comments are received on the direct final rule, the direct final rule will be withdrawn.

ADDRESSES: *Comments.* Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–96–09, Room M–1500, U.S. EPA, 401 M Street, SW., Washington, DC 20460. The EPA requests that a separate copy also be sent to the contact person listed below.

FOR FURTHER INFORMATION CONTACT: Mr. Gilbert Wood at (919) 541–5272 or Ms. Sheila Q. Milliken at (919) 541–2625, Integrated Implementation Group, Information Transfer and Program Integration Division (MD–12), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially affected by this action are State, local, or tribal governments that voluntarily implement Clean Air Act (Act) section 112 rules, emission standards, or requirements. This action does not regulate emission sources directly. Regulated categories and entities include:

Category	Examples of regulated entities
State, local, tribal governments.	State, local, or tribal governments that voluntarily request approval of rules or programs to be implemented in place of Act section 112 rules, emission standards or requirements or voluntarily request delegation of unchanged section 112 rules.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. The existing procedures and criteria for requesting and receiving approval of these State, local, or tribal government rules or programs or voluntarily requesting delegation of unchanged section 112 rules are in sections 63.90 through 63.95 of this subpart.

On November 26, 1993 (58 FR 62262), the EPA promulgated in the **Federal Register** guidance relating to the approval of State programs and delegation of Federal authorities under the authority of section 112(l) of the Act. Section 112(l)(2) of the Act requires the EPA to publish guidance useful to States in developing programs for implementing and enforcing emission standards and other requirements for hazardous air pollutants (HAP). The use of delegation under section 112(l) is voluntary on the part of the States. The regulations were promulgated as subpart E in 40 CFR part 63.

Today's action modifies the subpart E final regulation to improve clarity of administrative procedures and eliminate unnecessary and, in some cases, impractical requirements imposed on the States. Today's changes do not significantly modify the requirements of the regulation. The revisions are discussed in the order in which they appear in the subpart E regulation. If timely significant adverse comments are received on any amendment of this direct final rule, that amendment of the direct final rule will be withdrawn and all such comments will be addressed in a subsequent final rule based on the proposed rule contained in the proposed rules section of this **Federal Register** that addresses issues in this direct final rule. If no timely significant adverse comments are received on this direct final rule, then the direct final rule will become effective August 19, 1996 and no further action is contemplated on the parallel proposal published today.

Preamble Outline

The following outline is provided to aid in locating information in this preamble.

I. Description of Changes
  A. Approval of State Mechanism to Receive Delegation of Existing and Future Unchanged Federal Section 112 Standards and Requirements
  B. Deletion of 6-month Reporting Requirement
  C. Additional Language Regarding Implementation of Chemical Safety Hazard Investigation Board Requirement
  D. Approval of State Rules and Programs Designed to Limit Potential to Emit (PTE)
II. Unfunded Mandates Reform Act
III. Administrative
  A. Paperwork Reduction Act
  B. Executive Order 12866 Review
  C. Regulatory Flexibility Act
  D. Submission to Congress and the General Accounting Office

I. Description of Changes

A. Approval of State Mechanism to Receive Delegation of Existing and Future Unchanged Federal Section 112 Standards and Requirements

Section 63.91 of the subpart E rule establishes a process for straight delegation of individual maximum achievable control technology (MACT) standards after they are promulgated, but it does not include a process for approving a program for delegation of all future MACT standards through a single, advance program approval. State and local agencies have asked for a more streamlined method for taking delegation of future and existing unchanged Federal section 112 standards and requirements.

The EPA agrees with the merit of a program that will allow State and local agencies to receive upfront approval of the mechanism with which they would take delegation of existing and future unchanged Federal section 112 standards. Such a program would eliminate the need for State and local agencies to submit individual requests for delegation of unchanged Federal section 112 standards on a rule-by-rule basis. Regional Offices would benefit by receiving early identification of States' intentions for receiving delegation. State and local agencies would have minimal administrative burden in submitting their requests for approval.

The EPA established policy for such a process for sources subject to part 70 permitting through a memorandum entitled, "Straight Delegations Issues Concerning Sections 111 and 112 Requirements and Title V," dated December 10, 1993, from John Seitz, Director, Office of Air Quality Planning and Standards, U.S. EPA. A similar program for sources not subject to part 70 is detailed in the revised enabling guidance for subpart E ("Interim Enabling Guidance for the Implementation of 40 CFR part 63, subpart E," dated November 1993, EPA–453/R–93–040). The EPA intends to codify the policy described in the memorandum and guidance in this direct final rulemaking. Therefore, EPA is making the necessary revisions to the subpart E rule to include a process of approving State mechanisms for receiving delegation of existing and future unchanged Federal section 112 standards and requirements consistent with its current policy. Submittals previously approved before today's action will not be affected. Revisions are being made to sections 63.90 and 63.91 which specifically indicate that States can request upfront EPA approval of the State's mechanism for taking delegation of future unchanged Federal section 112 standards and requirements.

B. Deletion of 6-Month Reporting Requirement

The subpart E rule currently contains a provision which requires 6-month reporting by sources of all required monitoring or testing for the State rule which replaces a Federal rule (§ 63.93(b)(4)(iv)). This requirement was originally placed in the subpart E rule to be consistent with requirements in the part 70 operating permit rule at 40 CFR part 70, § 70.6(a)(3)(iii)(A).

State and local agencies believe that the 6-month reporting requirement for regulated sources is duplicative of reporting requirements already included in individual MACT standards and the title V permit program regulations. They feel that this requirement is unnecessary and creates paperwork with little or no benefit.

An example of where this requirement could adversely affect a source is in the case where the MACT rule only requires yearly reporting. If a State wanted to substitute their rule for the Federal MACT rule, the source would be required to report every 6 months due to the existing subpart E requirement. Area sources do not trigger the 6-month reporting requirement of title V, and thus, should only be required to report yearly. Nonetheless, subpart E currently mandates 6-month reporting. Consequently, it imposes, an unnecessary additional burden on sources in States with delegated air toxics programs.

In this scenario, the EPA feels that there would be no value added in increasing the reporting requirement to a mandatory minimum of 6-months because EPA has already determined the frequency of reporting necessary to assure compliance in each MACT standard or in the General Provisions. In addition, since section 112(l) is voluntary, the 6-month reporting provision imposes an increased burden on sources whose States submit equivalent State rules or programs for EPA approval, and discourages States from accepting delegation of the Federal rule.

The EPA agrees that this requirement is not necessary as a general requirement and is revising section 63.93 by deleting § 63.93(b)(4)(iv).

C. Additional Language Regarding Implementation of Chemical Safety and Hazard Investigation Board Requirement

Section 112(r)(7)(B)(iii) requires coordination with the Chemical Safety and Hazard Investigation Board (CSHIB) on accident investigations. For consistency, the subpart E rule (sectic 63.95 (b)(4)(i)) reiterates this requirement. State and local agencies believe this language should be deleted because the CSHIB has not yet been established. Continued inclusion of this provision imposes a meaningless requirement. It should be noted, however, that the CSHIB may be convened at some later date. The EPA agrees that it is appropriate that the requirement not take effect until the CSHIB is convened. Consequently, section 63.95(b)(4)(i) is being revised to add the sentence, "This requirement will not take effect until the Chemical Safety and Hazard Investigation Board is convened."

D. Approval of State Rules and Programs Designed to Limit Potential to Emit (PTE)

Currently, a number of States are submitting, for EPA approval into the State Implementation Plan, rules and programs such as prohibitory rules and federally enforceable State operating permit programs (FESOP). There are a few hazardous air pollutants (for example methylene chloride) which are not regulated by the criteria pollutant program. Accordingly, when a State seeks Federal approval of these rules and programs, as they relate to such pollutants, the EPA approval will be given pursuant to section 112(l) of the Act.

The current subpart E rule does not expressly provide for approval of programs designed to limit sources' potential to emit hazardous air pollutants. As explained in various recent notices approving PTE programs for section 112 purposes, EPA believes the authority exists under section 112(l) of the statute to approve PTE programs. Promulgation of a rule expressly providing for such approvals is consistent with this statutory authority. Thus, the EPA is today revising subpart E to clarify that it may be used to approve State PTE programs for section 112 purposes, in order to ensure that an unintended "gap" does not exist for pollutants such as methylene chloride.

The EPA notes that it is currently reexamining its policy on PTE for the section 112, title V, and new source review programs. One possible outcome of this reexamination is that PTE limits will no longer have to be federally enforceable. However, EPA believes tha today's revision to subpart E is neutral with respect to this issue. The revision to subpart E merely clarifies that the rule may be used as a pathway for approval of State PTE programs. It does not in and of itself establish a

requirement that limits on PTE must be issued pursuant to a program approved by EPA. In other words, today's revision clarifies that subpart E may be used to approve a PTE program that a State chooses to submit, without addressing whether or why a State would make this choice.

II. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year.

Today's rule contains no Federal mandates (under the regulatory provisions of title II of the UMRA) for State, local, or tribal governments or the private sector. The UMRA generally excludes from the definition of "Federal intergovernmental mandate" duties that arise from participation in a voluntary Federal program. The EPA has also determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

III. Administrative

A. Paperwork Reduction Act

The information collection requirements of the previously promulgated subpart E rulemaking were submitted to and approved by the Office of Management and Budget (OMB). A copy of this Information Collection Request (ICR) document (with an OMB approval control number 2060–0264) may be obtained from the Regulatory Information Division (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460, or by calling (202) 260–2740.

Today's changes to the rulemaking may slightly reduce the information collection burden estimates made previously. Since the expected reduction will not be significant, the ICR has not been revised.

B. Executive Order 12866 Review

The subpart E rulemaking, promulgated on November 26, 1993 was considered a "significant regulatory action" under Executive Order 12866 (58 FR 5173, dated October 4, 1993) and submitted to OMB for review. According to the Executive Order, a "significant regulatory action is one that is likely to result in a rule that may:

(1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, of 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 obligations of recipients thereof; or

(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.

Today's action is not considered a "significant regulatory action" within the meaning of this Executive Order. The amendments issued today clarify the rule and change certain administrative requirements to increase the flexibility to States in terms of gaining approval of their respective State programs. Therefore, the EPA concludes these amendments do not need to undergo OMB review.

C. Regulatory Flexibility Act

EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. This rule will not increase, and is likely to reduce, regulatory burdens on small businesses. EPA has determined that this rule will have no adverse effect on small businesses.

D. Submission to Congress and the General Accounting Office

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

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: June 26, 1996.

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 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 *et seq.*

Subpart E—Approval of State Programs and Delegation of Federal Authorities

2. Section 63.90 is amended by adding a sentence after the third sentence and a sentence at the end of the introductory text to read as follows:

§ 63.90 Program overview.

* * * In this process, States may seek approval of a State mechanism for receiving delegation of existing and future unchanged Federal section 112 standards. * * * This subpart also establishes procedures for the approval of State rules or programs to establish limitations on the potential to emit pollutants listed in or pursuant to section 112(b) of the Act.

* * * * *

2. Section 63.91 is amended by revising paragraph (a) introductory text to read as follows:

§ 63.91 Criteria common to all approval options.

(a) Approval process. To obtain approval under this subpart of a rule or program that is different from the Federal rule, the criteria of this section and the criteria of either § 63.92, § 63.93 or § 63.94 must be met. For approval of State programs to implement and enforce Federal section 112 rules as promulgated without changes (except for accidental release programs), only the criteria of this section must be met. This includes State requests for upfront approval of their mechanism for taking delegation of future unchanged Federal section 112 standards and requirements as well as approval to implement and enforce unchanged Federal section 112 standards and requirements on a rule-by rule basis. For approval of State rules or programs to implement and enforce the Federal accidental release prevention program as promulgated without

changes, the requirements of this section and section § 63.95 must be met. In the case of accidental release prevention programs which differ from the Federal accidental release prevention program, the requirements of this section, § 63.95, and either § 63.92 or § 63.93 must be met. The Administrator may, under the authority of Section 112(l) and this subpart, also approve a State program designed to establish limits on the potential to emit of pollutants listed pursuant to Section 112(b) of the Clean Air Act. For a State's initial request for approval of any rule or program under this subpart, and except as otherwise specified under § 63.92, § 63.93, or § 63.94 for a State's subsequent requests for approval, the approval process will be the following:

* * * * *

§ 63.93 [Amended]

3. Section 63.93 is amended by removing paragraph (b)(4)(iv).

4. Section 63.95 is amended by revising paragraph (b)(4)(i) to read as follows:

§ 63.95 Additional approval criteria for accidental release prevention programs.

* * * * *

(b) * * *

(4) * * *

(i) The Chemical Safety and Hazard Investigation Board, particularly during accident investigation. This requirement will not take effect until the Chemical Safety and Hazard Investigation Board is convened; and

* * * * *

[FR Doc. 96–17323 Filed 7–9–96; 8:45 am]
BILLING CODE 6560–50–P

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40 CFR Part 180

[OPP–300414A; FRL–5381–4]

RIN 2070–AB78

Triphenyltin Hydroxide; Tolerance Revision

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is issuing a final tolerance rule for triphenyltin hydroxide. All domestic registrations of triphenyltin hydroxide for use on carrots, peanuts and peanut hulls have been cancelled and EPA is revoking these tolerances.

EFFECTIVE DATES: This regulation is effective August 9, 1996.

ADDRESSES: Written objections and hearing requests, identified by the docket number, [OPP–300414A], may be submitted to: Hearing Clerk (1900), Environmental Protection Agency, Rm. M3708, 401 M St., SW., Washington, DC 20460. A copy of any objections and hearing requests filed with the Hearing Clerk should be identified by the docket number and submitted to: Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. In person, bring copy of objections and hearing requests to Rm. 1132, CM #2, 1921 Jefferson Davis Hwy., Arlington, VA 22202. Fees accompanying objections shall be labeled "Tolerance Petition Fees" and forwarded to: EPA Headquarters Accounting Operations Branch, OPP (Tolerance Fees); P.O. Box 360277M, Pittsburgh, PA 15251.

An electronic copy of objections and hearing requests filed with the Hearing Clerk may be submitted to OPP by sending electronic mail (e-mail) to:opp-docket@epamail.epa.gov. Copies of electronic objections and hearing requests must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Copies of electronic objections and hearing requests will also be accepted on disks in WordPerfect 5.1 file format or ASCII file format. All copies of electronic objections and data in electronic form must be identified by the docket number [OPP–300414A]. No Confidential Business Information (CBI) should be submitted through e-mail. Copies of electronic objections and hearing requests on this rule may be filed online at many Federal Depository Libraries. Additional information on electronic submissions can be found below in this document.

FOR FURTHER INFORMATION CONTACT: Jude Andreasen, Special Review and Reregistration Division (7508W), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Telephone: (703) 308–8016; e-mail: andreasen.jude@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: In the **Federal Register** of March 6, 1996 (61 FR 8901)(FRL–5347–7), EPA issued a proposed rule that gave notice that EPA intended to revoke tolerances for triphenyltin hydroxide on carrots, peanuts and peanut hulls. There were no comments or requests for referral to an advisory committee received in response to the proposed rule. The data submitted with the proposal and other relevant material have been evaluated and discussed in the proposed rule. Based on the data and information considered, the Agency concludes that the tolerances are not needed to protect the public health. Therefore, the tolerances are being removed as set below.

Any person adversely affected by this regulation may, within 30 days after publication of this document in the **Federal Register**, file written objections to the regulation and may also request a hearing on those objections. Objections and hearing requests must be filed with the Hearing Clerk, at the address given above (40 CFR 178.20). A copy of the objections and/or hearing requests filed with the Hearing Clerk should be submitted to the OPP docket for this rulemaking. The objections submitted must specify the provisions of the regulation deemed objectionable and the grounds for the objections (40 CFR 178.25). Each objection must be accompanied by the fee prescribed by 40 CFR 180.33(i). If a hearing is requested, the objections must include a statement of the factual issue(s) on which a hearing is requested, the requestor's contentions on such issues, and a summary of any evidence relied upon by the objector (40 CFR 178.27). A request for a hearing will be granted if the Administrator determines that the material submitted shows the following: There is genuine and substantial issue of fact; there is a reasonable possibil[illegible] that available evidence identified by requestor would, if established, resolv[illegible] one or more of such issues in favor of the requestor, taking into account uncontested claims or facts to the contrary; and resolution of the factual issue(s) in the manner sought by the requestor would be adequate to justify the action requested (40 CFR 178.32).

A record has been established for this rulemaking under docket number OPP–300414A (including comments and data submitted electronically as described below). A public version of this record, including printed, paper versions of electronic comments, which does not include any information claimed as CBI, is available for inspection from 8 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The public record is located in Room 1132 of the Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA.

Electronic comments can be sent directly to EPA at:

opp-docket@epamail.epa.gov

Electronic comments must be submitted as an ASCII file avoiding t[illegible] use of special characters and any form of encryption.

Federal Register

Monday
July 1, 1996

Part III

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations; Final Rule

NESHAP

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5516–7]

RIN 2060–AE05

National Emission Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates National Emission Standards for Hazardous Air Pollutants (NESHAP) under the authority of Section 112 of the Clean Air Act for off-site waste and recovery operations that emit hazardous air pollutants (HAP). The NESHAP applies to specific types of facilities that are determined to be major sources of HAP emissions and receive certain wastes, used oil, and used solvents from off-site locations for storage, treatment, recovery, or disposal at the facility. The rule requires use of maximum achievable control technology (MACT) to reduce HAP emissions from tanks, surface impoundments, containers, oil-water separators, individual drain systems and other material conveyance systems, process vents, and equipment leaks.

The final rule is estimated to reduce HAP emissions from the source category by approximately 82 percent or 43,000 megagrams per year (47,000 tons per year). In addition, application of MACT required by this rule will achieve similar levels of reduction in volatile organic compounds (VOC) emissions from the source category. The human health effects associated with exposure to the HAP emissions can range from mild to severe and may include reduction of lung function, respiratory irritation, and neurotoxic effects. Similarly, emissions of VOC are associated with a variety of adverse health and welfare impacts.

The HAP and VOC emissions reductions achieved by implementing this rule in combination with similar rules will achieve the primary Clean Air Act goal to "enhance the quality of the Nation's air resources so as to promote the public health and welfare and productive capacity of its population." The intent of this final rule is to protect public health by requiring the maximum degree of reduction of HAP emissions from new and existing sources, taking into consideration the cost of achieving such emission reduction; any non air quality, health, and environmental impacts; and energy requirements.

EFFECTIVE DATE: July 1, 1996. See the Supplementary Information section concerning judicial review.

ADDRESSES: *Docket.* The docket for this rulemaking containing the information considered by the EPA in development of the final rule is Docket No. A–92–16. This docket is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday except for Federal holidays, at the following address: U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street SW, Washington, D.C. 20460; telephone: (202) 260–7548. The docket is located at the above address in Room M–1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

Basis and Support Document. A basis and support document, titled "National Emission Standards for Hazardous Air Pollutants, Off-Site Waste and Recovery Operations—Basis and Support for Final Standards," has been prepared summarizing the significant public comments made on the proposed rule and the Administrator's response to those comments. This document is available in the docket for this rulemaking, and also is available for downloading from the Technology Transfer Network (see below) under the Clean Air Act Amendments, Recently Signed Rules.

Technology Transfer Network. The Technology Transfer Network is one of the EPA's electronic bulletin boards. The Technology Transfer Network provides information and technology exchange in various areas of air pollution control. The service is free except for the cost of a phone call. Dial (919) 541–5472 for up to a 14,400 bps modem. If more information on the Technology Transfer Network is needed call the HELP line at (919) 541–5384.

FOR FURTHER INFORMATION CONTACT: For information concerning applicability and rule determinations, contact the appropriate regional representative:

Region I: Greg Rosco, Air Programs Compliance Branch Chief, U.S. EPA, Region I, ASO, JFK Federal Building, Boston, MA 02203, (617) 565–3221

Region II: Kenneth Eng, Air Compliance Branch Chief, U.S. EPA, Region II, 290 Broadway, New York, NY 10007–1866, (212) 637–4000

Region III: Bernard Turlinski, Air Enforcement Branch Chief, U.S. EPA, Region III, 3AT10, 841 Chestnut Building, Philadelphia, PA 19107, (215) 597–3989

Region IV: Jewell A. Harper, Air Enforcement Branch, U.S. EPA, Region IV, 345 Courtland Street, N.E., Atlanta, GA 30365, (404) 347–2904

Region V: George T. Czerniak, Jr., Air Enforcement Branch Chief, U.S. EPA, Region V, 5AE–26, 77 West Jackson Street, Chicago, IL 60604, (312) 353–2088

Region VI: John R. Hepola, Air Enforcement Branch Chief, U.S. EPA, Region VI, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202–2733, (214) 655–7220

Region VII: Royan Teeter, Air Planning and Development Branch, U.S. EPA, Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7609

Region VIII: Douglas M. Skie, Air and Technical Operations Branch Chief, U.S. EPA, Region VIII, 999 18th Street, Suite 500, Denver, CO 80202-2466, (303) 312–6432

Region IX: Colleen W. McKaughan, Air Compliance Branch Chief, U.S. EPA, Region IX, 75 Hawthorne Street, San Francisco, CA, (415) 744–1198

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For information concerning the analyses performed in developing this rule, contact Ms. Michele Aston, Waste and Chemical Processes Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, telephone number (919) 541–2363.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by this action include the following types of facilities if the facility receives off-site material, as defined in the rule, and the facility is determined to be a major source of HAP emissions as defined in 40 CFR 63.2.

Category	Examples of regulated entities
Industry	Businesses that operate any of the following: hazardous waste treatment, storage, and disposal facilities (TSDF); RCRA exempt hazardous wastewater treatment facilities; nonhazardous wastewater treatment facilities other than publicly-owned treatment works; used solvent recovery plants; RCRA exempt hazardous waste recycling operations; used oil re-refineries.
Federal Government	Federal agency facilities that operate any of the waste management or recovery operations that meet the description of the entities listed under the "Industry" category in this table.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by the action, you should carefully examine the applicability criteria in § 63.680 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

Judicial Review

The NESHAP for off-site waste and recovery operations was proposed in the Federal Register on October 13, 1994 (59 FR 51913). This Federal Register action announces the EPA's final decisions on the rule. Under section 307(b)(1) of the Act, judicial review of the NESHAP is available only by the 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 final 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.

The following outline is provided to aid in reading this preamble to the final rule.

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I. Background

A. Section 112 Statutory Requirements

Section 112 of the Clean Air Act (Act) regulates stationary sources of hazardous air pollutants (HAP). This section of the Act was comprehensively amended under Title III of the 1990 Amendments to the Clean Air Act (1990 Amendments). In the 1990 Amendments, Congress listed 189 chemicals, compounds, or groups of chemicals as HAP. The EPA is directed by the 1990 Amendments to regulate the emission of these HAP from stationary sources by establishing national emission standards (i.e., National Emission Standards for Hazardous Air Pollutants or NESHAP).

Each NESHAP for a specific source category is technology-based and is developed based on application of Maximum Achievable Control Technology (MACT). Section 112(d)(2) of the 1990 Amendments defines MACT as "* * * the maximum degree of reduction in emissions of the HAP * * * 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 for new or existing sources in the category or subcategory to which such emission standard applies * * *."

B. Listing of Source Category

Section 112(c) of the 1990 Amendments required the EPA to develop and publish a list of source categories that emit HAP for which NESHAP will be developed. This list is required under Section 112 to include all known categories and subcategories of "major sources." The term "major source" is defined by the Act to mean "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 (ton/yr) or more of any HAP or 25 ton/yr or more of any combination of HAP."

The EPA published its initial list of HAP emission source categories in the Federal Register on July 16, 1992 (57 FR 31576). On this list, the EPA included one source category which the Agency intended to represent those waste management and recovery operations that would not be subject to air standards under other listed NESHAP source categories. This source category was titled on the initial list as "solid waste treatment, storage, and disposal facilities." After publication of the initial source category list, the EPA decided that it was appropriate to change the title of the NESHAP source category to better reflect the types of operations for which the EPA intended to establish air standards under a NESHAP for the source category. Therefore at proposal, the EPA changed the title of the source category subject to "off-site waste and recovery operations" (see 59 FR 51918, October 13, 1994).

For the purpose of developing the rules for this source category, the term "off-site" is used in the context that the source category represents those waste management and recovery operations which receive material delivered, transferred, or otherwise moved to the plant or facility where the operation is located from a separate site. In other words, the material placed in the waste management or recovery operation is not produced or generated at the same site where the operation is located.

C. Summary of Public Participation in Rule Development

The EPA published an advance notice of proposed rulemaking (ANPR) in the Federal Register on December 20, 1993 (58 FR 66336) to inform owners and operators of the potentially affected waste management and recovery operations and the general public of the planned scope of this NESHAP rulemaking. In the ANPR, the EPA requested information that would aid the Agency in the development of the rule. A 30-day comment period, from December 20, 1993 to January 19, 1994 was provided for interested parties to submit comments on the ANPR. The comments received by the EPA were

considered in developing the proposed rule.

The EPA proposed the Off-Site Waste and Recovery Operations NESHAP on October 13, 1994 (refer to 59 FR 51913). A proposed regulatory text for the rule and the background information document (BID) (EPA–453/R–94–070a) that presented information used in the development of the proposed rule was made available to the public for review and comment. A 90-day comment period from October 13, 1994 to January 11, 1995 (an initial 60 days plus a 30-day extension) was provided to accept written comments from the public on the proposed rule. The opportunity for a public hearing was provided to allow interested persons to present oral comments to the EPA on the rulemaking. However, the EPA did not receive a request for a public hearing, so a public hearing was not held.

A total of 89 comment letters regarding the proposed Off-Site Waste and Recovery Operations NESHAP were received by the EPA. A copy of each comment letter is available for public inspection in the docket for the rulemaking (Docket No. A–92–16; see the ADDRESSES section of this notice for information on inspecting the docket). The EPA received 70 letters containing specific comments on the proposed Off-Site Waste and Recovery Operations NESHAP. The other 19 letters were regarding extension of the public comment period and requests for copies of the regulatory text. The EPA has had extensive follow-up discussions with various commenters regarding specific issues initially raised in their written comments that were submitted to the Agency during the comment period. Copies of correspondence and other information exchanged between the EPA and the commenters during the post-comment period are available for public inspection in the docket for the rulemaking.

All of the comments received by the EPA were reviewed and carefully considered by the Agency. Changes to the rule were made when the EPA determined it to be appropriate. A summary of the EPA's responses to selected major comments on the proposed rule is presented in Section IV of this notice. Additional responses to comments are presented in the basis and support document described in the ADDRESSES section of this notice.

D. Relationship of Rule to Other EPA Regulatory Actions

1. Clean Air Act

Owners and operators of sites at which are located waste management and recovery operations that are subject to Off-Site Waste and Recovery Operations NESHAP may also be subject to another NESHAP because of other operations conducted at the site. For example, a waste management or recovery operation receiving materials from off-site may be located at a synthetic organic chemical manufacturing plant that is subject to 40 CFR 63 subparts F, G, and H—National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (referred to hereafter in this notice as the "HON") or at a petroleum refinery that is subject to 40 CFR 63 subpart CC—National Emission Standards for Organic Hazardous Air Pollutants from Petroleum Refineries. At plants subject to both the Off-Site Waste and Recovery Operations NESHAP and another NESHAP, the Off-Site Waste and Recovery Operations NESHAP applies only to those specific waste management or recovery operations listed in the rule that receive off-site material. The Off-Site Waste and Recovery Operations NESHAP does not apply to other units or equipment components at the site that are not part of the waste management and recovery operations specified in the rule.

Some NESHAP already regulate air emissions from the off-site management of certain wastes containing HAP. To avoid duplication of requirements in these cases, the Off-Site Waste and Recovery Operations NESHAP does not apply to waste management units that either receive waste from units complying with all applicable regulations under the HON, or receive waste from units complying with all applicable requirements specified by § 61.342(b) under 40 CFR 61 subpart FF—National Emission Standards for Benzene Waste Operations for a plant at which the total annual benzene quantity is greater than or equal to 10 Mg/yr.

2. Resource Conservation and Recovery Act

The EPA establishes rules for the management of solid wastes under authority of the Resource Conservation and Recovery Act (RCRA). Under authority of subtitle C of RCRA, the EPA has established rules in 40 CFR parts 260 through 271 regulating the management of solid wastes determined to be hazardous waste. Municipal solid wastes and other types of nonhazardous solid wastes are regulated by rules established under authority of subtitle D of RCRA in 40 CFR Parts 257 and 258.

The Clean Air Act requires that the requirements of rules developed under the Act be consistent, but avoid duplication, with requirements of rules developed under RCRA. The final Off-Site Waste and Recovery Operations NESHAP includes several provisions to ensure that this directive of the Act is met. First, certain types of wastes regulated under RCRA are excluded outright from the definition of "off-site material" used to determine the applicability of the Off-Site Waste and Recovery Operation NESHAP. These wastes include household waste as defined in 40 CFR 258.2; waste that is generated by remedial activities required under the RCRA corrective action authorities (RCRA section 3004(u), 3004(v), or 3008(h)), CERCLA authorities, or similar Federal or State authorities; and radioactive mixed waste.

The EPA also is fully aware that at some sites managing hazardous wastes not generated onsite, the owner and operator of a hazardous waste treatment, storage, and disposal facility (TSDF) could be subject to both the Off-Site Waste and Recovery Operations NESHAP and RCRA air rules under subparts AA, BB, and CC of 40 CFR parts 264 and 265. At a particular TSDF, some waste management units may be required to use air emission controls under one or the other, but not both, the Off-Site Waste and Recovery Operations NESHAP and the RCRA rules. However, some other waste management units could be subject to using air emission controls to comply with both sets of rules. It is unnecessary for owners and operators of those waste management units subject to air standards under both sets of rules to perform duplicative testing and monitoring, keep duplicate sets of records, or perform other duplicative actions. The EPA has decided that the best way to eliminate any regulatory overlap is to amend the RCRA rules to exempt units that are using air emission controls in accordance with the requirements of Off-Site Waste and Recovery Operations NESHAP or any other applicable NESHAP. The EPA therefore plans to amend the RCRA rules this summer and expects that these revisions will be finalized prior to the effective dates of both rules.

3. Pollution Prevention Act

The Pollution Prevention Act of 1990 (42 U.S.C. 13101 et seq., Pub. L. 101–508, November 5, 1990) establishes the national policy of the United States for pollution prevention. This act declare that: (1) Pollution should be prevente or reduced whenever feasible; (2) pollution that cannot be prevented or reduced should be recycled or reused in

an environmentally-safe manner wherever feasible; (3) pollution that cannot be recycled or reused should be treated; and (4) disposal or release into the atmosphere should be chosen only as a last resort.

Opportunities for applying pollution prevention to the Off-Site Waste and Recovery Operations NESHAP are basically limited to treatment to remove HAP (e.g., treatment of waste prior to its disposal). The off-site waste and recovery operations source category consists only of operations used to manage certain materials that have already been generated at other locations such as a manufacturing plant. Thus, there are no pollution prevention practices such as modifying the manufacturing process to reduce the quantity of HAP contained in materials or to recycle the materials back to the process which can be implemented once the material arrives at a site at which waste management and recovery operations subject to the NESHAP are located. The EPA has incorporated the pollution prevention policy into the NESHAP by requiring off-site materials be treated to remove or destroy HAP prior to management in units open directly to the environment. Thus, to the extent possible, pollution prevention has been considered in the development of this rulemaking. The Off-Site Waste and Recovery Operations NESHAP is consistent with the pollution prevention policy.

II. Basis and Purpose

A. Purpose of Regulation

The Clean Air Act was created in part "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population" [Act section 101(b)(1)]. Title III of the 1990 Amendments establishes a control technology-based program to reduce stationary source emissions of HAP. The goal of section 112(d) of the 1990 Amendments is to apply such control technology to reduce emissions and thereby reduce the hazard of the HAP emitted from stationary sources.

This final rule is technology-based (i.e., based on application of MACT to off-site waste and recovery operations). The Clean Air Act strategy avoids the dependence on a risk-based approach which would be limited by incomplete information on what HAP are emitted, what level of emissions is occurring, what health and safety benchmarks are available to assess risk, what health effects may be caused by certain pollutants and how best to model these effects, among other things. Because of these issues a quantitative risk assessment of the potential effects from the HAP emitted from off-site waste and recovery operations is not included in this rulemaking.

The EPA does recognize that the degree of adverse effects to health can range from mild to severe. The extent and degree to which the health effects may be experienced is dependent upon: (1) The ambient concentrations observed in the area; (2) duration of exposures; and (3) characteristics of exposed individuals (e.g., genetics, age, preexisting health conditions, and lifestyle) which vary significantly with the population. Some of these factors are also influenced by source-specific characteristics (e.g., emission rates and local meteorological conditions) as well as pollutant specific characteristics such as toxicity.

On a nationwide basis, the off-site waste and recovery operations at the facilities regulated by this rule emit significant quantities of organic HAP. Implementation of Off-Site Waste and Recovery Operations NESHAP will result in substantial reductions of these organic HAP emissions to the atmosphere. The final Off-Site Waste and Recovery Operations NESHAP will require control of material streams containing 1 or more of 98 specified compounds listed in Table 1 of the rule. This table is subset of the 189 HAP compounds listed in the Clean Air Act. Following is a summary of the potential health and environmental effects associated with exposures, at some level, to the emitted pollutants that would be reduced by this NESHAP.

The range of potential human health effects associated with exposure to organic HAP include cancer, aplastic anemia, pulmonary (lung) structural changes, dyspnea (difficulty in breathing), upper respiratory tract irritation with cough, conjunctivitis, and neurotoxic effects (e.g., visual blurring, tremors, delirium, unconsciousness, coma, convulsions). The EPA estimates that implementation of the Off-Site Waste and Recovery Operations NESHAP will reduce nationwide organic HAP emissions by approximately 43,000 megagrams per year (Mg/yr). Thus, this rule has the potential for providing both cancer and noncancer related health benefits.

By requiring facilities to reduce organic HAP emitted from off-site waste and recovery operations, today's rule will also reduce emissions of volatile organic compounds (VOC). Many VOC react photochemically with nitrogen oxides in the atmosphere to form tropospheric ozone. A number of factors affect the degree to which VOC emission reductions will reduce ambient ozone concentrations.

Human laboratory and community studies have shown that exposure to tropospheric ozone levels that exceed the National Ambient Air Quality Standards (NAAQS) can result in various adverse health impacts such as alterations in lung capacity; eye, nose, and throat irritation; and aggravation of existing respiratory disease. Animal studies have shown increased susceptibility to respiratory infection and lung structure changes.

Among the welfare impacts from exposure to tropospheric ozone levels that exceed the ozone NAAQS are damage to selected commercial timber species and economic losses for commercially valuable crops such as soybeans and cotton. Studies have shown that exposure to ozone can disrupt carbohydrate production and distribution in plants. The reduction in carbohydrate production and allocation can lead to reduced root growth, reduced biomass or yield, reduced plant vigor (which can cause increased susceptibility to attack from insects and disease and damage from cold) and diminished ability to successfully compete with more tolerant species. These effects have been observed in native vegetation in natural ecosystems as well as for selected number of commercial trees and agricultural crops that have been studied.

Although the final Off-Site Waste and Recovery Operations NESHAP does not specifically require control of VOC emissions, the organic emission control technologies upon which the final rule is based also significantly reduce VOC emissions from the source category. The EPA conservatively estimates that implementation of the Off-Site Waste and Recovery Operations NESHAP will reduce nationwide VOC emissions from the source category by 52,000 Mg/yr. Therefore, it is anticipated that additional health and welfare benefits will be associated with this reduction in VOC emissions.

B. Source Category Description

The final Off-Site Waste and Recovery Operations NESHAP only applies to certain waste management and recovery operations at those sites determined to "major sources" as defined in section 112(a)(1) of the 1990 Amendments. This means those plants or facilities where the stationary sources located within a contiguous area and under common control emit or have the potential to emit, considering controls, in total 10 ton/yr or more of any single HAP or 25 ton/yr or more of any combination of

HAP. Waste management and recovery operations receiving materials from off-site that are located at plants or facilities which are area sources are not being regulated at this time. These area sources could be considered at a future date by the EPA for regulation as part of the area source strategy authorized under section 112(k) of the Act.

At proposal, the EPA identified the types of waste management and recovery operations the Agency was considering for inclusion in the off-site waste and recovery operations source category. In response to public comments on the proposed rule and considering decisions made by the Agency since proposal regarding other related rulemakings, the EPA has reconsidered the types of waste management and recovery operations to be regulated under the Off-Site Waste and Recovery Operations NESHAP. The EPA reviewed information used for the source category impact analysis at proposal and evaluated new information provided to the Agency since proposal by commenters. As a result of this review, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP should not apply to owners and operators of certain operations originally considered to be in the scope of the rulemaking. The rationale for including or excluding specific waste management or recovery operations in the final rule applicability is presented below.

Facilities where operations are conducted to treat, store, and dispose of wastes determined to be hazardous wastes under RCRA may be subject to organic air emission standards under 40 CFR parts 264 and 265. At these facilities, referred to under the RCRA rules as a hazardous waste treatment, storage, and disposal facility (TSDF), a RCRA hazardous waste may be generated at the same site where a TSDF is located, or may be generated at one site and then transported to a TSDF at a separate location. At TSDF where RCRA hazardous waste is received from off-site, certain types of waste management units such as wastewater treatment tanks and hazardous waste recycling units can be exempted from the air standards specified in 40 CFR parts 264 and 265. Many (but not all) TSDF are expected by the EPA to be located at sites that are major sources of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP be applicable to hazardous waste TSDF as well as to sites where waste or recovery operations managing hazardous waste are performed and the entire operation is exempted under RCRA from the air standards in subparts AA, BB, and CC under 40 CFR parts 264 and 265.

Wastewater treatment facilities are operated by public entities and private companies throughout the United States for the treatment of wastewaters other than those that are RCRA hazardous wastewaters. Publicly owned treatment works (POTW) are not included in the off-site waste operations source category because POTW are listed as a separate NESHAP source category. A review of nationwide survey data by the EPA indicates that privately-owned wastewater treatment plants are operated at some locations in the United States for which the predominate function performed at the site is to treat wastewaters received from off-site. Although a wastewater may not be a RCRA hazardous waste, this wastewater can still contain significant quantities of HAP. The EPA concluded this group of wastewater treatment plants would not be subject to other NESHAP and would likely include some individual facilities that are major sources of HAP emissions.

Used oils from motor vehicles and other sources can contain HAP. While the management of used oils which are recycled is regulated by separate rules promulgated by the EPA under section 3014 of RCRA, these RCRA rules do not specifically establish air standards for used oil management operations. A major portion of the used oil is processed for sale as fuel for burning in boilers, furnaces, and space heaters. The remainder of the recycled used oil is sent to facilities categorized as "used oil re-refiners." At these facilities the used oil is processed into base lube oil stocks and other products. The EPA determined that some used oil re-refining facilities are likely to be major sources of HAP emissions. Consequently, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP apply to operations that reprocess or re-refine used oil and are subject to regulation under 40 CFR 279 subpart F–Standards for Used Oil Processors and Refiners.

Another recovery operation analogous to used oil re-refining operations is solvent recovery operations. Organic solvents are used in many types of businesses to clean oils, grease, dirt, or other foreign matter from mechanical parts and like items. These used organic solvents are often collected and reprocessed by a company for re-sale as a product or for use by another company as a process feedstock. The EPA expects that some solvent recovery operations could be major sources of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP be applicable to operations that reprocess or re-refine used solvents except in situations where the operation is not part of a chemical, petroleum, or other manufacturing process that is required to use air emission controls by another subpart of 40 CFR part 63.

Many landfill facilities operated in the United States are used for disposal of waste received from off-site. Municipal solid waste (MSW) landfills are not included in the off-site waste and recovery operations source category because these facilities are listed as a separate NESHAP source category. However, other landfill facilities operate in the United States which are not MSW landfills and accept only nonhazardous wastes. It is the EPA's understanding that landfills used for disposal of construction/demolition debris do not accept wastes containing significant amounts of organic HAP. One commeter submitted to the EPA additional information regarding operations, waste characterizations, and HAP emission estimates from industrial waste landfills. The potential for some industrial waste landfills to be a major source is possible due to special circumstances (e.g., accepting predominately soils contaminated with organics). However, under current operating practices, the EPA concluded that it is unlikely that any of the existing industrial waste landfills nationwide is a major source of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP not be applicable to any landfill facilities.

Some wastes generated during oil and gas exploration and production (E&P) are subsequently transferred to operations at other locations for centralized treatment or disposal. At proposal, the EPA identified these centralized treatment and disposal operations as waste management operations that would be subject to the Off-Site Waste and Recovery Operations NESHAP. Additional information was received by the EPA from commenters on the proposed rule regarding the nature of E&P operations as presently practiced in oil and gas production fields. Upon further consideration, the EPA decided it is not necessary to include E&P waste operations under the final Off-Site Waste and Recovery Operations NESHAP. Instead, the EPA is planning to address these sources under the Oil and Gas Production NESHAP currently being developed by the Agency.

C. Definition of Affected Source

For the purpose of implementing NESHAP under 40 CFR Part 63, "affected source" is defined to mean the stationary source, or 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 is to designate the "affected source" for the purposes of that standard. Within a source category, the EPA decides which HAP emission sources (i.e., emission points or groupings of emission points) are most appropriate for establishing separate emission standards in the context of the Clean Air Act statutory requirements and the industry operating practices for the particular source category.

At proposal, the EPA considered different options for defining "affected source" for the Off-Site Waste and Recovery Operations NESHAP ranging from using a broad definition (e.g., the entire plant or facility site) to narrow definitions (e.g., individual emission points) (59 FR 51923). The EPA proposed using the narrowest definition of affected source for the Off-Site Waste and Recovery Operations NESHAP by defining the affected sources to be each of the individual emission point types identified for the rule (e.g., each individual tank). The EPA received comments that its proposed designation of affected source for the Off-Site Waste and Recovery Operations NESHAP was too restrictive and would complicate an owner's or operator's determination of when reconstruction of a source has occurred triggering the requirement to comply with the standards for new sources. Upon consideration of these comments, the EPA decided that using a broader definition is a more appropriate approach for defining the affected sources for the Off-Site Waste and Recovery Operations NESHAP.

Designating the affected source for the Off-Site Waste and Recovery Operations NESHAP as the entire plant site was rejected by the EPA. This approach would allow the MACT floor to be established by the plant-wide emission reduction indicative of the level that is achieved by the best performing 12 percent of the existing sources. Application of a single MACT floor to all of the emission points located at the plant site and selected for control under the Off-Site Waste and Recovery Operations NESHAP would be difficult, if not technically infeasible, for several reasons. First, the EPA's data base for the off-site waste and recovery operations NESHAP lacks sufficient data regarding the type of information required to implement this approach for the source category. Also, the mechanism by which organic HAP are emitted to the atmosphere and the types of controls relevant for reducing these air emissions is not the same for all of the emission point types identified for off-site waste and recovery operation source category. For example, covers frequently are installed on tanks to control air emissions while work practice programs are used to control air emissions from equipment leaks. Furthermore, not all waste management and recovery operations at a particular plant site may be subject to this rulemaking because they are not used to manage off-site material, as defined in the rule.

A second approach is to designate several different affected sources by grouping the similar emission points for each waste management and recovery operation used at the plant site to manage off-site materials. Under this approach, each affected source consists of the group of similar emission point types for the entire sequence of units or equipment components in which a particular off-site material is managed at the site. An example of such a group of emission points is the collection of tanks, containers, surface impoundments, and similar units that are used at a site to manage a waste from the point where the waste is received at the site to the point where the material enters an on-site disposal unit not regulated under this rule (e.g., waste incinerator, landfill unit). An individual MACT floor is established for the entire group of emission points comprising each designated affected source.

This second approach offers several advantages for implementing the Off-Site Waste and Recovery Operations NESHAP. Designating the affected source to be a group of similar emission point types ensures that air emission controls of equivalent performance are applied at the same time to all of the units used to manage a particular off-site material stream. In contrast, had the EPA maintained the proposed designation for the affected sources (i.e., each individual emission point), situations could have occurred where an owner or operator was required to use controls on a new tank (or other newly installed unit) downstream of existing tanks managing the same off-site material but not required to use air emission controls under the rule. This would be an inefficient application of air emission controls since a significant portion of the HAP contained in the off-site material likely would have escaped to the atmosphere before the material entered the controlled unit. The approach also provides a logical grouping of equipment by which an owner or operator readily can determine when reconstruction of the affected source triggers the air emission control requirements under the rule for new sources. Therefore, for the final off-site waste and recovery operations NESHAP, the EPA decided to designate the affected sources by three distinct groups of the emission point types for the waste management and recovery operation subject to using air emission controls under the rule.

The first group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of tanks, containers, surface impoundments, oil-water and organic-water separators, individual drain systems and other stationary material conveyance systems used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. The units regulated under this affected source designation are collectively referred to hereafter in this notice as "off-site material management units."

The second the group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is process vents on units used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. As defined for the rule, a process vent is an open-ended pipe, stack, or duct used for passage of gases, vapors, or fumes to the atmosphere and this passage is caused by mechanical means (such as compressors or vacuum-producing systems) or by process-related means (such as volatilization produced by heating). A stack or duct used to exhaust combustion products from an enclosed combustion unit (e.g., boiler, furnace, heater, incinerator) is not a process vent for this rulemaking.

The third group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of equipment components prone to emitting HAP as a result of equipment leaks. This group of equipment consists of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and instrumentation systems that contain or contact off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site.

D. MACT Floor Determination

Specific statutory directives set out in section 112 of the 1990 Amendments require the EPA to establish standards under a NESHAP to reflect application of maximum achievable control technology (MACT). A statutory minimum or baseline level of HAP emission control that the EPA can select to be MACT for a particular source category is defined under section 112(d)(3) of the 1990 Amendments, and is referred to as the "MACT floor." For new sources, the MACT floor is the level of HAP emission control that is achieved in practice by the best controlled similar source. The statute allows standards under a NESHAP for existing sources to be less stringent than standards for new sources. The determination of MACT floor for existing sources is dependent on the nationwide number of existing sources within the source category. The off-site waste and recovery operations source category contains more than 30 existing sources nationwide. For a source category with 30 or more existing sources, the MACT floor is the average emission limitation achieved by the best performing 12 percent of the existing sources.

Once the MACT floors are determined for new and existing sources in a source category, the EPA must establish standards under a NESHAP that are no less stringent than the applicable MACT floors. The Administrator may promulgate standards that are more stringent than the MACT floor when such standards are determined by the EPA to be achievable taking into consideration the cost of implementing the standards as well as any non-air quality health and environmental impacts and energy requirements.

1. MACT Floor for Existing Sources

a. *Off-site Material Management Units.* As discussed in Section II.C of this notice, the EPA has revised the affected source designation for the off-site material management units at a plant site subject to the Off-Site Waste and Recovery Operations NESHAP. For the final rule, the designated affected source is the group of off-site material management units (e.g., tanks, surface impoundments, containers, oil-water and organic-water separators, individual drain systems and other stationary transfer systems) in each of the waste management and recovery operations specified in the rule that are located at the plant site. Because the MACT floor determination for these off-site material management units used at proposal was based on the application of the floor to individual units rather than the group of units, the EPA reconsidered the MACT floor determination following revision of the affected source designation for the rule.

The EPA reviewed site-specific information in the source category data base regarding existing air emission control practices for off-site material management units. In addition, the EPA considered the air emission controls that off-site material management units could be required to use by new air rules promulgated since the Off-Site Waste and Recovery Operations NESHAP was proposed (e.g., air rules for hazardous waste tanks, surface impoundments, and containers in subpart CC under 40 CFR parts 264 and 265).

Based on the EPA's review of the air emission control information in the data base for the off-site waste and recovery operations source category, the Agency concluded that most groups of off-site material management units (significantly more than 12 percent) manage off-site material, at a minimum, in covered units. A portion of these off-site material management units use more effective air emission controls such as venting the covered unit to a control device. However, based on the information available to Agency, the EPA cannot definitively determine whether the higher level of air emission control achieved by that portion of units using controls in addition to covers is representative of the average of the top 12 percent of all existing off-site material management units. Thus, the EPA decided to establish the MACT floor control technology for the existing off-site material managements as use of a cover.

For other source categories, the EPA has established whether a particular unit warrants the use of air emission controls under rules for the source category on the basis of a characteristic parameter for the materials placed in the unit (e.g., vapor pressure or organic concentration). The EPA believes that using this approach provides an effective and enforceable means for identifying the units that warrant air emission controls while excluding those units for which installation of controls is unnecessary because the units have no or little potential for HAP emissions. Consequently, to complete the definition of the MACT floor for this affected source, an applicability cutoff provision (referred to hereafter in this notice as an "action level") is needed to identify which off-site material management units use the selected air emission controls.

Establishing an action level requirec first selecting an appropriate format for the action level that allows the value to be relatively simple to be determined by an owner or operator and expeditiously checked by EPA or State enforcement personnel. For the proposed rule, the EPA evaluated several possible action level formats and decided that an action level based on the volatile organic HAP concentration (VOHAP) of the off-site materials is appropriate for identifying those units which emit HAP and warrant the application of air emission controls.

The data available to the EPA at this time for the off-site waste and recovery operations source category are insufficient to perform a rigorous statistical analysis for the purpose of establishing the minimum VOHAP concentration value for off-site material management units currently using air emission controls. From a qualitative perspective, application of air emission controls under the Off-Site Waste and Recovery Operations NESHAP is not needed when a material managed in an uncontrolled unit has little or no potential for HAP emissions. In general, these off-site materials can be characterized as materials having low VOHAP concentrations.

The EPA considered a range of possible values to establish the VOHAP concentration limit for the Off-Site Waste and Recovery Operations NESHAP. The EPA proposed a VOHAP concentration value of 100 ppmw to be used as the action level for the rule. However, in proposing this value, the EPA acknowledged that some off-site material management units subject to the Off-Site Waste and Recovery Operations NESHAP could be subject to other NESHAP and NSPS with differing action levels. The EPA therefore requested comment on establishing the VOHAP concentration action level for the rule at 100 ppmw, as well as information that could be used to support alternative action levels such as 500 ppmw (59 FR 51924). The EPA received comments stating that the 100 ppmw VOHAP concentration action level proposed by the EPA for the Off-site Waste and Recovery Operations NESHAP is inappropriate and inconsistent with other applicable NSPS and NESHAP and recommending that the EPA select a higher action level for the rule.

The EPA considered the comments received regarding the proposed actio level, other revisions to the final Off-Site Waste and Recovery Operations NESHAP, and changes that the EPA anticipates making for other waste and wastewater related rules. The EPA

concluded that a reexamination of the MACT floor action level determination was appropriate. Based on consideration of the information available to the Agency regarding HAP emissions from waste management and recovery operations receiving off-site material, the EPA has concluded that a VOHAP concentration value of 500 ppmw best represents the MACT floor for existing off-site material management units using covers.

Having established the MACT floor for existing off-site material management units, the EPA consider control options that are more stringent than the MACT floor based on the air emission control requirements under existing EPA rules for HAP emission sources similar to off-site material management units (e.g., air standards for tanks under the HON, air standards for tanks, surface impoundments, and containers at hazardous waste TSDF under 40 CFR parts 264 and 265). These existing rules establish requirements for application of controls more effective than covers on certain categories of tanks, containers, and other units based on air emission potential related characteristics such as the capacity of the unit and the vapor pressure of the material managed in the unit. In the development of these other rules, the EPA determined for these particular units that the more effective controls are appropriate for control of the pollutants emitted from the units and that implementing these controls is cost-effective. Therefore, for the Off-Site Waste and Recovery Operations NESHAP the EPA concluded that it is reasonable to establish standards for certain off-site waste management units that are more stringent than the MACT floor when such standards are determined by the EPA to be appropriate and consistent with the control requirements for similar HAP emission sources under other existing EPA rules.

b. *Process Vents.* The MACT floor for affected sources consisting of process vents is the same MACT floor used at proposal with one revision to the action level. As discussed in the proposal notice (59 FR 51925), this MACT floor is based on adapting, to the extent applicable and relevant to the Off-Site Waste and Recovery Operations NESHAP, the air emission standards for process vents on hazardous waste management units and recycling units under 40 CFR 264 subpart AA and 40 CFR 265 subpart AA. The action level identifying application of air emission controls on process vents has been revised to be consistent with the 500 ppmw action level selected for MACT floor for off-site material management units. The control technology selected for the floor is connecting the process vents to appropriate control devices such that an organic HAP emission control efficiency of 95 percent or more is achieved.

c. *Equipment Leaks.* The same MACT floor selected at proposal is used for affected sources consisting of the group of equipment components consisting of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and instrumentation systems that contain or contact off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. The MACT floor requires control of HAP emissions from equipment leaks by implementing leak detection and repair (LDAR) work practices and equipment modifications for those equipment components containing or contacting off-site material having a total organic HAP concentrations equal to or greater than 10 percent. As discussed in the proposal notice (59 FR 51925), the EPA selected this MACT floor based on the existing equipment leak air standards applicable to waste management operations to treat hazardous waste under 40 CFR 264 subpart BB and 40 CFR 265 subpart BB. The requirements of the MACT floor selected for the Off-Site Waste and Recovery Operations NESHAP are also consistent with existing NSPS equipment leak standards (e.g., 40 CFR 60 subparts VV, GG, and KK) and for certain NESHAP equipment leak standards (e.g., 40 CFR 61 subpart V).

2. MACT Floor for New Sources

At proposal, the EPA concluded that the MACT floor determined for existing sources also represents the HAP emission control that is achieved in practice by the best controlled similar sources in the off-site waste and recovery operation source category with the exception of new tanks. The MACT floor for new tanks was established based on the level of emission control that is required for new tanks under the HON (i.e., 40 CFR 63 subpart G). The EPA still believes these are appropriate decisions for establishing the MACT floor for new sources under the revised affected source designations selected for the final Off-Site Waste and Recovery Operations NESHAP.

E. Format of Standards

Section 112 of the Act requires promulgation of an emission standard whenever it is feasible; section 112(h) states that "if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof * * *" The term "not feasible" is applicable if the emission cannot be captured and vented through a vent or stack designed for that purpose, or if the application of a measurement methodology is not practicable because of technical or economic limitations. Alternative formats were considered for the three types of affected sources defined for the Off-Site Waste and Recovery Operations NESHAP.

For off-site material management units, the EPA concluded that a numerical emission standard would not be feasible because it would be difficult to capture and measure emissions from these units for the purpose of evaluating compliance. Therefore, the format of the rule for these affected sources includes a combination of design, equipment, work practice, and operational standards. For process vents, the EPA considered two alternative numerical emission limitation formats. These emission limitation formats are a mass percent reduction of HAP from process vents and a mass limitation of HAP emission from process vents. The percent reduction format was chosen for the Off-Site Waste and Recovery Operations NESHAP because it is the best representation of control technology performance, and provides flexibility to owners and operators. This format is based on the HAP removal efficiency of conventional air pollution control devices and any control technology that can achieve the reduction efficiency can be applied to any configuration of process vents to comply with the standards. For equipment leak sources (i.e., pumps, valves, etc.), numerical emission standards are not feasible and the final standards for equipment leaks are in the format of work practice and equipment specifications.

F. Unit-Specific Subparts

The regulatory text that EPA proposed for the Off-Site Waste and Recovery Operations NESHAP included all of the requirements for the rule in a single subpart to be added to 40 CFR part 63. The EPA decided to promulgate the final requirements for the Off-Site Waste and Recovery Operations NESHAP as a series of six new subparts added to 40 CFR part 63. These subparts are Subpart DD—National Emission Standards for Off-Site Waste and Recovery

Operations, Subpart OO—National Emission Standards for Tanks—Level 1, Subpart PP—National Emission Standards for Containers, Subpart QQ—National Emission Standards for Surface Impoundments, Subpart RR—National Emission Standards for Individual Drain Systems, and Subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators.

The air emission control requirements promulgated in Subparts OO, PP, QQ, and RR are derived from and incorporate public comments on the air emission control requirements originally proposed in Subpart DD for tanks, surface impoundments, containers, and individual drain systems. In addition, an individual subpart (Subpart VV) has been added to the final rule specifying air emission control requirements for oil-water separators and organic-water separators (referred to collectively hereafter as "separators"). At proposal, the EPA assumed that if a separator was subject to using air emission controls under the Off-Site Waste and Recovery Operations NESHAP it would be considered a type of tank. As such, this separator would have been required to meet the air emission control requirements specific in the rule for tanks. In actual practice, application of these controls to a separator in strict accordance with the requirements specified in the proposed rule may not be practical given special design and operating characteristics for separators. Therefore, the EPA concluded that it is appropriate to add an individual subpart specifically for separators that will provide a level of air emission control comparable to the control level established for tanks yet address the special design and operating features of separators.

The EPA decided to promulgate the air emission control requirements for selected types of units in individual subparts for ease of reference, administrative convenience, and as a step towards assuring consistency of the air emission control requirements applied to similar types of units under different rules. The EPA believes adopting the format of codifying the air emission control requirements for specific unit types in individual subparts will provide significant advantages to both regulated industries and to the Agency.

By today's notice, the air emission control requirements promulgated in Subparts OO, PP, QQ, RR, and VV presently are applicable only to units in waste management and recovery operations regulated under Subpart DD. For application of the unit-specific subparts to new rules for other source categories, the EPA is planning to reference these unit-specific subparts to specify the air emission control requirements for the units subject to using controls under the rule. The applicability, action level, designation of which units are required to use controls, treatment requirements, and any other requirements specific to the source category will be in the regulatory text under the source-specific subpart (i.e., the same format that is being promulgated today for the Off-Site Waste and Recovery Operations NESHAP) Also, the EPA may, in the future, amend existing NSPS, NESHAP, or other rules to reference the appropriate unit-specific subparts, whether as a replacement for the air emission control requirements in the existing rule or as an alternative means of compliance. In these rulemaking cases, the EPA will first propose the Agency's intention of applying the requirements of Subparts OO, PP, QQ, RR, and VV, as applicable, to other rules. The public will have the opportunity to comment on the appropriateness and application of using these unit-specific subparts for the particular sources regulated by the new or amended rule.

A major advantage for using the unit-specific subpart format for NESHAP and other air rules is for those situations when more than one rule applies to a particular source (e.g., a tank) and each of these rules requires use of air emission controls on that source (e.g., a fixed roof). By establishing unit-specific subparts, all of the rules will reference a common set of design, operating, testing, inspection, monitoring, repair, recordkeeping, and reporting requirements for air emission controls. This eliminates the potential for duplicative or conflicting air emission control requirements being placed on the unit by the different rules, and assures consistency of the air emission control requirements applied to the same types of units.

In the future, the EPA may decided it is appropriate to amend the air emission control requirements for different types of units to reflect improvements in control technologies or to add other control alternatives. When this occurs, using a unit-specific subpart format will simplify the amendment process and ensure that all source-specific subparts are amended in a consistent and timely manner. To incorporate the desired changes in the air emission control requirements, the EPA will need to amend only one subpart instead of amending each of the individual source category specific subparts. The identical amended regulatory language will automatically apply to all of the source category specific subparts that reference the amended unit-specific subpart. The amendments will become effective for all of the source category specific subparts at the same time.

G. Alternative Test Method Validation Procedure

As part of today's action, the EPA is promulgating a new validation procedure titled "Alternative Validation Procedure for EPA Waste Methods" that can be used as an alternative to Method 301 in Appendix A under 40 CFR part 63 for the validation of a test method established by the EPA Office of Water (OW) or the EPA Office of Solid Waste (OSW) when this test method is used for air emission standards. The alternative method is less rigorous than Method 301. A proposed version of the alternative validation procedure was made available for public review and comment on August 14, 1996 (60 FR 41870) as part of the information placed in the public docket and being considered by the Agency in revising air standards in the RCRA rules. Comments on the information were accepted by the EPA through October 13, 1995. No significant comments were received by the EPA regarding the proposed alternative validation procedure.

For the Off-Site Waste and Recovery Operations NESHAP, the EPA decided it is appropriate to allow organic concentration data test that are validated in accordance with the alternative validation method to be used as direct measurement data. Today's action promulgates "Alternative Validation Procedure for EPA Waste and Wastewater Methods" as Appendix D in 40 CFR part 63. This final version of Appendix D is the same as the proposed version. As promulgated, the alternative validation procedure is to be applied exclusively to those EPA methods developed by OW and OSW when the method is being applied to EPA air emission standards. If an owner or operator wants to use a test method not issued by either of these two EPA offices as an alternative to the test methods specifically listed in the rule, this test method must be validated according to the procedures in Sections 5.1 and 5.3 of Test Method 301.

III. Summary of Impacts

The EPA estimates that implementation of the Off-Site Waste and Recovery Operations NESHAP will reduce HAP emissions from the source category on a nationwide basis by approximately 82 percent, from 52,000 Mg/yr to 9,000 Mg/yr.

The EPA also estimated the reduction in VOC emissions from the source category. The Off-Site Waste and Recovery Operations NESHAP is estimated to reduce nationwide VOC emissions by approximately 52,000 Mg/yr. This value was calculated using the estimated nationwide HAP emission value times a value of approximately 1.2 to represent the ratio of VOC-to-HAP constituents in the off-site material regulated under the rule. The value for this ratio was derived from information in the data base for the off-site waste and recovery operations source category. This derived value is lower than VOC-to-HAP ratios indicated for other HAP emission sources. Thus, the procedure used to estimate nationwide VOC emissions for the source category is considered by the EPA to be conservative and may understate the actual quantity of VOC emission reduction that will occur from implementing the Off-Site Waste and Recovery Operations NESHAP.

The EPA prepared estimates of the cost to owners and operators of implementing the requirements of the final Off-Site Waste and Recovery Operations NESHAP at plant sites the EPA expects are likely to be subject to the rule. The total nationwide capital investment cost to purchase and install the air emission controls that are required by the rule is estimated by the EPA to be approximately $42 million. The total nationwide annual cost of the Off-Site Waste and Recovery Operations NESHAP is estimated to be approximately $18 million per year. This corresponds to an average cost of approximately $420 per megagram of HAP controlled.

Price increases in affected markets are projected at less than 0.01 percent of baseline price, and decreases in production are projected at less than 0.1 percent. No businesses or facilities are projected by the EPA to close as a result of implementing the requirements of the final rule. For more information regarding the economic analysis, consult the Economic Impact Analysis of National Emissions Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations available in the docket (Docket No. A–92–16).

IV. Summary of Responses to Major Comments

A summary of responses to selected major comments received on the proposed rule is presented below. Additional discussion of the EPA's responses to public comments is presented in the Basis and Support Document (see ADDRESSES section of this preamble).

A. Rule Applicability

Comment: Many commenters stated that the proposed applicability of the Off-Site Waste and Recovery Operations NESHAP would be too broad and should be narrower. Major reasons presented by individual commenters include: (1) the rule's applicability was expanded by the EPA beyond the scope of the initial source category listing without providing adequate notice to the public; (2) including operations managing "recoverable materials" received from off-site in the rule's applicability discourages recycling, provides a disincentive to pollution prevention, and is inconsistent with the Pollution Prevention Act; and (3) range of facility types subject to the rule is too broad because many of these facility types have significantly different HAP emission sources.

Response: The EPA proposed that the Off-Site Waste and Recovery Operations NESHAP be applicable to owners and operators of facilities that are "major sources" (as defined in 40 CFR 63.2) and at which operations are conducted to manage, convey, or handle "wastes" or "recoverable materials" received from off-site and containing specific organic HAP constituents (as specified in Table 1 of the rule). Under the proposed rule, waste management and recovery operations listed by the EPA as separate NESHAP source categories were specifically exempted from the requirements of the rule.

The EPA has not expanded the applicability of the Off-Site Waste and Recovery Operations NESHAP beyond the scope of the initial source category listing without providing adequate notice to the public. The EPA published an advance notice of proposed rulemaking (ANPR) in the **Federal Register** on December 20, 1993 (58 FR 66336) announcing the EPA's intent to develop a NESHAP for the off-site waste and recovery operations source category. In the ANPR, the EPA provided a general description of the types of facilities the EPA planned to regulate under this rulemaking (see 58 FR 66337). The EPA further provided a definition of "waste" that the Agency intended to be used for this rulemaking which included materials managed prior to being recycled. Thus, the Agency clearly expressed its intent in the ANPR to include recovery operations in the scope of this rulemaking.

As described in Section II.D.3 of this notice, the Pollution Prevention Act of 1990 (42 U.S.C. 13101 *et seq.*, Pub. L. 101–508, November 5, 1990) establishes the national policy of the United States for pollution prevention. The EPA believes that applying the Off-Site Waste and Recovery Operations NESHAP to units managing materials that are collected and transported to a facility for subsequent reprocessing or recycling is fully consistent with the Pollution Prevention Act. The final rule neither discourages recycling nor provides a disincentive to pollution prevention. The final rule does not prohibit or discourage an owner or operator from continuing to use the recovery operation; the rule only requires that the owner or operator control the organic HAP emitted to the atmosphere from the operation. This is consistent with the Pollution Prevention Act's declaration that operations to recycle or reuse materials be performed in an environmentally-safe manner.

In proposed regulatory text, the EPA split the definition of "waste" the Agency stated in the ANPR, into two separate terms; "waste" being defined as materials managed prior to being discarded or discharged, and "recoverable materials" being defined as materials managed prior to being recycled, reprocessed, or reused. Based on the comments received by the EPA, it appears that commenters interpreted the proposed regulatory text using these terms to extend the applicability of the rule to certain types of recycling and recovery operations that the Agency never intended to be subject to this rulemaking. To clarify the EPA's intent, the general term "recoverable material" is not used in the final rule. Instead, the EPA has added to the final rule the new terms "used oil" and "used solvent" to define the specific types of recycled or reprocessed materials subject to the rule. In each case where the final Off-Site Waste and Recovery Operations NESHAP is applicable to a used oil or used solvent recovery operation, the EPA has included this operation because the Agency has concluded that the operation when uncontrolled can be a significant source of HAP emissions and the operation will not be regulated by another NESHAP.

The EPA disagrees that the applicability of the Off-Site Waste and Recovery Operations NESHAP is too broad because many of the types of waste management and recovery operations included in the source category have significantly different HAP emission sources. In the **Federal Register** notice for the proposed rule, the EPA provided examples of specific types of facilities included in the off-site waste and recovery operations source category (see 59 FR 51920). At all of

these facilities, similar types of units are used to manage wastes or the other materials subject to the rule (e.g., tanks, containers, surface impoundments). Organic HAP are emitted from each type of unit by the same emission mechanisms regardless of the type of facility at which the unit is located. Common organic HAP control technologies are applicable to the units used at all of the off-site waste and recovery operations facility types. There are no significant differences in the organic HAP emissions or the control technologies applicable to controlling these emissions from the off-site waste and recovery operations facility types subject to this rulemaking.

Many commenters mistakenly interpreted the regulatory language of the proposed rule to extend the applicability of the Off-Site Waste and Recovery Operations NESHAP to facilities that the Agency never intended to be subject to this rulemaking. In response to the different interpretation of the proposed rule's applicability by commenters versus the Agency's intent for this rulemaking, the EPA reviewed the proposed regulatory text for the rule. The EPA decided to revise the format to be inclusive by specifically identifying those waste management and recovery operations that are subject to the Off-Site Waste and Recovery Operations NESHAP. Owners and operators of waste and recovery operations not explicitly included in the set of conditions specified for the final Off-Site Waste and Recovery NESHAP are not subject to the rule.

B. Data Base Used for Rule Development

Comment: Commenters stated that the data base used by the EPA to develop the Off-Site Waste and Recovery Operations NESHAP is not representative of all of the waste management recovery operations that would be potentially subject to the rule; and the information in the data base is not representative of current waste management and recovery operation practices.

Response: In the development of the Off-Site Waste and Recovery Operations NESHAP, the EPA used the best information available to the Agency. Earlier in the development of the rule, the EPA recognized that more up-to-date data and additional information would be beneficial for evaluating the different types of waste management and recovery operations included in the source category and for estimating the impacts associated with this rulemaking. The EPA made several requests for information from the public to supplement the Agency's information regarding the off-site waste and recovery operations source category.

Prior to proposal of the Off-Site Waste and Recovery NESHAP, the EPA announced in the ANPR the data bases the Agency was using for the impact analyses and requested information from the public (see 58 FR 66338 and 66339). The EPA specifically requested more information on off-site material characteristics (types, quantities, organic composition), operating practices, and waste and recovery operation emission points and air emission data. No additional information regarding these topics was received by the EPA.

At proposal, the EPA requested additional information to improve the Agency's understanding and profile of the waste management and recovery operations intended to be addressed by this rulemaking (see 59 FR 51921). Additional information was provided to the EPA by commenters regarding the following topics: (1) industrial waste landfill operations, waste characterizations, and HAP emissions; (2) general practices for waste management and recovery operations commonly used at chemical manufacturing plants and petroleum refineries; and (3) general waste management practices used at oil exploration and production leases. In addition, the EPA obtained additional information regarding used solvent collection and management practices for businesses that reprocess used solvent for sale to other users.

The data base used for the impact analysis for the rulemaking was compiled by collecting information related to off-site waste and recovery operations from nationwide surveys of hazardous waste TSDF, wastewater treatment facilities, and used oil management facilities that the EPA conducted for other rulemakings. The EPA is fully aware that off-site waste and recovery operations have changed since the surveys were conducted. These changes are the result of multiple factors including reductions in the quantities of certain wastes sent to waste management facilities as waste minimization programs have been implemented by generators; changes in waste disposal practices to comply with RCRA land disposal restrictions and other rules; and changes in ownership arrangements of waste management and recovery operations located within large petrochemical and other manufacturing complexes. In recognition of these changes, the EPA adjusted the data base to reflect these changes to the extent possible using other information available to the Agency.

The EPA reviewed the data base used to develop the Off-Site Waste and Recovery Operations NESHAP with respect to the Agency's decisions regarding the rule revisions made to the applicability of the final rule. The EPA believes that the data base contains sufficient information regarding the types of the waste management and recovery operations that are subject to the final Off-Site Waste and Recovery Operations NESHAP to support the Agency's decisions for this rulemaking.

C. Land Disposal Unit Requirements

Comment: Commenters disagreed with the proposed requirement to treat wastes prior to being placed in land disposal units because they state that the requirement is inconsistent with the RCRA land disposal restrictions and any solid waste land disposal restrictions should be promulgated by the EPA's Office of Solid Waste.

Response: The EPA proposed that, prior to being placed in land disposal units, owners and operators treat those off-site materials having a VOHAP concentration equal to or greater than the action level. Based on the EPA's decisions regarding applicability of the rule to landfills and considering the existing requirements under RCRA land disposal restrictions, the EPA concluded that the proposed requirement is not needed for the Off-Site Waste and Recovery Operations NESHAP. The final rule places no restrictions on the disposal of wastes in land disposal units nor places any other air emission control requirements on these units.

D. Off-Site Material Determination Test Methods

Comment: Commenters stated that proposed requirements for determining the average VOHAP concentration of a off-site material use inappropriate test methods and are excessive, impractical, and too costly to implement at many facilities potentially subject to the rule.

Response: Under the Off-Site Waste and Recovery Operations NESHAP, air emission controls are not required for those off-site material management units located in the affected source when the unit manages off-site material having a VOHAP concentration less than the action level. As part of the procedure for determining the VOHAP concentration of the off-site material, the EPA proposed that an owner or operator could use either: (1) Direct measurement using Method 305 of samples of the material collected in accordance with the procedures specified in the rule; or (2) the owner's or operator's knowledge of the VOHAP concentration in material

based on information, as specified in the rule.

For the final Off-Site Waste and Recovery Operations NESHAP, the EPA decided to add other appropriate test methods that an owner or operator can choose to use for direct measurement of the VOHAP concentration of an off-site material. In addition, the EPA has made certain other changes to facilitate the use of organic concentration data obtained using other alternative test methods not specifically listed in the rule. The EPA believes that the changes incorporated into waste determination requirements in conjunction with changes to the applicability and action level for the final Off-Site Waste and Recovery Operations NESHAP provide a range of options for determining the VOHAP concentration of an off-site material such that every owner and operator of facilities subject to the final rule has available practical and inexpensive waste determination alternatives.

The EPA developed Method 305 to provide a relative measure of the potential for specific volatile organic compounds to be emitted from waste materials. In developing Method 305, the EPA solicited public comments on a proposed version of the method and addressed these comments in the final version of the method (59 FR 19402). Method 305 has been validated and the EPA considers Method 305 to be an appropriate method for determining the VOHAP concentration of off-site materials subject to the Off-Site Waste and Recovery Operations NESHAP.

Method 305 uses the same waste sample collection procedures and sample recovery conditions established by Method 25D (40 CFR part 60, Appendix A). When using Method 25D, the waste sample is analyzed to determine the total concentration, by weight, of all organics recovered from the waste sample. When using Method 305, the waste sample is analyzed to determine the purged concentration, by weight, of only those specific hazardous air pollutants in the waste sample which are listed in Table 1 in the rule (i.e., the VOHAP concentration). Any hazardous air pollutant or organic constituent that may be contained in the sample but is not listed in Table 1 in the rule is not counted in the VOHAP concentration determination. For the off-site materials typically managed in the operations subject to the Off-Site Waste and Recovery Operations NESHAP, the EPA concluded that using Method 25D is a reasonable alternative to using Method 305 for the purpose of this rulemaking. Therefore, the final Off-Site Waste and Recovery Operations NESHAP includes use of Method 25D as one of the test methods an owner or operator may choose among for direct measurement of the VOHAP concentration of an off-site material.

Other test methods have been developed by the EPA for use in rulemakings under the Clean Water Act that measure the concentration of organic pollutants in municipal and industrial wastewaters (see Appendix A to 40 CFR part 136). Commenters suggested that certain of these test methods are applicable to EPA air rulemakings affecting wastewater management units. After extensive review, the EPA decided that as alternatives to using Method 305 or Method 25D for direct measurement of VOHAP concentration in an off-site material for the Off-Site Waste and Recovery Operations NESHAP it is appropriate to add Methods 624, 1624, and 1625 (all contained in 40 CFR 136, Appendix A) when used under certain specified conditions. Because these methods measure the total concentration of the HAP constituents listed in Table 1 of the rule, owners and operators may choose to "correct" these measured values to equate to the values that would be measured using Method 305. This is accomplished by multiplying the total concentration measured values times the appropriate "f_m factor" presented in Table 1 of the rule to obtain the Method 305 VOHAP concentration.

Sufficient recovery study results are available for Methods 1624 and 1625 to correct for possible bias, and therefore, these methods are considered adequate by the EPA to characterize the concentration of a off-site material sample. In addition, Method 624 is appropriate provided the initial calibration of the analytical system is performed with the target compounds to be measured. However, none of these methods specifies a sample collection and handling procedure that is considered by the EPA adequate to minimize the volatilization of organics from the sample prior to analysis. Therefore, to ensure that an adequately representative sample of an off-site material is analyzed by the method, an owner or operator that chooses to use either Method 624, 1624, or 1625 for the Off-Site waste and Recovery Operations NESHAP is required to develop and follow a written sampling plan. This plan describes a step-by-step procedure for collecting representative samples of the off-site materials such that material integrity is maintained and minimal loss of organics from the sample occurs throughout the collection and analysis process. An example of an acceptable sampling plan is one that incorporates sample collection and sample handing procedures similar to those specified in Method 25D. The sampling plan is to be maintained on-site in the facility records.

The EPA proposed use of knowledge-of-the-waste, allowing a facility owner or operator to use test data obtained using a test method other than Method 305 provided that the method was validated in accordance with Method 301 (40 CFR part 63, Appendix A). Under this application of Method 301, the owner or operator would be validating the alternative test method results as compared to test results obtained using Method 305. Since proposal, the EPA decided to allow organic concentration data test that are validated in accordance specifically with Sections 5.1 and 5.3 of Method 301 to be used as direct measurement data. This makes validation of the alternative test method a self-check of the method being validated. Also, if appropriate, owners and operators may choose to "correct" values measured by the alternative test method to equate to the values that would be measured using Method 305 by multiplying the measured values times the appropriate "f_m factor" presented for each hazardous air pollutant listed in Table 1 of the rule.

Finally, as discussed in Section II.G of this notice, the EPA is promulgating today a less rigorous validation procedure, "Alternative Validation Procedure for EPA Waste Methods," in Appendix to 40 CFR part 63 as an alternative to Method 301 for the validation of a test method established by the EPA Office of Water (OW) or the EPA Office of Solid Waste (OSW) when this test method is used for air emission standards. The EPA decided it is appropriate to allow organic concentration data test that are validated in accordance with this method to be used as direct measurement data.

E. Container Air Emission Controls

Comment: Commenters stated that proposed air emission control requirements for containers are commercially unavailable or impractical to implement. Also, commenters stated that the requirements should be consistent with the container air emission control requirements under the RCRA rules.

Response: Since proposal, the EPA has obtained more information on the practices and equipment currently used to manage waste and used solvents in containers. Based on consideration of this information, the EPA decided to

revise the air emission control requirements for containers to better reflect the container organic HAP emission potential, the various container types, and the common container management practices used for off-site waste and recovery operations. The EPA believes that these revised requirements are technically feasible and practical to implement on all types of containers that the Agency expects to be subject to the rule. These revisions are described in detail in Section V.G of this notice.

The EPA is addressing consistency between the air emission control requirements for containers (as well as the other affected units) in the Off-Site Waste and Recovery Operations NESHAP and the RCRA rules by amending the RCRA rules to include an exemption for those affected units using organic emission controls in accordance with the requirements of the Off-Site Waste and Recovery Operations NESHAP or any other applicable NESHAP.

F. Recordkeeping and Reporting

Comment: Commenters stated that the recordkeeping and reporting requirements proposed for the Off-Site Waste and Recovery Operations NESHAP would be excessive and inconsistent with other NSPS, NESHAP, and RCRA rules that also may be applicable to a unit subject to the rule.

Response: Under section 114(a) of the Act, the EPA may require any owner or operator of a source subject to a NESHAP to establish and maintain records as well as prepare and submit notifications and reports to the EPA or authorized State. Review by EPA and State officials of appropriate information that is maintained in facility records and is submitted in facility prepared reports provides one means for checking the compliance status of the facility with the NESHAP technical requirements. However, the EPA also recognizes that excessive and duplicative recordkeeping and reporting requirements can create a burden to facility owners and operators complying with a NESHAP as well as to the EPA and State officials responsible for assuring compliance with the NESHAP. Thus, it is the EPA's intention to limit the amount of recordkeeping and reporting required for a particular NESHAP to reasonable requirements which will provide the appropriate information needed by EPA and State officials to enforce the rule.

For the Off-Site Waste and Recovery Operations NESHAP, the EPA proposed adopting the recordkeeping and reporting requirements as specified in the Part 63 General Provisions. The EPA reviewed the recordkeeping and reporting needed for the final rule considering the revisions made to the rule applicability and technical requirements. Based on this review, the EPA decided that certain changes to simplify the recordkeeping and reporting requirements for the final Off-Site Waste and Recovery Operations NESHAP can be made without compromising the enforceability of the rule.

VI. Summary of Changes Since Proposal

Changes have been incorporated into the final Off-Site Waste and Recovery Operations NESHAP in response to comments on the proposed rule. Also, the EPA has made many changes to the specific air emission control requirements to clarify the EPA's intent in the application and implementation of these requirements and to make these requirements consistent and up-to-date with EPA decisions made for other related NESHAP and RCRA rules. The substantive changes to the Off-Site Waste and Recovery Operations NESHAP since proposal are summarized below.

A. Applicability

Several major changes have been made to the applicability of the final Off-Site Waste and Recovery Operations NESHAP to address comments on the proposed rule and to clarify the specific waste management and recovery operations that the EPA intends to be subject to the Off-Site Waste and Recovery Operations NESHAP. These changes include: (1) Deleting the proposed term "recoverable material" and defining new terms "off-site material", "used oil", and "used solvent" to explicitly specify the types of materials that the EPA is regulating under this rule; (2) adding a list of the specific wastes and other materials which can be received at a plant site but not considered by the EPA to be off-site materials for the purpose of implementing the rule; and (3) using an inclusive format to limit the rule applicability to six specific types of waste management and recovery operations. A detailed description of each of these changes is presented in the following paragraphs.

The Off-Site Waste and Recovery Operations NESHAP is applicable to owners and operators of a plant site that meet both of the following conditions: (1) The plant site is a major source of HAP emissions as defined in the General Provisions to 40 CFR part 63; and (2) at the plant site, the owner or operator manages "off-site material," as defined in the rule, in one or more of the specific waste management or recovery operations listed in the rule. If either one (or both) of the conditions do not apply to a plant site, then the owner and operator of the plant site is not subject to the Off-Site Waste and Recovery Operations NESHAP, and no action is required by the owner or operator in regards to this rule.

For the purpose of implementing the Off-Site Waste and Recovery Operations NESHAP, a "plant site" is 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. A unit or group of units within a contiguous property that are not under common control (e.g., a wastewater treatment unit or solvent recovery unit located at the site but is sold to a different company) is a different plant site.

The first applicability condition for the Off-Site Waste and Recovery Operations NESHAP is determined by whether or not the plant site is a major source of HAP emissions as defined in 40 CFR 63.2. In general, this would be a plant site that emits or has the potential to emit considering controls, in total, 10 tons per year or more of any one HAP or 25 tons per year or more of any combination of HAP. If the plant site is not a major source, then the owner and operator of the plant site is not subject to the Off-Site Waste and Recovery Operations NESHAP regardless of the types of materials received from off-site.

The second applicability condition involves the combined requirement that "off-site material" must be received at the plant site and this material must be managed in one of the six types of waste management or recovery operations specified in the rule. The first part of the applicability condition involves determining whether an "off-site material" as defined in the rule is received at the plant site. The second part of the applicability condition involves determining whether one or more of the following types of waste management or recovery operations is located at the plant site: (1) a hazardous waste treatment, storage, and disposal facility (TSDF) regulated under 40 CFR part 264 or 265 that manages waste received from off-site; (2) a wastewater treatment facility that manages wastewater received from off-site and this facility is exempted from regulation

TSDF under 40 CFR 264.1(g)(6) or 0 CFR 265.1(c)(10); (3) a wastewater reatment facility other than a POTW hat manages wastewaters received from off-site and operation of this facility is he predominant function performed at he plant site; (4) a facility that recycles off-site material and this facility is exempted from regulation as a TSDF under 40 CFR 264.1(g)(2) or 40 CFR 265.1(c)(6); (5) a facility in which used solvents received from off-site are reprocessed or recovered; and (6) a facility in which used oil received from off-site is reprocessed or re-refined and this facility is regulated under 40 CFR Part 279, subpart F—Standards for Used Oil Processors and Refiners.

For the purpose of implementing the rule, "off-site material" is defined to be a material for which all three of the following criteria apply: (1) The material is a "waste", "used oil", or "used solvent" as defined in the rule; (2) this material is delivered, transferred, or otherwise moved to the plant site from another location; and (3) this material contains one or more of the specific HAP constituents listed in Table 1 in the rule. If the material received at the plant site does not meet ny one of these criteria, then the material is not an "off-site material" under the rule.

The term "waste" used for the final rule is the same definition proposed for the rule. Waste types that EPA does not intend to be regulated under this rulemaking are specifically listed in the final rule. For the purpose of the implementing the Off-Site Waste and Recovery Operations NESHAP, none of the following wastes are "off-site materials": household waste as defined in 40 CFR 258.2; radioactive mixed waste managed in accordance with all applicable regulations under Atomic Energy Act and Nuclear Waste Policy Act authorities; waste that is generated by remedial activities required under the RCRA corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), CERCLA authorities, or similar Federal or State authorities; waste containing HAP that is generated by residential households (e.g., old paint, home garden pesticides) and subsequently is collected as a community service by government agencies, businesses, or other organizations for the purpose of promoting the proper disposal of this waste; waste that is generated by or transferred from units complying with all applicable regulations under 40 CFR Part 63, subparts F and G—National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry; waste containing benzene that is generated by or transferred from units complying with all applicable requirements specified by § 61.342(b) under 40 CFR Part 61, subpart FF—National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr; and ship ballast water that is pumped from a ship to an onshore wastewater treatment facility.

"Used oil" means any oil refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. This definition is consistent with the definition used by the EPA for the RCRA used oil management standards under 40 CFR Part 279, subpart F.

"Used solvent" means a solvent composed of mixtures of one or more aliphatic hydrocarbons or aromatic hydrocarbons that has been used and as a result of such use is contaminated by physical or chemical impurities.

Based on the applicability conditions for the final Off-Site Waste and Recovery Operations NESHAP, an owner or operator is not subject to the rule and no action is required by the rule for the following cases. If a plant site is not a major source of HAP emissions, then the owner and operator of the plant site are not subject to the Off Site Waste and Recovery Operations NESHAP regardless of whether the site receives off-site material. If at a plant site is located one or more of the specific waste management or recovery operations listed in the rule but off-site material received at the plant site is not managed in these operations, then the owner and operator of the plant site are not subject to the Off-Site Waste and Recovery Operations NESHAP. In a case when a plant site receives off-site material and is a major source of HAP emissions but there is not one of the waste management or recovery operations listed in the rule located at the site, then owner and operator of the plant site are not subject to the Off-Site Waste and Recovery Operations NESHAP.

At a plant site subject to the Off-Site Waste and Recovery Operations NESHAP, the rule only applies to the affected sources used to manage off-site material in the waste management and recovery operations specified in the rule that are located at the plant site. Units and equipment used to manage off-site material at the plant site but are not part of one of the waste management or recovery operations specified in the rule are not affected sources under the rule.

The first affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of tanks, surface impoundments, separators, transfer systems, and containers used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. The second affected source for the rule is the group of process vents on units in each of the waste management and recovery operations specified in the rule that are located at the plant site.

The third affected source for the rule is the group of equipment components consisting of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and instrumentation systems that contain or contact off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site.

The compliance date for existing sources subject to the Off-Site Waste and Recovery Operations NESHAP (i.e., affected sources that commenced construction or reconstruction before October 13, 1994) to meet the air emission control requirements of the rule is beginning 3 years after today's date. If management of off-site material in the source is discontinued by this date, then source would no longer subject to the rule. On the other hand, if an existing waste management operation or recovery operation does not presently receive off-site material but begins receiving off-site materials for the first time 3 years after today's date (and meets the other applicability conditions in the rule), then the source is a new source subject to the rule. In this case, the owner or operator of the source must achieve compliance with the provisions of the rule upon the first date that the waste management operation or recovery operation begins to manage the off-site material.

Finally, the list of the specific HAP constituents for the Off-Site Waste and Recovery Operations NESHAP (Table 1 in Subpart DD) was revised by the EPA for the final rule. The EPA decided to delete eight chemicals from the proposed list because of the low potential for these chemicals to be emitted from the waste management and recovery operations subject to the rule. The criterion used to characterize and evaluate emission potential was based on a chemical constituent's Henry's law constant. The following chemical compounds were deleted from the proposed list: acrylic acid, aniline, o-cresol, dibutylphthalate, 1,1-

dimethylhydrazine, formaldehyde, methyl hydrazine, and n-nitrosodimethylamine.

B. General Standards

Several major changes have been made to the general standards for the final rule. First, the average VOHAP concentration action level for off-site material required to be managed in the units using air emission controls under the rule has been changed to 500 ppmw (as determined at the point-of-delivery). Units managing off-site materials determined by the owner or operator to have average VOHAP concentrations that remain less than 500 ppmw are not required to use air emission controls under the rule. The second change is land disposal units have been deleted as an affected source and the final rule places no restrictions on the disposal of wastes in land disposal units.

A third change is the addition of an exemption to the general standards in the final Off-Site Waste and Recovery Operations NESHAP that relates to the treatment of the off-site material. This exemption provides that an off-site material management unit is exempted from the air emission control requirements if the off-site material placed in the unit is a hazardous waste that meets the numerical concentration limits, applicable to the hazardous waste, as specified in 40 CFR part 268—Land Disposal Restrictions under both of the following tables: (1) Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40, and (2) Table UTS—"Universal Treatment Standards" in 40 CFR 268.48.

C. Treatment Standards

The final Off-Site Waste and Recovery Operations NESHAP provides owners or operators with a selection of alternative provisions for determining when a treated off-site material is no longer required to be managed in units meeting the air emission control requirements of the rule. The proposed treatment alternatives have been revised where appropriate to reflect the new action level of 500 ppmw and additional alternatives have been added to the rule to provide greater flexibility to the owner or operator in the treatment of off-site materials.

D. Tank Standards

The tank standards have been revised to address comments on the proposed requirements, to be consistent with tank standards established for related NESHAP source categories, and to reduce the inspection, monitoring, recordkeeping, and reporting requirements. In general, the final Off-Site Waste and Recovery Operations NESHAP establishes two levels of air emission control for tanks managing off-site materials having a maximum HAP vapor pressure less than 76.6 kPa. The control level applicable to a tank required to use controls is determined by the tank design capacity and the maximum organic HAP vapor pressure of the off-site material in the tank. Different capacity and vapor pressure limits have been established for tanks determined to be part of an existing affected source and those determined to be part of a new affected source. Tanks used for waste stabilization processes are required to use Tank Level 2 air emission controls. The designation of which tanks are required to use controls and the required control level for the tank are specified in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements for Tank Level 1 controls are specified in 40 CFR part 63, subpart OO—National Emission Standards for Tanks-Level 1. The specific air emission control requirements for Tank Level 2 controls remain in 40 CFR part 63, subpart DD.

The tank capacity limits for existing tanks in which the maximum HAP vapor pressure of the off-site material in the tank is less than 76.6 kPa have been corrected to be consistent with the EPA's original intent to be compatible with other RCRA and NESHAP air emission standards already promulgated by the Agency which potentially could be applicable to the same tank. The proposed rule was incorrectly drafted to exclude existing tanks having a design capacity less than 75 m^3 (approximately 20,000 gallons) from using any air emission controls. The EPA never intended to exclude this group of tanks from this rulemaking. Under the final rule, when applicable, use of Tank Level 1 air emission controls is required for an existing tank having a design capacity less than 75 m^3.

For a tank required to use Level 1 controls, the final rule specifies that the off-site material be managed in a tank using a fixed-roof. For the Level 2 controls, the final rule requires that off-site material be managed in one of the following: (1) a fixed roof tank equipped with an internal floating roof; (2) a tank equipped with an external floating roof; (3) a tank vented through a closed-vent system to a control device; (4) a pressure tank; or (5) a tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device.

E. Oil-Water Separator and Organic-Water Standards

Under the final Off-Site Waste and Recovery Operations NESHAP, individual air emission control requirements have been established for oil-water separator or organic-waster separators. For each separator required to use controls under the rule, the owner or operator is required to control air emissions from the separator by installing and operating on each section of the unit either a floating roof or a fixed-roof that is vented through a closed-vent system to a control device. The designation of which separators are required to use controls is specified in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR part 63, subpart VV—National Emission Standards for Oil-Water and Organic-Water Separators.

F. Surface Impoundment Standards

Revisions have been made to the surface impoundment standards so that, where relevant and appropriate, the inspection, monitoring, recordkeeping, and reporting requirements for surface impoundments are consistent with the requirements established for tanks and separators. The designation of which surface impoundments are required to use controls is specified in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR part 63, subpart QQ—National Emission Standards for Surface Impoundments.

G. Container Standards

The container standards have been significantly revised to address comments on the proposed requirements, to make this rule compatible with the existing U.S. Department of Transportation (DOT) regulations for transporting hazardous materials, and to reduce the inspection, monitoring, recordkeeping, and reporting requirements. The designation of which containers are required to use controls and the required control level for the container are specified in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements for each control level are specified in 40 CFR Part 63

subpart PP—National Emission Standards for Containers.

The revised container standards for the Off-Site Waste and Recovery Operations NESHAP establish three levels of air emission control. The control level applicable to a container is determined by the container design capacity, the total organic content of the material in the container, and use of the container. For example, containers with a design capacity less than or equal to 0.1 m^3 (approximately 26 gallons) are not subject to any requirements under the rule.

Under the final rule, Level 1 controls are required for the following container categories (except when the container remains uncovered for waste stabilization processes): (1) containers having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3 (approximately 119 gallons); and (2) containers with a design capacity greater than 0.46 m^3 and used to manage off-site materials that do not meet the definition of "light material." Level 2 controls are required for containers with a design capacity greater than 0.46 m^3 and used to handle "light materials" (i.e., off-site materials where the vapor pressure of one or more of the components in the material is greater than 0.3 kilopascals [kPa] at 20 °C, and the total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight), except when the container remains uncovered for waste stabilization processes. Level 3 controls are required for containers having a design capacity greater than 0.1 m^3 that must remain uncovered for waste stabilization processes.

For the containers required to use Level 1 controls, the final rule requires that the off-site material be managed either: (1) in a container that meets the relevant DOT regulations on packaging hazardous materials for transportation under 49 CFR parts 173, 178, 179, and 180; or (2) a covered container that meets the requirements specified in the final rule. No additional requirements are specified by the final rule for containers complying with the applicable DOT regulations. In the case when an owner or operator elects to comply with the covered container requirements (i.e., non-DOT containers), the container must be equipped with a tight-fitting cover that has no visible gaps, spaces, holes, or other openings. The rule does require a visual inspection when the cover is applied and, thereafter, annually if the container remains in on-site storage for a period longer than 1 year. No testing for detectable organic emissions using Method 21 is required. No recordkeeping and reporting are required under the final rule for containers using Level 1 controls.

For the containers required to use Level 2 controls, the final rule requires that the off-site material be managed in one of the following: (1) a container that meets the relevant DOT regulations on packaging hazardous materials for transportation under 49 CFR parts 173, 178, 179, and 180; or (2) a container that has been demonstrated within the preceding 12 months to operate with no detectable organic emissions by using Method 21; or (3) a container that has been demonstrated within the preceding 12 months to be vapor-tight by using Method 27. No additional requirements are specified by the final rule for containers complying with the applicable DOT regulations. Specific design, operating, inspection and monitoring, repair, recordkeeping, and reporting requirements for containers tested using either Method 21 or 27 are specified in the rule.

For the containers required to use Level 3 controls, the final rule requires that an open container be placed in an enclosure vented through a closed-vent system to a control device or a covered container be vented directly to a control device. If an enclosure is used, the enclosure is to be designed in accordance with the criteria for a permanent total enclosure as specified in 40 CFR 52.741, Appendix B, Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure.

Requirements for loading off-site material into a container have been revised since proposal. Under the final rule there are no requirements for loading off-site material into containers using Level 1 controls. For containers using Level 2 controls, the loading requirements have been revised to allow flexibility to use any appropriate loading method that will minimize exposure of the off-site material to the atmosphere and thereby reduce organic air emissions, to the extent practical considering the physical properties of the off-site material and good engineering and safety practices. Examples of container loading procedures that the EPA considers to meet these requirements include, but are not limited to, using a submerged-fill pipe or other submerged-fill method to load liquids into the container; or using a vapor-balancing or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations.

The inspection, monitoring, recordkeeping, and reporting requirements for containers have been significantly simplified from those proposed. Owners and operators of containers using either Container Level 1 or Container Level 2 controls in accordance with the provisions of the rule are required to visually inspect the container and its cover and closure devices to check for defects at the time the owner or operator first accepts possession of the container at the facility site with the exception of those containers emptied within 24 hours of being received. Also, in the case when a container used for managing regulated-material remains at the facility site for a period of 1 year or more, the container and its cover and closure devices are to be visually inspected to check for defects at least once every 12 months.

There are no requirements for periodic Method 21 leak monitoring of containers. There are no recordkeeping nor reporting requirements under this final rulemaking for containers using either Container Level 1 or Container Level 2 controls.

H. Transfer System Standards

The major change to the transfer system standards is the addition of specific requirements for individual drain systems to the final rule. The designation of which individual drain systems are required to use controls is specified in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR 63 subpart RR—National Emission Standards for Individual Drain systems. Other revisions have been made, where relevant and appropriate, so that the requirements for transfer systems other than an individual drain system are consistent with the requirements established for the other types of off-site material management units.

I. Process Vent Standards

In response to comments, several changes have been made to the air emission control requirements for process vents under the Off-Site Waste and Recovery Operations NESHAP. The term "enclosed treatment unit" proposed for the rule has been deleted from the final rule and replaced with a definition for the term "process vent." The EPA decided to use this new term to clarify the process vents that must use air emission controls under the rule. The final rule has also been revised to require an average emission reduction of

at least 95 percent by weight in total HAP emissions from the combination of all affected process vents at the plant site (i.e., all process vents that are a part of the affected sources subject to the Off-Site Waste and Recovery Operations NESHAP).

J. Equipment Leak Air Standards

The EPA has not included in the final Off-Site Waste and Recovery Operations NESHAP a definition for "ancillary equipment" as was originally proposed. Instead, the specific equipment types subject to equipment leak standards under the Off-Site Waste and Recovery Operations NESHAP are listed directly in the applicability section of the rule (§ 63.690). These equipment types are consistent with other NESHAP equipment leak standards.

K. Control Device and Closed-Vent System Standards

Revisions to the control device and closed-vent system standards consist of incorporating changes to the closed-vent system and control device requirements so that these requirements are consistent and up-to-date with the general decisions the EPA has made regarding NESHAP inspection, monitoring, maintenance, repair, malfunctions, recordkeeping, and reporting requirements for organic emission control devices. Also, to improve the readability and user understanding of the requirements, the format used to present the standards has been revised. In the final rule, all of the requirements for a particular type of control device (e.g., vapor incinerator, carbon adsorber, or condenser) are grouped together.

L. Test Methods and Procedures

For the final Off-Site Waste and Recovery Operations NESHAP, the EPA decided to allow an owner or operator to use any one of several existing EPA test methods for direct measurement of the VOHAP concentration of an off-site material. In addition, the EPA has made certain other changes to the rule to facilitate the use of organic concentration data obtained using other alternative test methods not specifically listed in the rule.

The final rule allows an owner or operator to directly measure the volatile organic concentration using any one of the following methods: Method 305 in 40 CFR part 63, Appendix A; Method 25D in 40 CFR part 60, Appendix A; or Method 624, Method 1624, or Method 1625 in 40 CFR part 136, Appendix A (when used in accordance with the procedure specified in the rule). In addition, an owner or operator may use any other alternative method that has been validated in accordance with the procedures specified in Sections 5.1 and 5.3 of Method 301 or specified in the Appendix D—Alternative Validation Procedure for EPA Waste Methods promulgated by this action in 40 CFR part 63.

M. Recordkeeping and Reporting Requirements

The EPA has changed the recordkeeping and reporting requirements for the final Off-Site Waste and Recovery Operations NESHAP to reflect the revisions to the rule applicability and technical requirements and reduce the burden of these requirements on owners and operators.

VII. Administrative Requirements

A. Docket

The docket is an organized and complete file of information considered by the EPA in the development of a rulemaking. The docket pertaining to the Off-Site Waste and Recovery Operations NESHAP is Docket No. A–92–16. This docket contains a copy of the regulatory text of the proposed rule, the BID, and copies of all BID references and other information related to the development of the proposed and final rule. The public may review all materials in this docket at the EPA's Air and Radiation Docket and Information Center (see the **ADDRESSES** section at the beginning of this notice).

B. Paperwork Reduction Act

The information collection requirements for this NESHAP have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1717.02), and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W.; Washington, DC 20460, or by calling (202) 260–2740.

The public recordkeeping and reporting burden for this collection of information is estimated to average approximately 830 hours per respondent for each of the first 3 years following promulgation of the rule. 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 recordkeeping and reporting burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch (2137), U.S. Environmental Protection Agency, 401 M Street, S.W.; 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 12866

Under Executive Order 12866 (58 FR 5173, October 4, 1993), 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 result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, 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 obligations of recipients thereof; or

(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 the Executive Order 12866, it has been determined that this action will be treated as a "significant regulatory action" within the meaning of the Executive Order. As such, this action was submitted to the Office of Management and Budget (OMB) for review. Changes made in response to OMB suggestions or recommendations are documented in the docket pertaining to the Off-Site Waste and Recovery Operations NESHAP rulemaking (Docket No. A–92–16).

D. Regulatory Flexibility Act

Section 605 of the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 et seq.), the EPA Regulatory Flexibility guidelines (April, 1992), and the Small Business Regulatory Fairness Act of 1996 requires Federal agencies to give special consideration to the impacts of regulations on small entities, which are small businesses, small organizations, and small governments. The major purpose of the Regulatory Flexibility Act, the EPA guidelines, and the Small Business Fairness Act is to keep paperwork and regulatory requirements

from being out of proportion to the scale of the entities being regulated, without compromising the objectives of, in this case, the Clean Air Act.

A small business with establishments in Standard Industrial Classification 4953, Refuse Systems, is defined by the Small Business Administration as one receiving less than $6 million per year, averaged over the most recent three fiscal years. A small organization is a not-for-profit enterprise that is independently owned and operated and is not dominant in the waste disposal industry. A small government is one that serves a population of less than 50,000 people. The EPA may use other definitions, but elects to use these. The EPA believes that small organizations and small governments have at most a very minor involvement with the types of waste management and recovery operations subject to this rule, and therefore would not be significantly affected by the Off-Site Waste and Recovery Operations NESHAP. Hence, the EPA has concentrated its attention on small businesses.

The Regulatory Flexibility Act specifies that Federal agencies must prepare an initial regulatory flexibility analysis if a proposed regulatory action would have "a significant economic impact on a substantial number of small entities." The data bases available to the EPA reflect the state of the hazardous waste TSDF industry in 1986, and provide limited basis for updating the economic factors. Furthermore, the EPA does not have reliable projections of construction of new facilities with the types of waste management and recovery operations that will be subject to the rule. The EPA, based on its initial Regulatory Flexibility analysis, therefore assumed that the rule may have a significant impact on a substantial number of small businesses, and conducted a final regulatory flexibility analysis. This analysis is part of the economic impact analysis (titled *Economic Impact Analysis of National Emission Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations*) prepared for the rulemaking and available in the docket (Docket No. A–92–16).

Even though many facilities at which are located waste management and recovery operations receiving off-site materials are expected to be area sources and would not be subject to this NESHAP, the EPA assumed for the regulatory flexibility analysis that all facilities listed in the source category data base are collocated at major sources. Also, the analysis did not exclude those facilities that are major sources but would not be subject to the air emission control requirements under the Off-Site Waste and Recovery Operations NESHAP because the facility qualifies for the rule exemption for a facility at which the total annual organic HAP mass content of all off-site material is less than 1 Mg/yr.

From the source category data base, the EPA identified for the analysis 110 small businesses that own 112 facilities subject to the Off-Site Waste and Recovery Operations NESHAP. As a result of exemptions allowed by the final rule, none of these small businesses would incur costs beyond costs for recordkeeping and reporting. All of these small businesses would meet at least one of the exemption criteria in the rule and, therefore, would not need to use the air emission controls required by the rule. The small costs for recordkeeping and reporting are required to document compliance with the rule exemptions. For a median small business, the same costs come to less than 0.1 percent of sales—compared with about 0.01 percent for the median large business. Since there are no capital costs to small businesses, none of the small businesses would exceed the capital cost retained earning breakpoints (the maximum amount of new capital a business can raise without issuing new stock and without changing its existing capital structure). By way of comparison, 30 percent of large businesses would have capital costs of compliance exceeding their breakpoints. None of these large businesses are expected to receive significant economic impacts.

Finally, the EPA evaluated the possibility that the final rule might cause a small business to close. Based on this review, no small businesses are expected to close as a result of having to comply with the requirements of the final rule.

Pursuant to section 605(b) of the Regulatory Flexibility Act, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities.

E. Unfunded Mandates

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

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

F. Review

The off-site waste and recovery operations NESHAP will be reviewed 8 years from today's date of promulgation. This review will include an assessment of such factors as evaluation of the residual health risks, any duplication with other air programs, the existence of alternative methods, enforceability, improvements in air emission control technology and health data, and the recordkeeping and reporting requirements.

VII. Statutory Authority

The statutory authority for this proposal is provided by section 101, 112, 114, 116, and 301 of the Clean Air Act, as amended; 42. U.S.C., 7401, 7412, 7414, 7416, and 7601.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Containers, Equipment leaks, Hazardous air pollutants, Individual drain systems, NESHAP, Off-site waste and recovery operations, Oil-water separators, Process vents, Tanks, Surface impoundments, Used oil, Used solvents, Waste.

Dated: May 28, 1996.

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 are amended as follows:

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

1–3. The authority citation for part 63 continues to read as follows:

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

4. Part 63 is amended by adding subpart DD consisting of §§ 63.680 through 63.698 to read as follows:

Subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations

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63.684 Standards: Off-site material treatment.
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63.693 Standards: Closed-vent systems and control devices.
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Table 1 to Subpart DD—List of Hazardous Air Pollutants (HAP) for Subpart DD.
Table 2 to Subpart DD—Applciability of paragraphs in 40 CFR Subpart A, General Provisions, to Subpart DD.
Table 3 to Subpart DD—Tank Control Levels for Tanks at Existing Affected Sources as Required by 40 CFR 63.685(b)(1).
Table 4 to Subpart DD—Tank Control Levels for Tanks at New Affected Sources as Required by 40 CFR 63.685(b)(2).

Subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations

§ 63.680 Applicability and designation of affected sources.

(a) The provisions of this subpart apply to the owner and operator of a plant site for which both of the conditions specified in paragraphs (a)(1) and (a)(2) of this section are applicable. If either one of these conditions does not apply to the plant site, then the owner and operator of the plant site are not subject to the provisions of this subpart.

(1) The plant site is a major source of hazardous air pollutant (HAP) emissions as defined in 40 CFR 63.2.

(2) At the plant site is located one or more of operations that receives off-site materials as specified in paragraph (b) of this section and the operations is one of the following waste management operations or recovery operations as specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section.

(i) A waste management operation that receives off-site material and the operation is regulated as a hazardous waste treatment, storage, and disposal facility (TSDF) under either 40 CFR part 264 or part 265.

(ii) A waste management operation that treats wastewater which is an off-site material and the operation is exempted from regulation as a hazardous waste treatment, storage, and disposal facility under 40 CFR 264.1(g)(6) or 40 CFR 265.1(c)(10).

(iii) A waste management operation that treats wastewater which is an off-site material and the operation meets both of the following conditions:

(A) The operation is subject to regulation under either section 402 or 307(b) of the Clean Water Act but is not owned by a "state" or "municipality" as defined by section 502(3) and 502(4), respectively, of the Clean Water Act; and

(B) The treatment of wastewater received from off-site is the predominant activity performed at the plant site.

(iv) A recovery operation that recycles or reprocesses hazardous waste which is an off-site material and the operation is exempted from regulation as a hazardous waste treatment, disposal, and storage facility under 40 CFR 264.1(g)(2) or 40 CFR 265.1(c)(6).

(v) A recovery operation that recycles or reprocesses used solvent which is an off-site material and the operation is not part of a chemical, petroleum, or other manufacturing process that is required to use air emission controls by another subpart of 40 CFR part 63.

(vi) A recovery operation that re-refines or reprocesses used oil which is an off-site material and the operation is regulated under 40 CFR 279 subpart F—Standards for Used Oil Processors and Refiners.

(b) For the purpose of implementing this subpart, an off-site material is a material that meets all of the criteria specified in paragraph (b)(1) of this section but is not one of the materials specified in paragraph (b)(2) of this section.

(1) An off-site material is a material that meets all of the criteria specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. If any one of these criteria do not apply to the material, then the material is not an off-site material subject to this subpart.

(i) The material is a waste, used oil, or used solvent as defined in § 63.681 of this subpart;

(ii) The material is not produced or generated within the plant site, but the material is delivered, transferred, or otherwise moved to the plant site from a location outside the boundaries of the plant site; and

(iii) The material contains one or more of the hazardous air pollutants (HAP) listed in Table 1 of this subpart based on the composition of the material at the point-of-delivery, as defined in § 63.681 of this subpart.

(2) For the purpose of implementing this subpart, the following materials are not off-site materials:

(i) Household waste as defined in 40 CFR 258.2.

(ii) Radioactive mixed waste managed in accordance with all applicable regulations under Atomic Energy Act and Nuclear Waste Policy Act authorities.

(iii) Waste that is generated as a result of implementing remedial activities required under the Resource Conservation and Recovery Act (RCRA) corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authorities, or similar Federal or State authorities.

(iv) Waste containing HAP that is generated by residential households (e.g., old paint, home garden pesticides) and subsequently is collected as a community service by government agencies, businesses, or other organizations for the purpose of promoting the proper disposal of this waste.

(v) Waste that is generated by or transferred from units complying with all applicable regulations under 40 CFR 63 subparts F and G—National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry.

(vi) Waste that is generated by or transferred from units complying with all applicable requirements specified by § 61.342(b) under 40 CFR 61 subpart FF—National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year.

(vii) Ship ballast water pumped from a ship to an onshore wastewater treatment facility.

(c) For the purpose of implementing this subpart, the affected sources at a plant site subject to this subpart are as follows:

(1) Off-site material management units. The affected source is the group of tanks, containers, oil-water or organic-water separators, surface impoundments, and transfer systems used to manage off-site material in each of the waste management operations and recovery operations specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site.

(2) Process vents. The affected source is the group of process vents on units used to manage off-site material in each of the waste management operations and recovery operations specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site.

(3) Equipment leaks. The affected source is the group of equipment specified in § 63.683(b)(2)(i) through (b)(2)(iii) of this subpart that is used to handle off-site material in each of the waste management operations and recovery operations specified in paragraphs (a)(2)(i) through (a)(2)(vi) of this section that is located at the plant site.

(d) Owners and operators of plant sites at which are located affected sources subject to this subpart are exempted from the requirements of §§ 63.682 through 63.699 of this subpart in situations when the total annual quantity of the HAP that is contained in the off-site material received at the plant site is less than 1 megagram per year. This total annual HAP quantity for the off-site material shall be based on the total quantity of the HAP listed in Table 1 of this subpart as determined at the point-of-delivery for each off-site material stream. Documentation shall be prepared by the owner or operator and maintained at the plant site to support the initial determination of the total annual HAP quantity for the off-site material. The owner or operator shall perform a new determination when the extent of changes to the quantity or composition of the off-site material received at the plant site could cause the total annual HAP quantity in the off-site material to the exceed limit of 1 megagram per year.

(e) Compliance dates.

(1) Existing sources. The owner or operator of an affected source that commenced construction or reconstruction before October 13, 1994, shall achieve compliance with the provisions of the subpart no later than July 1, 1999 unless an extension has been granted by the Administrator as provided in 40 CFR 63.6(i).

(2) New sources. The owner or operator of an affected source for which construction or reconstruction commences on or after October 13, 1994, shall achieve compliance with the provisions of this subpart by July 1, 1996 or upon initial startup of operations, whichever date is later as provided in 40 CFR 63.6(b). For the purpose of implementing this subpart, a waste management operation or recovery operation that commenced construction or reconstruction before October 13, 1994, and receives off-site material for the first time after July 1, 1999 is a new source, and the owner or operator of this affected source shall achieve compliance with the provisions of this subpart upon the first date that the waste management operation or recovery operation begins to manage the off-site material.

(f) The provisions of 40 CFR part 63, subpart A—General Provisions that apply and those that do not apply to this subpart are specified in Table 2 of this subpart.

§ 63.681 Definitions.

All terms used in this subpart shall have the meaning given to them in this section, 40 CFR 63.2 of this part, and the Act.

Boiler means an enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

Closed-vent system means a system that is not open to the atmosphere and is composed of hard-piping, ductwork, connections, and, if necessary, fans, blowers, or other flow-inducing devices that conveys gas or vapor from an emission point to a control device.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that prevents or reduces air pollutant emissions to the atmosphere by blocking an opening in a cover when the device is secured in the closed position. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Container means a portable unit used to hold material. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes", cargo tank trucks, and tank rail cars.

Continuous record means documentation of data values measured at least once every 15 minutes and recorded at the frequency specified in 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-minutes or more frequent block averages.

Continuous seal means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

Control device means equipment used for recovering or oxidizing organic vapors. Examples of such equipment include but are not limited to carbon adsorbers, condensers, vapor incinerators, flares, boilers, and process heaters.

Cover means a device that prevents or reduces air pollutant emissions to the atmosphere by forming a continuous barrier over the off-site material managed in a unit. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

Emission point means an individual tank, surface impoundment, container, oil-water or organic-water separator, transfer system, process vent, or enclosure.

Enclosure means a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapor through a closed vent system to a control device.

External floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a tank with no fixed roof.

Fixed roof means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the liquid managed in the unit.

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

Floating roof means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the liquid being contained, and is equipped with a continuous seal.

HAP means hazardous air pollutants.

Hard-piping means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

Hazardous waste means a waste that is determined to be hazardous under the Resource Conservation and Recovery Act (PL 94–580) (RCRA), as implemented by 40 CFR parts 260 and 261.

Individual drain system means a stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge

or disposal. The term includes hard-piping, all drains and junction boxes, together with their associated sewer lines and other junction boxes (e.g., manholes, sumps, and lift stations) conveying wastewater streams or residuals. For the purpose of this subpart, an individual drain system is not a drain and collection system that is designed and operated for the sole purpose of collecting rainfall runoff (e.g., stormwater sewer system) and is segregated from all other individual drain systems.

Internal floating roof means a cover that rests or floats on the liquid surface (but not necessarily in complete contact with it inside a tank that has a fixed roof).

Light-material service means the container is used to manage an off-site material for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the off-site material is greater than 0.3 kilopascals (kPa) at 20 °C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight.

Liquid-mounted seal means a foam- or liquid-filled continuous seal mounted in contact with the liquid in a unit.

Maximum HAP vapor pressure means the sum of the individual HAP equilibrium partial pressure exerted by an off-site material at the temperature equal to either: the local maximum monthly average temperature as reported by the National Weather Service when the off-site material is stored or treated at ambient temperature; or the highest calendar-month average temperature of the off-site material when the off-site material is stored at temperatures above the ambient temperature or when the off-site material is stored or treated at temperatures below the ambient temperature. For the purpose of this subpart, maximum HAP vapor pressure is determined using the procedures specified in § 63.694(j) of this subpart.

Metallic shoe seal means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank 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.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.694(k) of this subpart.

Off-site material means a material that meets all of the criteria specified in paragraph § 63.680(b)(1) of this subpart but is not one of the materials specified in § 63.680(b)(2) of this subpart.

Off-site material management unit means a tank, container, surface impoundment, oil-water separator, organic-water separator, or transfer system used to manage off-site material.

Off-site material stream means an off-site material produced or generated by a particular process or source such that the composition and form of the material comprising the stream remain consistent. An off-site material stream may be delivered, transferred, or otherwise moved to the plant site in a continuous flow of material (e.g., wastewater flowing through a pipeline) or in a series of discrete batches of material (e.g., a truckload of drums all containing the same off-site material or multiple bulk truck loads of an off-site material produced by the same process).

Oil-water separator means a separator as defined for this subpart that is used to separate oil from water.

Operating parameter value means a minimum or maximum value established for a control device or treatment process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation or standard.

Organic-water separator means a separator as defined for this subpart that is used to separate organics from water.

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. A unit or group of units within a contiguous property that are not under common control (e.g., a wastewater treatment unit or solvent recovery unit located at the site but is sold to a different company) is a different plant site.

Point-of-delivery means the point at the boundary or within the plant site where the owner or operator first accepts custody, takes possession, or assumes responsibility for the management of an off-site material stream managed in a waste management operation or recovery operation specified in § 63.680 (a)(2)(i) through (a)(2)(vi) of this subpart. The characteristics of an off-site material stream are determined prior to combining the off-site material stream with other off-site material streams or with any other materials.

Point-of-treatment means a point where the off-site material to be treated in accordance with § 63.683(b)(1)(ii) of this subpart exits the treatment process. The characteristics shall be determined before this material is conveyed, handled, or otherwise managed in such a manner that the material has the potential to volatilize to the atmosphere.

Process heater means an enclosed combustion device that transfers heat released by burning fuel directly to process streams or to heat transfer liquids other than water.

Process vent means any open-ended pipe, stack, or duct that allows the passage of gases, vapors, or fumes to the atmosphere and this passage is caused by mechanical means (such as compressors or vacuum-producing systems) or by process-related means (such as volatilization produced by heating). For the purpose of this subpart, a process vent is not a stack or duct used to exhaust combustion products from a boiler, furnace, process heater, incinerator, or other combustion device.

Recovery operation means the collection of off-site material management units, process vents, and equipment components used at a plant site to manage an off-site material stream from the point-of-delivery through the point where the material has been recycled, reprocessed, or re-refined to obtain the intended product or to remove the physical and chemical impurities of concern.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable

gulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Separator means a waste management unit, generally a tank, used to separate oil or organics from water. A 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 any additional treatment units such as an air flotation unit clarifier or biological treatment unit. Examples of a separator include, but are not limited to, an API separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

Single-seal system means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

Surface impoundment means a unit that is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquids. Examples of surface impoundments include holding, storage, settling, and aeration pits, ponds, and lagoons.

Tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support and is designed to hold an accumulation of liquids or other materials.

Transfer system means a stationary system for which the predominant function is to convey liquids or solid materials from one point to another. point within a waste management operation or recovery operation. For the purpose of this subpart, the conveyance of material using a container (as defined for this subpart) or a self-propelled vehicle (e.g., a front-end loader) is not a transfer system. Examples of a transfer system include but are not limited to a pipeline, an individual drain system, a gravity-operated conveyor (such as a chute), and a mechanically-powered conveyor (such as a belt or screw conveyor).

Temperature monitoring device means a piece of equipment used to monitor temperature and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius (°C) or ±1.2 degrees °C, whichever value is greater.

Treatment process means a process in which an off-site material stream is physically, chemically, thermally, or biologically treated to destroy, degrade, or remove hazardous air pollutants contained in the off-site material. A treatment process can be composed of a single unit (e.g., a steam stripper) or a series of units (e.g., a wastewater treatment system). A treatment process can be used to treat one or more off-site material streams at the same time.

Used oil means any oil refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. This definition is the same definition of "used oil" in 40 CFR 279.1.

Used solvent means a solvent composed of a mixture of aliphatic hydrocarbons or a mixture of one and two ring aromatic hydrocarbons that has been used and as a result of such use is contaminated by physical or chemical impurities.

Vapor-mounted seal means a continuous seal that is mounted such that there is a vapor space between the liquid in the unit and the bottom of the seal.

Volatile organic hazardous air pollutant concentration or VOHAP concentration means the fraction by weight of the HAP listed in Table 1 of this subpart that are contained in an off-site material. For the purpose of this subpart, VOHAP concentration is determined in accordance with the test methods and procedures specified in § 63.694 (b) and (c) of this subpart.

Waste means a material generated from industrial, commercial, mining, or agricultural operations or from community activities that is discarded, discharged, or is being accumulated, stored, or physically, chemically, thermally, or biologically treated prior to being discarded or discharged.

Waste management operation means the collection of off-site material management units, process vents, and equipment components used at a plant site to manage an off-site material stream from the point-of-delivery to the point where the waste exits or is discharged from the plant site or the waste is placed for on-site disposal in a unit not subject to this subpart (e.g., a waste incinerator, a land disposal unit).

Waste stabilization process means any physical or chemical process used to either reduce the mobility of hazardous constituents in a waste or eliminate free liquids as determined by Test Method 9095—Paint Filter Liquids Test in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW–846, Third Edition, September 1986, as amended by Update I, November 15, 1992. A waste stabilization process includes mixing the waste with binders or other materials, and curing the resulting waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification." A waste stabilization process does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

§ 63.682 [Reserved]

§ 63.683 Standards: General.

(a) This section applies to owners and operators of affected sources as defined in § 63.680(c) of this subpart.

(b) The owner or operator shall control the air emissions from each affected source in accordance with the following requirements:

(1) For each off-site material management unit that is part of an affected source, the owner or operator shall perform one of the following except when the unit is exempted under provisions of paragraph (c) of this section:

(i) Install and operate air emission controls on the off-site material management unit in accordance with the standards specified in §§ 63.685 through 63.689 of this subpart, as applicable to the unit;

(ii) Treat the off-site material to remove or destroy the HAP in accordance with the treatment standards specified in § 63.684 of this subpart before placing the material in the off-site material management unit; or

(iii) Determine that the average VOHAP concentration of each off-site material stream managed in the off-site material unit remains at a level less than 500 parts per million by weight (ppmw) based on the HAP content of the off-site material stream at the point-of-delivery. The owner or operator shall perform an initial determination of the average VOHAP concentration of each off-site material stream using the procedures specified in § 63.694(b) of this subpart before the first time any portion of the off-site material stream is placed in the unit. Thereafter, the owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the off-site material stream.

(2) For each process vent that is part of an affected source, the owner or operator shall control the HAP emitted from the process vent by implementing one of the following control measures.

(i) Install and operate air emission controls on the process vent in accordance with the standards specified in § 63.690 of this subpart.

(ii) Determine that the average VOHAP concentration of each off-site material stream managed in the unit on which the process vent is used remains at a level less than 500 parts per million by weight (ppmw) based on the HAP content of the off-site material stream at the point-of-delivery. The owner or operator shall perform an initial determination of the average VOHAP concentration of each off-site material stream using the procedures specified in § 63.694(b) of this subpart before the first time any portion of the off-site material stream is placed in the unit. Thereafter, the owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the off-site material stream.

(3) For each equipment component that is part of an affected source and meets all of the criteria specified in paragraphs (b)(3)(i) through (b)(3)(iii) of this section, the owner or operator shall control the HAP emitted from equipment leaks by implementing control measures in accordance with the standards specified in § 63.691 of this subpart.

(i) The equipment component contains or contacts off-site material having a total HAP concentration equal to or greater than 10 percent by weight;

(ii) The equipment piece is a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, or instrumentation system; and

(iii) The equipment piece is intended to operate 300 hours or more during a 12-month period.

(c) Exempted off-site material management units. An off-site material management unit is exempted from the requirements specified in paragraph (b) of this section when the unit meets any one of the exemptions provided in paragraphs (c)(1) through (c)(5) of this section.

(1) An off-site material management unit is exempted from the requirements specified in paragraph (b) of this section if the unit is also subject to another subpart under 40 CFR part 61 or 40 CFR part 63, and the owner or operator is controlling the HAP listed in Table 1 of this subpart that are emitted from the unit in compliance with the provisions specified in the other applicable subpart.

(2) One or more off-site material management units located at a plant site can be exempted from the requirements specified in paragraph (b) of this section at the discretion of the owner or operator provided that the total annual quantity of HAP contained in the off-site material placed in the off-site material management units selected by the owner or operator to be exempted under this provision is less than 1 megagram per year. This total annual HAP quantity for the off-site material shall be based on the total quantity of the HAP listed in Table 1 of this subpart as determined at the point where the off-site material is placed in each exempted unit. For the off-site material management unit selected by the owner or operator to be exempted from the under this provision, the owner or operator shall meet the following requirements:

(i) Documentation shall be prepared by the owner or operator and maintained at the plant site to support the initial determination of the total annual HAP quantity of the off-site material. This documentation shall include identification of each off-site material management unit selected by the owner or operator to be exempted under paragraph (c)(2) of this section and the basis for determining the HAP content of the off-site material. The owner or operator shall perform a new determination when the extent of changes to the quantity or composition of the off-site material placed in the exempted units could cause the total annual HAP content in the off-site material to exceed 1 megagram per year.

(ii) Each of the off-site material management units exempted under paragraph (c)(2) of this section shall be permanently marked in such a manner that it can be readily identified as an exempted unit from the other off-site material management units located at the plant site.

(3) A tank or surface impoundment is exempted from the requirements specified in paragraph (b) of this section if the unit is used for a biological treatment process that destroys or degrades the HAP contained in the material entering the unit, such that either of the following conditions is met:

(i) The HAP reduction efficiency (R) for the process is equal to or greater than 95 percent, and the HAP biodegradation efficiency (R_{bio}) for the process is equal to or greater than 95 percent. The HAP reduction efficiency (R) shall be determined using the procedure specified in § 63.694(g) of this subpart. The HAP biodegradation efficiency (R_{bio}) shall be determined in accordance with the requirements of § 63.694(h) of this subpart.

(ii) The total actual HAP mass removal rate (MR_{bio}) as determined in accordance with the requirements of § 63.694(i) of this subpart for the off-site material treated by the process is equal to or greater than the required HAP mass removal rate (RMR) as determined in accordance with the requirements of § 63.694(e) of this subpart.

(4) An off-site material management unit is exempted from the requirements specified in paragraph (b) of this section if the off-site material placed in the unit is a hazardous waste that meets the numerical concentration limits, applicable to the hazardous waste, as specified in 40 CFR part 268—Land Disposal Restrictions under both of the following tables:

(i) Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40; and

(ii) Table UTS—"Universal Treatment Standards" in 40 CFR 268.48.

(5) A tank used for bulk feed of off-site material to a waste incinerator is exempted from the requirements specified in paragraph (b) of this section if all of the following conditions are met:

(i) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF—National Emission Standards for Benzene Waste Operations for a facili' at which the total annual benzene quantity from the facility waste is equa. to or greater than 10 megagrams per year;

(ii) The enclosure and control device serving the tank were installed and began operation prior to July 1, 1996; and

(iii) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

§ 63.684 Standards: Off-Site Material Treatment.

(a) The provisions of this section apply to the treatment of off-site material to control air emissions for which § 63.683(b)(1)(ii) of this subpart references the requirements of this section for such treatment.

(b) The owner or operator shall remove or destroy the HAP contained in off-site material streams to be managed in the off-site material management unit in accordance with § 63.683(b)(1)(ii) of this subpart using a treatment process that continuously achieves, under normal operations, one of the following performance levels for the range of off-site material stream compositions and quantities expected to be treated:

(1) *VOHAP concentration.* The treatment process shall reduce the VOHAP concentration of the off-site material using a means, other than by dilution, to achieve one of the following performance levels, as applicable:

(i) In the case when every off-site material stream entering the treatment process has an average VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery, then the VOHAP concentration of the off-site material shall be reduced to a level that is less than 500 ppmw at the point-of-treatment.

(ii) In the case when the off-site material streams entering the treatment process include off-site material streams having average VOHAP concentrations less than 500 ppmw at the point-of-delivery, then the VOHAP concentration of the off-site material shall be reduced to a level at the point-of-treatment that is either:

(A) Less than the VOHAP concentration limit (C_R) established for the treatment process using the procedure specified in § 63.694(d) of this subpart; or

(B) Less than the lowest VOHAP concentration determined for each of the off-site material streams entering the treatment process as determined by the VOHAP concentration of the off-site material at the point-of-delivery.

(2) *HAP mass removal.* The treatment process shall achieve a performance level such that the total quantity of HAP actually removed from the off-site material stream (MR) is equal to or greater than the required mass removal (RMR) established for the off-site material stream using the procedure specified in § 63.694(e) of this subpart. The MR for the off-site material streams shall be determined using the procedures specified in § 63.694(f) of this subpart.

(3) *HAP reduction efficiency.* The treatment process shall achieve a performance level such that the total quantity of HAP in the off-site material stream is reduced to one of the following performance levels, as applicable:

(i) In the case when the owner or operator determines that off-site material stream entering the treatment process has an average VOHAP concentration less than 10,000 ppmw at the point-of-delivery, then the treatment process shall achieve a performance level such that the total quantity of HAP in the off-site material stream is reduced by 95 percent or more. The HAP reduction efficiency (R) for the treatment process shall be determined using the procedure specified in § 63.694(g) of this subpart. The average VOHAP concentration of the off-site material stream at the point-of-delivery shall be determined using the procedure specified in § 63.694(b) of this subpart.

(ii) In the case when the off-site material stream entering the treatment process has an average VOHAP concentration equal to or greater than 10,000 ppmw at the point-of-delivery, then the treatment process shall achieve a performance level such that the total quantity of HAP in the off-site material stream is reduced by 95 percent or more, and the average VOHAP concentration of the off-site material at the point-of-treatment is less than 100 parts per million by weight (ppmw). The HAP reduction efficiency (R) for the treatment process shall be determined using the procedure specified in § 63.694(g) of this subpart. The average VOHAP concentration of the off-site material stream at the point-of-treatment shall be determined using the procedure specified in § 63.694(c) of this subpart.

(4) *Biological degradation.* The treatment process shall achieve either of the following performance levels:

(i) The HAP reduction efficiency (R) for the treatment process is equal to or greater than 95 percent, and the HAP biodegradation efficiency (R_{bio}) for the treatment process is equal to or greater than 95 percent. The HAP reduction efficiency (R) shall be determined using the procedure specified in § 63.694(g) of this subpart. The HAP biodegradation efficiency (R_{bio}) shall be determined in accordance with the requirements of § 63.694(h) of this subpart.

(ii) The total quantity of HAP actually removed from the off-site material stream by biological degradation (MR_{bio}) shall be equal to or greater than the required mass removal (RMR) established for the off-site material stream using the procedure specified in § 63.694(e) of this subpart. The MR_{bio} of the off-site material stream shall be determined using the procedures specified in § 63.694(i) of this subpart.

(5) *Incineration.* The HAP contained in the off-site material stream shall be destroyed using one of the following combustion devices:

(i) An incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and the incinerator is designed and operated in accordance with the requirements of 40 CFR 264 subpart O—Incinerators, or

(B) Has certified compliance with the interim status requirements of 40 CFR 265 subpart O—Incinerators.

(ii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270, and the combustion unit is designed and operated in accordance with the requirements of 40 CFR part 266 subpart H—Hazardous Waste Burned in Boilers and Industrial Furnaces, or

(B) Has certified compliance with the interim status requirements of 40 CFR part 266 subpart H Hazardous Waste Burned in Boilers and Industrial Furnaces.

(c) For a treatment process that removes the HAP from the off-site material by a means other than thermal destruction or biological degradation to achieve one of the performances levels specified in paragraph (b)(1), (b)(2), or (b)(3) of this section, the owner or operator shall manage the HAP removed from the off-site material in such a manner to minimize release of these HAP to the atmosphere, to the extent practical. Examples of HAP emission control measures that meet the requirements of this paragraph include managing the HAP removed from the off-site material in units that use air emission controls in accordance with the standards specified in §§ 63.685 through 63.689 of this subpart, as applicable to the unit.

(d) When the owner or operator treats the off-site material to meet one of the performance levels specified in paragraphs (b)(1) through (b)(4) of this section, the owner or operator shall demonstrate that the treatment process achieves the selected performance level for the range of expected off-site material stream compositions expected to be treated. An initial demonstration shall be performed as soon as possible but no later than 30 days after first time an owner or operator begins using the treatment process to manage off-site material streams in accordance with the requirements of § 63.683(b)(1)(ii) of this subpart. Thereafter, the owner or operator shall review and update, as necessary, this demonstration at least once every 12 months following the date of the initial demonstration.

(e) When the owner or operator treats the off-site material to meet one of the performance levels specified in paragraphs (b)(1) through (b)(4) of this section, the owner or operator shall ensure that the treatment process is

achieving the applicable performance requirements by continuously monitoring the operation of the process when it is used to treat off-site material:

(1) A continuous monitoring system shall be installed and operated for each treatment that measures operating parameters appropriate for the treatment process technology. This system shall include a continuous recorder that records the measured values of the selected operating parameters. The monitoring equipment shall be installed, calibrated, and maintained in accordance with the equipment manufacturer's specifications. The continuous recorder shall be a data recording device that records either an instantaneous data value at least once every 15 minutes or an average value for intervals of 15 minutes or less.

(2) For each monitored operating parameter, the owner or operator shall establish a minimum operating parameter value or a maximum operating parameter value, as appropriate, to define the range of conditions at which the treatment process must be operated to continuously achieve the applicable performance requirements of this section.

(3) When the treatment process is operating to treat off-site material, the owner or operator shall inspect the data recorded by the continuous monitoring system on a routine basis and operate the treatment process such that the actual value of each monitored operating parameter is greater than the minimum operating parameter value or less than the maximum operating parameter value, as appropriate, established for the treatment process.

(f) The owner or operator shall maintain records for each treatment process in accordance with the requirements of § 63.696 of this subpart.

(g) The owner or operator shall prepare and submit reports for each treatment process in accordance with the requirements of § 63.697 of this subpart.

(h) The Administrator may at any time conduct or request that the owner or operator conduct testing necessary to demonstrate that a treatment process is achieving the applicable performance requirements of this section. The testing shall be conducted in accordance with the applicable requirements of this section. The Administrator may elect to have an authorized representative observe testing conducted by the owner or operator.

§ 63.685 Standards: Tanks.

(a) The provisions of this section apply to the control of air emissions from tanks for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each tank subject to this section in accordance with the following applicable requirements:

(1) For a tank that is part of an existing affected source but the tank is not used to manage off-site material having a maximum organic vapor pressure that is equal to or greater than 76.6 kPa nor is the tank used for a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall determine whether the tank is required to use either Tank Level 1 controls or Tank Level 2 controls as specified for the tank by Table 3 of this subpart based on the off-site material maximum HAP vapor pressure and the tank's design capacity. The owner or operator shall control air emissions from a tank required by Table 3 to use Tank Level 1 controls in accordance with the requirements of paragraph (c) of this section. The owner or operator shall control air emissions from a tank required by Table 3 to use Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(2) For a tank that is part of a new affected source but the tank is not used to manage off-site material having a maximum organic vapor pressure that is equal to or greater than 76.6 kPa nor is the tank used for a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall determine whether the tank is required to use either Tank Level 1 controls or Tank Level 2 controls as specified for the tank by Table 4 of this subpart based on the off-site material maximum HAP vapor pressure and the tank's design capacity. The owner or operator shall control air emissions from a tank required by Table 4 to use Tank Level 1 controls in accordance with the requirements of paragraph (c) of this section. The owner or operator shall control air emissions from a tank required by Table 4 to use Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(3) For a tank that is used for a waste stabilization process, the owner or operator shall control air emissions from the tank by using Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section.

(4) For a tank that manages off-site material having a maximum organic vapor pressure that is equal to or greater than the 76.6 kPa, the owner or operator shall control air emissions from the tank by venting the tank through a closed vent system to a control device in accordance with the requirements of paragraph (g) of this section.

(c) Owners and operators controlling air emissions from a tank using Tank Level 1 controls shall meet the following requirements:

(1) The owner or operator shall determine the maximum HAP vapor pressure for an off-site material to be managed in the tank using Tank Level 1 controls before the first time the off-site material is placed in the tank. The maximum HAP vapor pressure shall be determined using the procedures specified in § 63.694(j) of this subpart. Thereafter, the owner or operator shall perform a new determination whenever changes to the off-site material managed in the tank could potentially cause the maximum HAP vapor pressure to increase to a level that is equal to or greater than the maximum HAP vapor pressure limit for the tank design capacity category specified in Table 3 or Table 4 of this subpart, as applicable to the tank.

(2) The owner or operator shall control air emissions from the tank using a fixed-roof in accordance with the provisions specified in 40 CFR 63 subpart OO—National Emission Standards for Tanks—Level 1.

(d) Owners and operators controlling air emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in paragraph (e) of this section;

(2) A tank equipped with an external floating roof in accordance with the requirements specified in paragraph (f) of this section;

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(4) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(e) The owner or operator who elects to control air emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirem specified in paragraphs (e)(1) throug (e)(3) of this section.

(1) The tank shall be equipped with a fixed roof and an internal floating roof

in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in § 63.681 of this subpart; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) 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.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) 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 practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim spaces vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified in § 63.695(b) of this subpart.

(f) The owner or operator who elects to control tank emissions by using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in § 63.681 of this subpart. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(iii) The external floating roof shall be meet the following specifications:

(A) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float wells shall be equipped with covers designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vents shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) 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 practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified in § 63.695(b) of this subpart.

(g) The owner or operator who controls tank air emissions by venting to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section.

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 63.693 of this subpart.

(2) Whenever an off-site material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of separator.

(ii) Opening of a safety device, as defined in § 63.681 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the procedures specified in § 63.695 of this subpart.

(h) The owner or operator who elects to control tank air emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in § 63.694(k) of this subpart.

(3) Whenever an off-site material is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except in the event that opening of a safety device, as defined in § 63.681 of this subpart, is required to avoid an unsafe condition.

(i) The owner or operator who elects to control air emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (i)(4) of this section.

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in § 63.693 of this subpart.

§ 63.686 Standards: Oil-water and organic water separators.

(a) The provisions of this section apply to the control of air emissions from oil-water separators and organic-water separators for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from the separator subject to this section by installing and operating one of the following:

(1) A floating roof in accordance with all applicable provisions specified in 40 CFR 63 subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators. For portions of the separator where it is infeasible to install and operate a floating roof, such as over a weir mechanism, the owner or operator shall comply with the requirements specified in paragraph (b)(2) of this section.

(2) A fixed-roof that is vented through a closed-vent system to a control device in accordance with all applicable provisions specified in 40 CFR 63 subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators.

§ 63.687 Standards: Surface impoundments.

(a) The provisions of this section apply to the control of air emissions from surface impoundments for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each surface impoundment subject to this section by installing and operating one of the following, as relevant to the surface impoundment design and operation:

(1) A floating membrane cover in accordance with the applicable provisions specified in 40 CFR 63 subpart QQ—National Emission Standards for Surface Impoundments.

(2) A cover that is vented through a closed-vent system to a control device in accordance with all applicable

provisions specified in 40 CFR 63 subpart QQ—National Emission Standards for Surface Impoundments.

§ 63.688 Standards: Containers.

(a) The provisions of this section apply to the control of air emissions from containers for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (c) of this section apply to the container.

(1) For a container having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3, the owner or operator shall control air emissions from the container in accordance with the standards for Container Level 1 controls as specified in 40 CFR 63 subpart PP—National Emission Standards for Containers.

(2) For a container having a design capacity greater than 0.46 m^3 and the container is not in light-material service as defined in § 63.681 of this subpart, the owner or operator shall control air emissions from the container in accordance with the standards for Container Level 1 controls as specified in 40 CFR 63 subpart PP—National Emission Standards for Containers.

(3) For a container having a design capacity greater than 0.46 m^3 and the container is in light-material service as defined in § 63.681 of this subpart, the owner or operator shall control air emissions from the container in accordance with the standards for Container Level 2 controls as specified in 40 CFR 63 subpart PP—National Emission Standards for Containers.

(c) When a container subject to this subpart and having a design capacity greater than 0.1 m^3 is used for treatment of an off-site material by a waste stabilization process as defined in § 63.681 of this subpart, the owner or operator shall control air emissions from the container at those times during the process when the off-site material in container is exposed to the atmosphere in accordance with the standards for Container Level 3 controls as specified in 40 CFR 63 subpart PP—National Emission Standards for Containers.

§ 63.689 Standards: Transfer systems.

(a) The provisions of this section apply to the control of air emissions from transfer systems for which § 63.683(b)(1)(i) of this subpart references the use of this section for such air emission control.

(b) For each transfer system that is subject to this section and is an individual drain system, the owner or operator shall control air emissions from in accordance with the standards specified in 40 CFR 63 subpart RR—National Emission Standards for Individual Drain Systems.

(c) For each transfer system that is subject to this section but is not an individual drain system, the owner or operator shall control air emissions by installing and operating one of the following:

(1) A transfer system that uses covers in accordance with the requirements specified in paragraph (d) of this section.

(2) A transfer system that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed flange).

(3) A transfer system that is enclosed and vented through a closed vent system to a control device in accordance with the following requirements:

(i) The transfer system is designed and operated such that an internal pressure in the vapor headspace in the system is maintained at a level less than atmospheric pressure when the control device is operating, and

(ii) The closed vent system and control device are designed and operated in accordance with the requirements of § 63.693 of this subpart.

(d) Owners and operators controlling air emissions from a transfer system using covers in accordance with the provisions of paragraph (c)(1) of this section shall meet the following requirements:

(1) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the off-site material as it is conveyed by the transfer system except for the openings at the inlet and outlet to the transfer system through which the off-site material passes. The inlet and outlet openings used for passage of the off-site material through the transfer system shall be the minimum size required for practical operation of the transfer system.

(2) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section joints or between the interface of the cover edge and its mounting.

(3) Except for the inlet and outlet openings to the transfer system through which the off-site material passes, each opening in the cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

(4) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the off-site material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the material or its vapors conveyed in the transfer system; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the transfer system on which the cover is installed.

(5) Whenever an off-site material is in the transfer system, the cover shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the cover is allowed to provide access to the transfer system for performing routine inspection, maintenance, repair, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a hatch or remove the cover to repair conveyance equipment mounted under the cover or to clear a blockage of material inside the system. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable.

(ii) Opening of a safety device, as defined in § 63.681 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(6) The owner or operator shall inspect the air emission control equipment in accordance with the requirements specified in § 63.695 of this subpart.

§ 63.690 Standards: Process vents.

(a) The provisions of this section apply to the control of air emissions from process vents for which § 63.683(b)(2)(i) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control HAP emitted from the process vent within the affected source by connecting each process vent through a closed-vent system to a control device that is designed and operated in

accordance with the standards specified in § 63.693 of this subpart with the following exceptions.

(1) Each individual control device used to comply with the requirements of this section is not required to meet the level of performance, as applicable to the particular control technology used, specified in §§ 63.693 (d)(1), (e)(1), (f)(1)(i), and (g)(1)(i) of this subpart provided that these control devices are designed and operated to achieve a total reduction of 95 weight percent or more in the quantity of HAP, listed in Table 1 of this subpart, that is emitted from all process vents within the affected source.

(2) For the purpose of complying with this section, a device for which the predominate function is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser or a solvent recovery unit) is not a control device.

§ 63.691 Standards: Equipment leaks.

(a) The provisions of this section apply to the control of air emissions from equipment leaks for which § 63.683(b)(3) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control the HAP emitted from equipment leaks in accordance with the applicable provisions of either:

(1) Section 61.242 through § 61.247 in 40 CFR Part 61 subpart V—National Emission Standards for Equipment Leaks; or

(2) Section 63.162 through § 63.182 in 40 CFR Part 63 subpart H—National Emission Standards for Organic Hazardous Air Pollutants from Equipment Leaks.

§ 63.692 [Reserved]

§ 63.693 Standards: Closed-vent systems and control devices.

(a) The provisions of this section apply to closed-vent systems and control devices used to control air emissions for which another standard references the use of this section for such air emission control.

(b) For each closed-vent system and control device used to comply with this section, the owner or operator shall meet the following requirements:

(1) The closed-vent system shall be designed and operated in accordance with the requirements specified in paragraph (c) of this section.

(2) The control device shall remove, recover, or destroy HAP at a level of performance that achieves the requirements applicable to the particular control device technology as specified in paragraphs (d) through (h) of this section. The owner or operator shall demonstrate that the control device achieves the applicable performance requirements by either conducting a performance test or preparing a design analysis for the control device in accordance with the requirements specified in this section.

(3) Whenever gases or vapors containing HAP are vented through a closed-vent system connected to a control device used to comply with this section, the control device shall be operating except at the following times:

(i) The control device may be bypassed for the purpose of performing planned routine maintenance of the closed vent system or control device in situations when the routine maintenance cannot be performed during periods that the emission point vented to the control device is shutdown. On an annual basis, the total time that the closed-vent system or control device is bypassed to perform routine maintenance shall not exceed 240 hours per each 12 month period.

(ii) The control device may be bypassed for the purpose of correcting a malfunction of the closed vent system or control device. The owner or operator shall perform the adjustments or repairs necessary to correct the malfunction as soon as practicable after the malfunction is detected.

(4) The owner or operator shall ensure that the control device is achieving the performance requirements specified in paragraph (b)(2) of this section by continuously monitoring the operation of the control device as follows:

(i) A continuous monitoring system shall be installed and operated for each control device that measures operating parameters appropriate for the control device technology as specified in paragraphs (d) through (h) of this section. This system shall include a continuous recorder that records the measured values of the selected operating parameters. The monitoring equipment shall be installed, calibrated, and maintained in accordance with the equipment manufacturer's specifications. The continuous recorder shall be a data recording device that records either an instantaneous data value at least once every 15 minutes or an average value for intervals of 15-minutes or less.

(ii) For each monitored operating parameter, the owner or operator shall establish a minimum operating parameter value or a maximum operating parameter value, as appropriate, to define the range of conditions at which the control device must be operated to continuously achieve the applicable performance requirements of this section. Each minimum or maximum operating parameter value shall be established as follows:

(A) If the owner or operator conducts a performance test to demonstrate control device performance, then the minimum or maximum operating parameter value shall be established based on values measured during the performance test and supplemented, as necessary, by control device design analysis and manufacturer recommendations.

(B) If the owner or operator uses a control device design analysis to demonstrate control device performance, then the minimum or maximum operating parameter value shall be established based on the control device design analysis and the control device manufacturer's recommendations.

(C) When the control device is required to be operating in accordance with the provisions of paragraph (b)(3) of this section, the owner or operator shall inspect the data recorded by the continuous monitoring system on a routine basis and operate the control device such that the actual value of each monitored operating parameter is greater than the minimum operating parameter value or less than the maximum operating parameter value, as appropriate, established for the control device.

(5) The owner or operator shall inspect and monitor the closed-vent system in accordance with the requirements of § 63.695(c) of this subpart.

(6) The owner or operator shall maintain records for each closed-vent system and control device in accordance with the requirements of § 63.696 of this subpart.

(7) The owner or operator shall prepare and submit reports for each closed-vent system and control device in accordance with the requirements of § 63.697 of this subpart.

(8) The Administrator may at any time conduct or request that the owner or operator conduct a performance test to demonstrate that a closed-vent system and control device achieves the applicable performance requirements of this section. The performance test shall be conducted in accordance with the requirements of § 63.694(l) of this subpart. The Administrator may elect to have an authorized representative observe a performance test conducted by the owner or operator. Should the results of this performance test not agree with the determination of control device performance based on a design analysis, then the results of the performance test

shall be used to establish compliance with this section.

(c) Closed-vent system requirements.

(1) The vent stream required to be controlled shall be conveyed to the control device by either of the following closed-vent systems:

(i) A closed-vent system that is designed to operate with no detectable organic emissions using the procedure specified in § 63.694(k) of this subpart; or

(ii) A closed-vent system that is designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(2) In situations when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph (c)(2)(i) or a seal or locking device as specified in paragraph (c)(2)(ii) of this section. For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with paragraph (c)(2) of this section, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates either the presence of gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with paragraph (c)(2) of this section, the device shall be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(d) Carbon adsorption control device requirements.

(1) The carbon adsorption system shall be designed and operated to achieve one of the following performance specifications:

(i) Recover 95 percent or more, on a weight-basis, of the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the carbon adsorption system; or

(ii) Recover 95 percent or more, on a weight-basis, of the total HAP listed in Table 1 of this subpart contained in the vent stream entering the carbon adsorption system.

(2) The owner or operator shall demonstrate that the carbon adsorption system achieves the performance requirements of paragraph (d)(1) of this section by one of the following methods:

(i) Conduct a performance test in accordance with the requirements of § 63.694(l) of this subpart.

(ii) Prepare a design analysis. This analysis shall address the vent stream characteristics and control device operating parameters for the applicable carbon adsorption system type as follows:

(A) For a regenerable carbon adsorption system, the design analysis shall address the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total regeneration steam 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 the carbon.

(B) For a nonregenerable carbon adsorption system (e.g., a carbon canister), the design analysis shall address the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature and shall establish the design exhaust vent stream organic compound concentration, carbon bed capacity, activated carbon type and working capacity, and design carbon replacement interval based on the total carbon working capacity of the control device and emission point operating schedule.

(3) To meet the monitoring requirements of paragraph (b)(4) of this section, the owner or operator shall use one of the following continuous monitoring systems:

(i) For a regenerative-type carbon adsorption system, an integrating regeneration stream flow monitoring device equipped with a continuous recorder and a carbon bed temperature monitoring device for each adsorber vessel equipped with a continuous recorder. The integrating regeneration stream flow monitoring device shall have an accuracy of ±10 percent and measure the total regeneration stream mass flow during the carbon bed regeneration cycle. The temperature monitoring device shall measure the carbon bed temperature after regeneration and within 15 minutes of completing the cooling cycle and the duration of the carbon bed steaming cycle.

(ii) A continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder.

(iii) A continuous monitoring system that measures other alternative operating parameters upon approval of the Administrator as specified in 40 CFR 63.8 (f)(1) through (f)(5) of this part.

(4) The owner or operator shall manage the carbon used for the carbon adsorption system, as follows:

(i) Following the initial startup of the control device, all carbon in the control device shall be replaced with fresh carbon on a regular, predetermined time interval that is no longer than the carbon service life established for the carbon adsorption system.

(ii) The spent carbon removed from the carbon adsorption system shall be managed in one of the following ways:

(A) Regenerated or reactivated in a thermal treatment unit that is designed and operated in accordance with the requirements of 40 CFR 264 subpart X and is permitted under 40 CFR part 270 of this chapter, or certified to be in compliance with the interim status requirements of 40 CFR 265 subpart P of this chapter.

(B) Burned in a hazardous waste incinerator that is designed and operated in accordance with the requirements of 40 CFR 264 subpart O and is permitted under 40 CFR part 270 of this chapter, or certified to be in compliance with the interim status requirements of 40 CFR part 265 subpart O.

(C) Burned in a boiler or industrial furnace that is designed and operated in accordance with the requirements of 40 CFR 266 subpart H and is permitted under 40 CFR part 270 of this chapter, or certified to be in compliance with the interim status requirements of 40 CFR part 266 subpart H of this chapter.

(e) Condenser control device requirements.

(1) The condenser shall be designed and operated to achieve one of the following performance specifications:

(i) Recover 95 percent or more, on a weight-basis, of the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the condenser; or

(ii) Recover 95 percent or more, on a weight-basis, of the total HAP, listed in Table 1 of this subpart, contained in the vent stream entering the condenser.

(2) The owner or operator shall demonstrate that the condenser achieves the performance requirements of paragraph (e)(1) of this section by one of the following methods:

(i) Conduct performance tests in accordance with the requirements of § 63.694(l) of this subpart.

(ii) Prepare a design analysis. This design analysis shall address 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.

(3) To meet the continuous monitoring requirements of paragraph (b)(3)(ii) of this section, the owner or operator shall use one of the following continuous monitoring systems:

(i) A temperature monitoring device equipped with a continuous recorder. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser.

(ii) A continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder.

(iii) A continuous monitoring system that measures other alternative operating parameters upon approval of the Administrator as specified in 40 CFR 63.8 (f)(1) through (f)(5) of this part.

(f) Vapor incinerator control device requirements.

(1) The vapor incinerator shall be designed and operated to achieve one of the following performance specifications:

(i) Destroy the total organic compounds (TOC), less methane and ethane, contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a weight-basis, or

(B) To achieve a total incinerator outlet concentration for the TOC, less methane and ethane, of less than or equal to 20 parts per million by volume (ppmv) on a dry basis corrected to 3 percent oxygen.

(ii) Destroy the HAP listed in Table 1 of this subpart contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a total HAP weight-basis, or

(B) To achieve a total incinerator outlet concentration for the HAP, listed in table 1 of this subpart, of less than or equal to 20 parts per million by volume (ppmv) on a dry basis corrected to 3 percent oxygen.

(iii) Maintain the conditions in the vapor incinerator combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher.

(2) The owner or operator shall demonstrate that the vapor incinerator achieves the performance requirements of paragraph (f)(1) of this section by one of the following methods:

(i) Conduct performance tests in accordance with the requirements of § 63.694(l) of this subpart; or

(ii) Prepare a design analysis. The design analysis shall include analysis of the vent stream characteristics and control device operating parameters for the applicable vapor incinerator type as follows:

(A) For a thermal vapor incinerator, the design analysis shall address the vent stream composition, constituent concentrations, and flow rate and shall establish the design minimum and average temperatures in the combustion chamber and the combustion chamber residence time.

(B) For a catalytic vapor incinerator, the design analysis shall address 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, and the design service life of the catalyst.

(3) To meet the monitoring requirements of paragraph (b)(4) of this section, the owner or operator shall use one of the following continuous monitoring systems, as applicable:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device capable of monitoring temperature at two locations equipped with a continuous recorder. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For either type of vapor incinerator, a continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder.

(iv) For either type of vapor incinerator, a continuous monitoring system that measures alternative operating parameters other than those specified in paragraphs (f)(3)(i) or (f)(3)(ii) of this section upon approval of the Administrator as specified in 40 CFR 63.8 (f)(1) through (f)(5) of this part.

(g) Boilers and process heaters control device requirements.

(1) The boiler or process heater shall be designed and operated to achieve one of the following performance specifications:

(i) Destroy the total organic compounds (TOC), less methane and ethane, contained in the vent stream introduced into the flame zone of the boiler or process heater either:

(A) By 95 percent or more, on a weight-basis, or

(B) To achieve in the exhausted combustion gases a total concentration for the TOC, less methane and ethane, of less than or equal to 20 parts per million by volume (ppmv) on a dry basis corrected to 3 percent oxygen.

(ii) Destroy the HAP listed in Table 1 of this subpart contained in the vent stream entering the vapor incinerator either:

(A) By 95 percent or more, on a total HAP weight-basis, or

(B) To achieve in the exhausted combustion gases a total concentration for the HAP, listed in table 1 of the subpart, of less than or equal to 20 parts per million by volume (ppmv) on a dry basis corrected to 3 percent oxygen.

(iii) Introduce the vent stream into the flame zone of the boiler or process heater and maintain the conditions in the combustion chamber at a residence time of 0.5 seconds or longer and at a temperature of 760°C or higher.

(iv) Introduce the vent stream with the fuel that provides the predominate heat input to the boiler or process heater (i.e., the primary fuel); or

(v) Introduce the vent stream to a boiler or process heater for which the owner or operator either has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266 subpart H of this chapter; or has certified compliance with the interim status requirements of

.0 CFR part 266 subpart H of this chapter.

(2) The owner or operator shall demonstrate that the boiler or process heater achieves the performance requirements of paragraph (g)(1)(i), (g)(1)(ii), or (g)(1)(iii) of this section using one of the following methods:

(i) Conduct performance tests in accordance with the requirements of § 63.694(l) of this subpart.

(ii) Prepare a design analysis. The design analysis shall address 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.

(3) The owner or operator shall demonstrate that the boiler or process heater achieves the performance requirements of paragraph (g)(1)(iv) or (g)(1)(v) of this section by keeping records that document that the boiler or process heater is designed and operated in accordance with the applicable requirements of this section.

(4) To meet the monitoring requirements of paragraph (b)(4) of this section, the owner or operator shall use any of the following continuous monitoring systems:

(i) A temperature monitoring device equipped with a continuous recorder. The temperature sensor shall be installed at a location in the combustion chamber downstream of the flame zone.

(ii) A continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder.

(iii) A continuous monitoring system that measures alternative operating parameters other than those specified in paragraphs (g)(3)(i) or (g)(3)(ii) of this section upon approval of the Administrator as specified in 40 CFR 63.8 (f)(1) through (f)(5) of this part.

(h) Flare control device requirements. The flare shall be designed and operated in accordance with the requirements of 40 CFR 63.11(b). To meet the monitoring requirements of paragraph (b)(4) of this section, the owner or operator shall use a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

§ 63.694 Testing methods and procedures.

(a) This section specifies the testing methods and procedures required for this subpart to perform the following:

(1) To determine the average VOHAP concentration for off-site material streams at the point-of-delivery for compliance with standards specified § 63.683 of this subpart, the testing methods and procedures are specified in paragraph (b) of this section.

(2) To determine the average VOHAP concentration for treated off-site material streams at the point-of-treatment for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (c) of this section.

(3) To determine the treatment process VOHAP concentration limit (C_R) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (d) of this section.

(4) To determine treatment process required HAP removal rate (RMR) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (e) of this section.

(5) To determine treatment process actual HAP removal rate (MR) for compliance with standards specified § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (f) of this section.

(6) To determine treatment process required HAP reduction efficiency (R) for compliance with standards specified in § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (g) of this section.

(7) To determine treatment process required HAP biodegradation efficiency (R_{bio}) for compliance with standards specified in § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (h) of this section.

(8) To determine treatment process required actual HAP mass removal rate (MR_{bio}) for compliance with standards specified in § 63.684 of this subpart, the testing methods and procedures are specified in paragraph (i) of this section.

(9) To determine maximum organic HAP vapor pressure of off-site materials in tanks for compliance with the standards specified in § 63.685 of this subpart, the testing methods and procedures are specified in paragraph (j) of this section.

(10) To determine no detectable organic emissions, the testing methods and procedures are specified in paragraph (k) of this section.

(11) To determine closed-vent system and control device performance for compliance with the standards specified in § 63.693 of this subpart, the testing methods and procedures are specified in paragraph (l) of this section.

(b) Testing methods and procedures to determine average VOHAP concentration of an off-site material stream at the point-of-delivery.

(1) The average VOHAP concentration of an off-site material at the point-of-delivery shall be determined using either direct measurement as specified in paragraph (b)(2) of this section or by knowledge as specified in paragraph (b)(3) of this section.

(2) Direct measurement to determine VOHAP concentration.

(i) Sampling. Samples of the off-site material stream shall be collected from the container, pipeline, or other device used to deliver the off-site material stream to the plant site in a manner such that volatilization of organics contained in the sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VOHAP concentration for the off-site material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the off-site material stream but shall not exceed 1 year.

(B) A sufficient number of samples, but no less than four samples, shall be collected to represent the complete range of HAP compositions and HAP quantities that occur in the off-site material stream during the entire averaging period due to normal variations in the operating conditions for the source or process generating the off-site material stream. Examples of such normal variations are seasonal variations in off-site material quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW–846 or Method 25D in 40 CFR part 60, appendix A.

(ii) Analysis. Each collected sample shall be prepared and analyzed in accordance with one of the following methods:

(A) Method 25D in 40 CFR part 60, appendix A.

(B) Method 305 in 40 CFR part 63, appendix A.

(C) Method 624 in 40 CFR part 136, appendix A.

(D) Method 1624 in 40 CFR part 136, appendix A.

(E) Method 1625 in 40 CFR part 136, appendix A.

(F) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 and Section 5.3 of Method 301 in 40 CFR part 63, appendix A.

(iii) Calculations. The average VOHAP concentration (C) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (b)(2)(ii) of this section and the following equation:

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

where:

$\overline{C}$=Average VOHAP concentration of the off-site material at the point-of-delivery on a mass-weighted basis, ppmw.

i=Individual sample "i" of the off-site material.

n=Total number of samples of the off-site material collected (at least 4) for the averaging period (not to exceed 1 year).

Q_i=Mass quantity of off-site material stream represented by C_i, kg/hr.

Q_T=Total mass quantity of off-site material during the averaging period, kg/hr.

C_i=Measured VOHAP concentration of sample "i" as determined in accordance with the requirements of § 63.693(b)(2)(ii), ppmw.

(3) Knowledge of the off-site material to determine VOHAP concentration.

(i) Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the off-site material stream's average VOHAP concentration. Examples of information that may be used as the basis for knowledge include: material balances for the source or process generating the off-site material stream; species-specific chemical test data for the off-site material stream from previous testing that are still applicable to the current off-site material stream; previous test data for other locations managing the same type of off-site material stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.

(ii) If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VOHAP concentration. For example, an owner or operator may use HAP concentration test data for the off-site material stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A of this part as the basis for knowledge of the off-site material.

(iii) An owner or operator using species-specific chemical concentration test data as the basis for knowledge of the off-site material may adjust the test data to the corresponding average VOHAP concentration value which would be obtained had the off-site material samples been analyzed using Method 305. To adjust these data, the measured concentration for each individual HAP chemical species contained in the off-site material is multiplied by the appropriate species-specific adjustment factor (f_{m305}) listed in Table 1 of this subpart.

(iv) In the event that the Administrator and the owner or operator disagree on a determination of the average VOHAP concentration for an off-site material stream using knowledge, then the results from a determination of VOHAP concentration using direct measurement as specified in paragraph (b)(2) of this section shall be used to establish compliance with the applicable requirements of this subpart. The Administrator may perform or request that the owner or operator perform this determination using direct measurement.

(c) Determination of average VOHAP concentration of an off-site material stream at the point-of-treatment.

(1) Sampling. Samples of the off-site material stream shall be collected at the point-of-treatment in a manner such that volatilization of organics contained in the sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(i) The averaging period to be used for determining the average VOHAP concentration for the off-site material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the off-site material stream but shall not exceed 1 year.

(ii) A sufficient number of samples, but no less than four samples, shall be collected to represent the complete range of HAP compositions and HAP quantities that occur in the off-site material stream during the entire averaging period due to normal variations in the operating conditions for the treatment process. Examples of such normal variations are seasonal variations in off-site material quantity or fluctuations in ambient temperature.

(iii) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material stream such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the plant site operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW–846 or Method 25 in 40 CFR part 60, appendix A.

(2) Analysis. Each collected sample shall be prepared and analyzed in accordance with the one of the following methods:

(i) Method 25D in 40 CFR part 60, appendix A.

(ii) Method 305 in 40 CFR part 63, appendix A.

(iii) Method 624 in 40 CFR part 136, appendix A.

(iv) Method 1624 in 40 CFR part 136, appendix A.

(v) Method 1625 in 40 CFR part 136, appendix A.

(3) Calculations. The average VOHAP concentration ($\overline{C}$) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (c)(2) of this section and the following equation:

$$\overline{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\overline{C}$=Average VOHAP concentration of the off-site material on a mass-weighted basis, ppmw.

i=Individual sample "i" of the off-site material.

n=Total number of samples of the off-site material collected (at least 4) for the averaging period (not to exceed 1 year).

Q_i=Mass quantity of off-site material stream represented by C_i, kg/hr.
Q_T=Total mass quantity of off-site material during the averaging period, kg/hr.
C_i=Measured VOHAP concentration of sample "i" as determined in accordance with the requirements of § 63.693(c)(2), ppmw.

(d) Determination of treatment process VOHAP concentration limit (C_R).

(1) All of the off-site material streams entering the treatment process shall be identified.

(2) The average VOHAP concentration of each off-site material stream at the point-of-delivery shall be determined using the procedures specified in paragraph (b) of this section.

(3) The VOHAP concentration limit (C_R) shall be calculated by using the results determined for each individual off-site material stream and the following equation:

$$C_R = \frac{\sum_{x=1}^{m}\left(Q_x \times \bar{C}_x\right) + \sum_{y=1}^{n}\left(Q_y \times 500\ \text{ppmw}\right)}{\sum_{x=1}^{m} Q_x + \sum_{y=1}^{n} Q_y}$$

where:
C_R=VOHAP concentration limit, ppmw.
x=Individual off-site material stream "x" that has a VOHAP concentration less than 500 ppmw at the point-of-delivery.
y=Individual off-site material stream "y" that has a VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery.
m=Total number of "x" off-site material streams treated by process.
n=Total number of "y" off-site material streams treated by process.
Q_x=Total mass quantity of off-site material stream "x", kg/yr.
Q_y=Total mass quantity of off-site material stream "y", kg/yr.
$\bar{C}_x$=VOHAP concentration of off-site material stream "x" at the point-of-delivery, ppmw.

(e) Determination of required HAP mass removal rate (RMR).

(1) All of the off-site material streams entering the treatment process shall be identified.

(2) The average VOHAP concentration of each off-site material stream at the point-of-delivery shall be determined in accordance with the requirements of paragraph (b) of this section.

(3) For each individual off-site material stream that has an average VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery, the average volumetric flow rate and the density of the off-site material stream at the point-of-delivery shall be determined.

(4) The required HAP mass removal rate (RMR) shall be calculated by using the average VOHAP concentration, average volumetric flow rate, and density determined for each off-site material stream and the following equation:

$$RMR = \sum_{y=1}^{n}\left[V_y \times k_y \times \frac{\left(\bar{C}_y - 500\ \text{ppmw}\right)}{10^6}\right]$$

where:
RMR=Required HAP mass removal rate, kg/hr.
y=Individual off-site material stream "y" that has a VOHAP concentration equal to or greater than 500 ppmw at the point-of-delivery as determined in accordance with the requirements of § 63.693(b).
n=Total number of "y" off-site material streams treated by process.
V_y=Average volumetric flow rate of off-site material stream "y" at the point-of-delivery, m^3/hr.
k_y=Density of off-site material stream "y", kg/m^3
$\bar{C}_y$=Average VOHAP concentration of off-site material stream "y" at the point-of-delivery as determined in accordance with the requirements of § 63.693(b), ppmw.

(f) Determination of actual HAP mass removal rate (MR).

(1) The actual HAP mass removal rate (MR) shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(2) The off-site material HAP mass flow entering the process (E_b) and the off-site material HAP mass flow exiting the process (E_a) shall be determined in accordance with the requirements of paragraph (g)(4) of this section.

(3) The actual mass removal rate shall be calculated by using the mass flow rates determined in accordance with the requirements of paragraph (f)(2) of this section and the following equation:

$$MR = E_b - E_a$$

where:
MR=Actual HAP mass removal rate, kg/hr.
E_b=Off-site material HAP mass flow entering process as determined in accordance with the requirements of paragraph (f)(2) of this section, kg/hr.
E_a=Off-site material HAP mass flow exiting process as determined in accordance with the requirements of paragraph (f)(2) of this section, kg/hr.

(g) Determination of treatment process HAP reduction efficiency (R).

(1) The HAP reduction efficiency (R) for a treatment process shall be determined based on results for a minimum of three consecutive runs.

(2) All off-site material streams entering the treatment process and all off-site material streams exiting the treatment process shall be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the off-site material in the process.

(3) For each run, information shall be determined for each off-site material stream identified in paragraph (g)(2) of this section using the following procedures:

(i) The mass quantity of each off-site material stream entering the process (Q_b) and the mass quantity of each off-

site material stream exiting the process (Q_a) shall be determined.

(ii) The average VOHAP concentration at the point-of-delivery of each off-site material stream entering the process ($\bar{C}_b$) during the run shall be determined in accordance with the requirements of paragraph (b) of this section. The VOHAP concentration of the off-site material stream at the point-of-treatment (C_a) during the run shall be determined in accordance with the applicable requirements of paragraph (c) of this section.

$$E_b = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{bj} \times \bar{C}_{bj}\right)$$

$$E_a = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{aj} \times \bar{C}_{aj}\right)$$

where:

E_b=Off-site material HAP mass flow entering process, kg/hr.

E_a=Off-site material HAP mass flow exiting process, kg/hr.

m=Total number of runs (at least 3)

j=Individual run "j"

Q_V=Mass quantity of off-site material entering process during run "j", kg/hr.

Q_{aj}=Average mass quantity of off-site material exiting process during run "j", kg/hr.

$\bar{C}_{aj}$=Average VOHAP concentration of off-site material exiting process during run "j" as determined in accordance with the requirements of § 63.693(b), ppmw.

$\bar{C}_V$=Average VOHAP concentration of off-site material entering process during run "j" as determined in accordance with the requirements of § 63.693(b), ppmw.

(4) The off-site material HAP mass flow entering the process (E_b) and the off-site material HAP mass flow exiting the process (E_a) shall be calculated by using the results determined in accordance with paragraph (g)(3) of this section and the following equations:

(5) The HAP reduction efficiency (R) shall be calculated by using the results determined in accordance with paragraph (g)(4) of this section and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100$$

where:

R=HAP reduction efficiency, percent.

E_b=Off-site material HAP mass flow entering process as determined in accordance with the requirements of paragraph (d)(4) of this section, kg/hr.

E_a=Off-site material HAP mass flow exiting process as determined in accordance with the requirements of paragraph (d)(4) of this section, kg/hr.

(h) Determination of HAP biodegradation efficiency (R_{bio}).

(1) The fraction of HAP biodegraded (F_{bio}) shall be determined using the procedure specified in 40 CFR part 63, appendix C of this part.

(2) The HAP biodegradation efficiency (R_{bio}) shall be calculated by using the following equation:

$R_{bio} = F_{bio} \times 100$

where:

R_{bio} = HAP biodegradation efficiency, percent.

F_{bio} = Fraction of HAP biodegraded as determined in accordance with the requirements of paragraph (h)(1) of this section.

(i) Determination of actual HAP mass removal rate (MR_{bio}).

(1) The actual HAP mass removal rate (MR_{bio}) shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(2) The off-site material HAP mass flow entering the process (E_b) shall be determined in accordance with the requirements of paragraph (g)(4) of this section.

(3) The fraction of HAP biodegraded (F_{bio}) shall be determined using the procedure specified in 40 CFR part 63, appendix C of this part.

(4) The actual mass removal rate shall be calculated by using the HAP mass flow rates and fraction of HAP biodegraded determined in accordance with the requirements of paragraphs (i)(2) and (i)(3), respectively, of this section and the following equation:

$MR_{bio} = E_b \times F_{bio}$

where:

MR_{bio}=Actual HAP mass removal rate, kg/hr.

E_b=Off-site material HAP mass flow entering process, kg/hr.

F_{bio}=Fraction of HAP biodegraded.

(j) Determination of maximum HAP vapor pressure for off-site material in a tank.

(1) The maximum HAP vapor pressure of the off-site material composition managed in a tank shall be determined using either direct measurement as specified in paragraph (j)(2) of this section or by knowledge of the off-site material as specified by paragraph (j)(3) of this section.

(2) Direct measurement to determine the maximum HAP vapor pressure of an off-site material.

(i) Sampling. A sufficient number of samples shall be collected to be representative of the off-site material contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the off-site material is collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be

standards specified in § 63.689(c)(1) of this subpart, the inspection and monitoring procedure are specified in paragraph (d) of this section.

(b) Tank Level 2 fixed roof and floating roof inspection requirements.

(1) Owners and operators that use a tank equipped with an internal floating roof in accordance with the provisions of § 63.685(e) of this subpart shall meet the following inspection requirements:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the waste surfaces from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided for in paragraph (b)(1)(iii) of this section:

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(iii) As an alternative to performing the inspections specified in paragraph (b)(1)(ii) of this section for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 5 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(2) Owners and operators that use a tank equipped with an external floating roof in accordance with the provisions of § 63.685(f) of this subpart shall meet the following requirements:

(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 days after initial operation of the separator following installation of the floating roof and, thereafter, at least once every year. Prior to each inspection, the owner or operator shall notify the Administrator in accordance with the reporting requirements specified in § 63.697 of this subpart.

(C) If a tank ceases to hold off-site material for a period of 1 year or more, subsequent introduction of off-site material into the tank shall be considered an initial operation for the purposes of paragraphs (b)(2)(i)(A) and (b)(2)(i)(B) of this section.

(D) The owner shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure.

(*1*) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(*2*) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

(*3*) For a seal gap measured under paragraph (b)(2) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(*4*) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of the tank. These total gap areas for the primary seal and secondary seal are then are compared to the respective standards for the seal type as specified in § 63.685(f)(1) of this subpart.

(E) In the event that the seal gap measurements do not conform to the specifications in § 63.685(f)(1) of this subpart, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform the inspections following installation of the external floating roof and, thereafter, at least once every year.

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696(d) of this subpart.

(3) Owners and operators that use a tank equipped with a fixed roof in accordance with the provisions of § 63.685(g) of this subpart shall meet the following requirements:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the separator wall; broken, cracked,

or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform the inspections following installation of the fixed roof and, thereafter, at least once every year.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b)(4) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696(e) of this subpart.

(4) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (b)(1), (b)(2), or (b)(3) of this section in the following manner:

(i) The owner or operator shall within 45 calendar days of detecting the defect either repair the defect or empty the tank and remove it from service. If within this 45-day period the defect cannot be repaired or the tank cannot be removed from service without disrupting operations at the plant site, the owner or operator is allowed two 30-day extensions. In cases when an owner or operator elects to use a 30-day extension, the owner or operator shall prepare and maintain documentation describing the defect, explaining why alternative storage capacity is not available, and specify a schedule of actions that will ensure that the control equipment will be repaired or the tank emptied as soon as possible.

(ii) When a defect is detected during an inspection of a tank that has been emptied and degassed, the owner or operator shall repair the defect before refilling the tank.

(c) Owners and operators that use a closed vent system in accordance with the provisions of § 63.693 of this subpart shall meet the following inspection and monitoring requirements:

(1) Each closed-vent system that is used to comply with § 63.693(c)(1)(i) of this subpart shall be inspected and monitored in accordance with the following requirements:

(i) At initial startup, the owner or operator shall monitor the closed-vent system components and connections using the procedures specified in § 63.693(k) of this subpart to demonstrate that the closed-vent system operates with no organic detectable emissions.

(ii) After initial startup, the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air emissions. The owner or operator shall monitor a component or connection using the procedures specified in § 63.693(k) of this subpart to demonstrate that it operates with no detectable organic emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in paragraph (c)(1)(ii)(A) of this section, shall be monitored at least once per year using the procedures specified in § 63.693(k) of this subpart to demonstrate that components or connections operate with no detectable organic emissions.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of paragraph (3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in § 63.696 of this subpart.

(2) Each closed-vent system that is used to comply with § 63.693(c)(1)(ii) of this subpart shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwok or piping; loose connections; or broken or missing caps or other closure devices.

(ii) The owner or operator shall perform the inspections following installation of the closed-vent system and, thereafter, at least once every year.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (3) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(3) The owner or operator shall repair all detected defects as follows:

(i) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection.

(ii) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.696 of this subpart.

(d) Owners and operators that use a transfer system equipped with a cover in accordance with the provisions of § 63.689(c)(1) of this subpart shall meet the following inspection requirements:

(1) The cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover sections or between the cover and its mounting; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform the inspections following installation of the cover and, thereafter, at least once every year.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (5) of this section.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.696 of this subpart.

(5) The owner or operator shall repair all detected defects as follows:

(i) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (c)(5)(ii) of this section.

(ii) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.696 of this subpart.

§ 63.696 Recordkeeping requirements.

(a) The owner or operator subject to this subpart shall comply with the recordkeeping requirements in § 63.10 under 40 CFR 63 subpart A—General Provisions that are applicable to this subpart as specified in Table 2 of this subpart.

(b) The owner or operator of a control device subject to this subpart shall maintain the records in accordance with the requirements of 40 CFR 63.10 of this part.

(c) [Reserved]

(d) Each owner or operator using an internal floating roof to comply with the tank control requirements specified in

§ 63.685(e) of this subpart or using an external floating roof to comply with the tank control requirements specified in § 63.685(f) of this subpart shall prepare and maintain the following records:

(1) Documentation describing the floating roof design and the dimensions of the tank.

(2) A record for each inspection required by § 63.695(b) of this subpart, as applicable to the tank, that includes the following information: a tank identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(3) The owner or operator shall record for each defect detected during inspections required by § 63.695(b) of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.695(b)(4) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) Owners and operators that use a tank equipped with an external floating roof in accordance with the provisions of § 63.685(f) of this subpart shall prepare and maintain records for each seal gap inspection required by § 63.695(b) describing the results of the seal gap measurements. The records shall include the date of that the measurements are performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in § 63.695(b) of this subpart, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the separator was emptied, if necessary.

(e) Each owner or operator using a fixed roof to comply with the tank control requirements specified in § 63.685(g) of this subpart shall prepare and maintain the following records:

(1) A record for each inspection required by § 63.695(b) of this subpart, as applicable to the tank, that includes the following information: a tank identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(2) The owner or operator shall record for each defect detected during inspections required by § 63.695(b) of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.695(b)(4) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(f) Each owner or operator using an enclosure to comply with the tank control requirements specified in § 63.685(i) of this subpart shall prepare and maintain records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B.

(g) An owner or operator shall record, on a semiannual basis, the information specified in paragraphs (g)(1) and (g)(2) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of § 63.693(d) through (h) of this subpart, as applicable.

(1) 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.

(2) 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 these 6 months that the control device did not meet the requirement of § 63.693 (d) through (h) of this subpart, as applicable, due to planned routine maintenance.

(h) An owner or operator shall record the information specified in paragraphs (h)(1) through (h)(3) of this section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of § 63.693 (d) through (h) of this subpart, as applicable.

(1) The occurrence and duration of each malfunction of the control device system.

(2) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(3) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

§ 63.697 Reporting requirements.

(a) The owner or operator subject to this subpart shall comply with the notification requirements in § 63.9 and the reporting requirements in § 63.10 under 40 CFR 63 subpart A—General Provisions that are applicable to this subpart as specified in Table 2 of this subpart.

(b) The owner or operator of a control device used to meet the requirements of § 63.693 of this subpart shall submit the following reports to the Administrator:

(1) A Notification of Performance Tests specified in § 63.7 and § 63.9(g) of this part,

(2) Performance test reports specified in § 63.10(d)(2) of this part

(3) Startup, shutdown, and malfunction reports specified in § 63.10(d)(5) of this part,

(i) 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 not completely consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in § 63.6(e)(3) of this part, the owner or operator shall state such information in the report. The startup, shutdown, or malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy, that shall be submitted to the Administrator, and

(ii) Separate startup, shutdown, or malfunction reports are not required if the information is included in the report specified in paragraph (b)(6) of this section.

(4) A summary report specified in § 63.10(e)(3) of this part shall be submitted on a semi-annual basis (i.e., once every 6-month period).

(c) Each owner or operator using an internal floating roof or external floating roof to comply with the Tank Level 2 control requirements specified in § 63.685(d) of this subpart shall notify the Administrator in advance of each inspection required under § 63.695(b) of this subpart to provide the Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Administrator of the date and location of the inspection as follows:

(1) Prior to each inspection to measure external floating roof seal gaps as required under § 63.695(b) of this subpart, written notification shall be prepared and sent by the owner or operator so that it is received by the Administrator at least 30 calendar days

before the date the measurements are scheduled to be performed.

(2) Prior to each visual inspection of an internal floating roof or external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (c)(3) of this section.

(3) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Administrator at least 7 calendar days before refilling the tank.

§ 63.698 Delegation of Authority.

(a) In delegating implementation and enforcement authority to a State under section 112(d) of the Act, the authority listed in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority will not be delegated to States for § 63.694 of this subpart.

TABLE 1 TO SUBPART DD.—LIST OF HAZARDOUS AIR POLLUTANTS (HAP) FOR SUBPART DD

CAS No.[a]	Chemical name	$f_{m\,305}$
75070	Acetaldehyde	1.000
75058	Acetonitrile	0.989
98862	Acetophenone	0.314
107028	Acrolein	1.000
107131	Acrylonitrile	0.999
107051	Allyl chloride	1.000
71432	Benzene (includes benzene in gasoline)	1.000
98077	Benzotrichloride (isomers and mixture)	0.958
100447	Benzyl chloride	1.000
92524	Biphenyl	0.864
542881	Bis(chloromethyl)ether[b]	0.999
75252	Bromoform	0.998
106990	1,3-Butadiene	1.000
75150	Carbon disulfide	1.000
56235	Carbon tetrachloride	1.0[illegible]
43581	Carbonyl sulfide	1.[illegible]
133904	Chloramben	0.63[illegible]
108907	Chlorobenzene	1.000
67663	Chloroform	1.000
107302	Chloromethyl methyl ether[b]	1.000
126998	Chloroprene	1.000
98828	Cumene	1.000
94757	2,4-D, salts and esters	0.167
334883	Diazomethane[c]	0.999
132649	Dibenzofurans	0.967
96128	1,2-Dibromo-3-chloropropane	1.000
106467	1,4-Dichlorobenzene(p)	1.000
107062	Dichloroethane (Ethylene dichloride)	1.000
111444	Dichloroethyl ether (Bis(2-chloroethyl ether)	0.757
542756	1,3-Dichloropropene	1.000
79447	Dimethyl carbamoyl chloride[c]	0.150
57147	1,1-Dimethyl hydrazine	0.383
64675	Diethyl sulfate	0.002[illegible]
77781	Dimethyl sulfate	0.086
121697	N,N-Dimethylaniline	0.000[illegible]
51285	2,4-Dinitrophenol	0.007[illegible]
121142	2,4-Dinitrotoluene	0.084[illegible]
123911	1,4-Dioxane (1,4-Diethyleneoxide)	0.869
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	0.939
106887	1,2-Epoxybutane	1.000
140885	Ethyl acrylate	1.000
100414	Ethyl benzene	1.000
75003	Ethyl chloride (Chloroethane)	1.000
106934	Ethylene dibromide (Dibromoethane)	0.999
107062	Ethylene dichloride (1,2-Dichloroethane)	1.000
151564	Ethylene imine (Aziridine)	0.867
75218	Ethylene oxide	1.000
75343	Ethylidene dichloride (1,1-Dichloroethane)	1.00[illegible]
	Glycol ethers[d]	[illegible]
118741	Hexachlorobenzene	0.97
87683	Hexachlorobutadiene	[illegible]
67721	Hexachloroethane	[illegible]
110543	Hexane	1.00[illegible]
78591	Isophorone	0.50[illegible]
58899	Lindane (all isomers)	1.00[illegible]
67561	Methanol	0.85

TABLE 1 TO SUBPART DD.—LIST OF HAZARDOUS AIR POLLUTANTS (HAP) FOR SUBPART DD—Continued

CAS No.[a]	Chemical name	$f_{m\,305}$
74839	Methyl bromide (Bromomethane)	1.000
74873	Methyl chloride (Chloromethane)	1.000
71556	Methyl chloroform (1,1,1-Trichloroethane)	1.000
78933	Methyl ethyl ketone (2-Butanone)	0.990
74884	Methyl iodide (Iodomethane)	1.000
108101	Methyl isobutyl ketone (Hexone)	0.979
624839	Methyl isocyanate	1.000
80626	Methyl methacrylate	0.999
1634044	Methyl tert butyl ether	1.000
75092	Methylene chloride (Dichloromethane)	1.000
91203	Naphthalene	0.994
98953	Nitrobenzene	0.394
79469	2-Nitropropane	0.989
82688	Pentachloronitrobenzene (Quintobenzene)	0.839
87865	Pentachlorophenol	0.0898
75445	Phosgene[c]	1.000
123386	Propionaldehyde	0.999
78875	Propylene dichloride (1,2-Dichloropropane)	1.000
75569	Propylene oxide	1.000
75558	1,2-Propylenimine (2-Methyl aziridine)	0.945
100425	Styrene	1.000
96093	Styrene oxide	0.830
79345	1,1,2,2-Tetrachloroethane	0.999
127184	Tetrachloroethylene (Perchloroethylene)	1.000
108883	Toluene	1.000
95534	o-Toluidine	0.152
120821	1,2,4-Trichlorobenzene	1.000
71556	1,1,1-Trichloroethane (Methyl chlorform)	1.000
79005	1,1,2-Trichloroethane (Vinyl trichloride)	1.000
79016	Trichloroethylene	1.000
95954	2,4,5-Trichlorophenol	0.108
88062	2,4,6-Trichlorophenol	0.132
121448	Triethylamine	1.000
540841	2,2,4-Trimethylpentane	1.000
108054	Vinyl acetate	1.000
593602	Vinyl bromide	1.000
75014	Vinyl chloride	1.000
75354	Vinylidene chloride (1,1-Dichloroethylene)	1.000
1330207	Xylenes (isomers and mixture)	1.000
95476	o-Xylenes	1.000
108383	m-Xylenes	1.000
106423	p-Xylenes	1.000

Notes:

$f_{m\,305}$=Method 305 fraction measure factor

a. CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

b. Denotes a HAP that hydrolyzes quickly in water, but the hydrolysis products are also HAP chemicals.

c. Denotes a HAP that may react violently with water, exercise caustic is an expected analyte.

d. Denotes a HAP that hydrolyzes slowly in water.

e. Several glycol ethers meet the criteria used to select HAP for the purposes of this subpart. The $f_{m\,305}$ factors for some of the more common glycol ethers are listed below:

Ethylene glycol dimethyl ether ($f_{m\,305}$=0.861)
Ethylene glycol monoethyl ether acetate ($f_{m\,305}$=0.0887)
Ethylene glycol monomethyl ether acetate ($f_{m\,305}$=0.0926)
Diethylene glycol diethyl ether ($f_{m\,305}$=0.216)

TABLE 2 TO SUBPART DD.—APPLICABILITY OF PARAGRAPHS IN 40 CFR 63 SUBPART A, GENERAL PROVISIONS, TO SUBPART DD

Subpart A reference	Applies to subpart DD	Comment
63.1(a)(1)	Yes.	Subpart DD (this table) specifies applicability of each paragraph in subpart A to subpart DD.
63.1(a)(2)	Yes.	
63.1(a)(3)	Yes.	
63.1(a)(4)	No	
63.1(a)(5)–63.1(a)(9)	No.	
63.1(a)(10)	Yes.	
63.1(a)(11)	Yes.	
63.1(a)(12)	Yes.	
63.1(a)(13)	Yes.	

TABLE 2 TO SUBPART DD.—APPLICABILITY OF PARAGRAPHS IN 40 CFR 63 SUBPART A, GENERAL PROVISIONS, TO SUBPART DD—Continued

Subpart A reference	Applies to subpart DD	Comment
63.1(a)(14)	Yes.	
63.1(b)(1)	No	Subpart DD specifies its own applicability.
63.1(b)(2)	Yes.	
63.1(b)(3)	No.	
63.1(c)(1)	No	Subpart DD explicitly specifies requirements that apply.
63.1(c)(2)	No	Area sources are not subject to subpart DD.
63.1(c)(3)	No.	
63.1(c)(4)	Yes.	
63.1(c)(5)	Yes	Except that sources are not required to submit notifications overridden by this table.
63.1(d)	No.	
63.1(e)	No.	
63.2	Yes	§63.681 of subpart DD specifies that if the same term is defined in subparts A and DD, it shall have the meaning given in subpart DD.
63.3	Yes.	
63.4(a)(1)–63.4(a)(3)	Yes.	
63.4(a)(4)	No	Reserved.
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	Reserved.
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 DD overrides §63.9(b)(2) and (b)(3).
63.5(b)(5)	Yes.	
63.5(b)(6)	Yes.	
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes.	
63.5(d)(1)(ii)	Yes.	
63.5(d)(1)(iii)	Yes.	
63.5(d)(2)	No.	
63.5(d)(3)	Yes.	
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes.	
63.6(a)	Yes.	
63.6(b)(1)	No	Subpart DD specifies compliance dates for sources subject to subpart DD.
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 Clean Air Act.
63.6(b)(5)	No	§63.697 of subpart DD includes notification requirements.
63.6(b)(6)	No.	
63.6(b)(7)	No.	
63.6(c)(1)	No	§63.680 of subpart DD specifies the compliance date.
63.6(c)(2)–63.6(c)(4)	No.	
63.6(c)(5)	Yes.	
63.6(d)	No.	
63.6(e)	Yes.	
63.6(f)(1)	Yes.	
63.6(f)(2)(i)	Yes.	
63.6(f)(2)(ii)	Yes	Subpart DD specifies the use of monitoring data in determining compliance with subpart DD.
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)	Yes.	
63.6(h)	No	Subpart DD does not require opacity and visible emission standards.
63.6(i)	Yes	Except for §63.6(i)(15), which is reserved.
63.6(j)	Yes.	
63.7(a)(1)	No	Subpart DD specifies required testing and compliance demonstration procedure
63.7(a)(2)	Yes.	
63.7(a)(3)	Yes.	
63.7(b)	No.	
63.7(c)	No.	

TABLE 2 TO SUBPART DD.—APPLICABILITY OF PARAGRAPHS IN 40 CFR 63 SUBPART A, GENERAL PROVISIONS, TO SUBPART DD—Continued

Subpart A reference	Applies to subpart DD	Comment
63.7(d)	Yes.	
63.7(e)(1)	Yes.	
63.7(e)(2)	Yes.	
63.7(e)(3)	No	Subpart DD specifies test methods and procedures.
63.7(e)(4)	Yes.	
63.7(f)	No	Subpart DD specifies applicable methods and provides alternatives.
63.7(g)	Yes.	
63.7(h)(1)	Yes.	
63.7(h)(2)	Yes.	
63.7(h)(3)	Yes.	
63.7(h)(4)	No.	
63.7(h)(5)	Yes.	
63.8(a)	No.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subpart DD specifies locations to conduct monitoring.
63.8(b)(3)	Yes.	
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	Yes.	
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	Subpart DD specifies monitoring frequency
63.8(c)(5)–63.8(c)(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)	Yes.	
63.8(f)(2)	Yes.	
63.8(f)(3)	Yes.	
63.8(f)(4)(i)	Yes.	
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)	Yes.	
63.8(g)	Yes.	
63.9(a)	Yes.	
63.9(b)(1)(i)	Yes.	
63.9(b)(1)(ii)	No.	
63.9(b)(2)	Yes.	
63.9(b)(3)	No.	
63.9(b)(4)	Yes.	
63.9(b)(5)	Yes.	
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No.	
63.9(f)	No.	
63.9(g)	No.	
63.9(h)	Yes.	
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	Yes.	
63.10(b)(2)(i)	Yes.	
63.10(b)(2)(ii)	Yes.	
63.10(b)(2)(iii)	No.	
63.10(b)(2)(iv)	Yes.	
63.10(b)(2)(v)	Yes.	
63.10(b)(2) (vi)–(ix)	No.	
63.10(b)(2)(x)	Yes.	
63.10(b)(2) (xii)–(xiv)	No.	
63.10(b)(3)	No.	
63.10(c)	No.	
63.10(d)(1)	No.	
63.10(d)(2)	Yes.	
63.10(d)(3)	No.	
63.10(d)(4)	Yes.	
63.10(d)(5)(i)	Yes.	
63.10(d)(5)(ii)	Yes.	
63.10(e)	No.	

TABLE 2 TO SUBPART DD.—APPLICABILITY OF PARAGRAPHS IN 40 CFR 63 SUBPART A, GENERAL PROVISIONS, TO SUBPART DD—Continued

Subpart A reference	Applies to subpart DD	Comment
63.10(f)	Yes.	
63.11–63.15	Yes.	

Note: 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 required.

TABLE 3 TO SUBPART DD.—TANK CONTROL LEVELS FOR TANKS AT EXISTING AFFECTED SOURCES AS REQUIRED BY 40 CFR 63.685(b)(1)

Tank design capacity (cubic meters)	Maximum HAP vapor pressure of off-site material managed in tank (kilopascals)	Tank control level
Design capacity less than 75 m^3	Maximum HAP vapor pressure less than 76.6 kPa	Level 1.
Design capacity equal to or greater than 75 m^3 and less than 151 m^3.	Maximum HAP vapor pressure less than 27.6 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 27.6 kPa.	Level 2.
Design capacity equal to or greater than 151 m^3	Maximum HAP vapor pressures less than 5.2 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 5.2 kPa	Level 2.

TABLE 4 TO SUBPART DD.—TANK CONTROL LEVELS FOR TANKS AT NEW AFFECTED SOURCES AS REQUIRED BY 40 CFR 63.685(b)(2)

Tank design capacity (cubic meters)	Maximum HAP vapor pressure of off-site material managed in tank (kilopascals)	Tank control level
Design capacity less than 38 m^3	Maximum HAP vapor pressure less than 76.6 kPa	Level 1.
Design capacity equal to or greater than 38 m^3 and less than 151 m^3.	Maximum HAP vapor pressure less than 13.1 kPa	Level 1
	Maximum HAP vapor pressure equal to or greater than 13.1 kPa.	Level 2.
Design capacity equal to or greater than 151 m^3	Maximum HAP vapor pressure less than 0.7 kPa	Level 1.
	Maximum HAP vapor pressure equal to or greater than 0.7 kPa	Level 2.

5. Part 63 is amended by adding subpart OO consisting of §§ 63.900 through 63.907 to read as follows:

Subpart OO—National Emission Standards for Tanks—Level 1

Sec.
63.900 Applicability.
63.901 Definitions.
63.902 Standards—Tank fixed roof.
63.903 [Reserved]
63.904 [Reserved]
63.905 Test methods and procedures.
63.906 Inspection and monitoring requirements.
63.907 Recordkeeping requirements.

Subpart OO—National Emission Standards for Tanks—Level 1

§ 63.900 Applicability.

The provisions of this subpart apply to the control of air emissions from tanks for which another subpart of 40 CFR parts 60, 61, or 63 references the use of this subpart for such air emission control. These air emission standards for tanks are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the other subparts that reference this subpart. The provisions of 40 CFR part 63, subpart A—General Provisions do not apply to this subpart except as noted in the subpart that references this subpart.

§ 63.901 Definitions.

All terms used in this subpart shall have the meaning given to them in the Act and in this section. If a term is defined in both this section and in another subpart that references the use of this subpart, then the definition in this subpart shall take precedence when implementing this subpart.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that, when the device is secured in the closed position, prevents or reduces air emissions to the atmosphere by blocking an opening in a fixed roof. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Fixed roof means a cover that is mounted on a tank in a stationary position and does not move with fluctuations in the level of the liquid managed in the tank.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.905(a) of this subpart.

Regulated-material means the material (e.g. waste, wastewater, off-site material) required to be managed in tanks using air emission controls in accordance with the standards specified in this subpart.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to the tank air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routir venting of gases or vapors from the vapor headspace underneath the tank cover. A safety device is designed to remain in a closed position during normal operations and open only wher

the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

Tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support and is designed to hold an accumulation of liquids or other materials.

§ 63.902 Standards—Tank fixed roof.

(a) This section applies to owners and operators subject to this subpart and controlling air emissions from a tank using a fixed roof.

(b) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(1) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

(2) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(3) Each opening in the fixed roof shall be either:

(i) equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(ii) connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever regulated material is managed in the tank.

(4) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the liquid or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(c) Whenever a regulated-material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(1) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(i) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(ii) To remove accumulated sludge or other residues from the bottom of tank.

(2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(3) Opening of a safety device, as defined in § 63.901 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect the air emission control equipment in accordance with the requirements specified in § 63.906(a) of this subpart.

§ 63.903 [Reserved]

§ 63.904 [Reserved]

§ 63.905 Test methods and procedures.

(a) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart.

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the tank contains a material having an organic HAP concentration representative of the range of concentrations for the regulated-materials expected to be managed in the tank. During the test, the cover and closure devices shall be secured in the closed position.

(3) 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 organic constituents in the regulated-material placed in the tank, not for each individual organic constituent.

(4) 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.

(5) Calibration gases shall be as follows:

(i) Zero air (less than 10 ppmv hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration less than 10,000 ppmv.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60 appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as

possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

§ 63.906 Inspection and monitoring requirements.

(a) Owners and operators that use a tank equipped with a fixed roof in accordance with the provisions of § 63.902 of this subpart shall meet the following requirements:

(1) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform the inspections following installation of the fixed roof and, thereafter, at least once every year.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b) of this section.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.907 (a) of this subpart.

(b) The owner or operator shall repair all detected defects as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (b)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the regulated-material normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the regulated-material managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(c) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.907(b) of this subpart.

§ 63.907 Recordkeeping requirements.

(a) Each owner or operator shall prepare and maintain a record for each tank that includes the following information:

(1) A tank identification number (or other unique identification description as selected by the owner or operator).

(2) A description of the tank dimensions and the tank design capacity.

(3) The date that each inspection required by § 63.906 of this subpart is performed.

(b) The owner or operator shall record the following information for each defect detected during inspections required by § 63.906 of this subpart: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.907(b)(2) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

6. Part 63 is amended by adding subpart PP consisting of §§ 63.920 through 63.928 to read as follows:

Subpart PP—National Emission Standards for Containers

Sec.

63.920 Applicability.
63.921 Definitions.
63.922 Standards—Container Level 1 controls.
63.923 Standards—Container Level 2 controls.
63.924 Standards—Container Level 3 controls.
63.925 Test methods and procedures.
63.926 Inspection and monitoring requirements.
63.927 Recordkeeping requirements.
63.928 Reporting requirements.

Subpart PP—National Emission Standards for Containers

§ 63.920 Applicability.

The provisions of this subpart apply to the control of air emissions from containers for which another subpart of 40 CFR parts 60, 61, or 63 references the use of this subpart for such air emission control. These air emission standards for containers are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the other subparts that reference this subpart. The provisions of 40 CFR Part 63, subpart A—General Provisions do not apply to this subpart except as noted in the subpart that references this subpart.

§ 63.921 Definitions.

All terms used in this subpart shall have the meaning given to them in the Act and in this section. If a term is defined in both this section and in another subpart that references the use of this subpart, then the definition in this subpart shall take precedence when implementing this subpart.

Container means a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include but are not limited to drums, dumpsters, roll-off boxes, bulk cargo containers commonly known as "portable tanks" or "totes," cargo tank trucks, and tank railcars.

Closure device means a cover, cap, hatch, lid, plug, seal, valve, or other type of fitting that prevents or reduces air emissions to the atmosphere by blocking an opening in a container or its cover when the device is secured in the closed position. Closure devices include devices that are detachable from the container (e.g., a drum head, a threaded plug), manually operated (e.g., a hinged dumpster lid, a truck tank hatch), or automatically operated (e.g., a spring loaded pressure relief valve).

Empty container means a container for which either of the following conditions exists, as applicable: the regulated-material is a hazardous waste and the container meets the conditions for an empty container specified in 40 CFR 261.7(b); or all regulated-material has been removed from the container except for any regulated-material that remains on the interior surfaces of the container as clingage or in pools on the container bottom due to irregularities in the container.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.925(a) of this subpart.

Regulated-material means the material (e.g. waste, wastewater, off-site material) required to be managed in containers using air emission controls in accordance with the standards specified in this subpart.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a container or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the container such as during filling of the container or to adjust the internal pressure of the container in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the container and its air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

§ 63.922 Standards—Container Level 1 controls.

(a) This section applies to owners and operators subject to this subpart and required to control air emissions from containers using Container Level 1 controls.

(b) A container using Container Level 1 controls is one of the following:

(1) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(2) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum, a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a bulk cargo container equipped with a screw-type cap).

(3) An open-top container in which an organic vapor-suppressing barrier is placed on or over the regulated-material in the container such that no regulated-material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(c) A container used to meet the requirements of either paragraph (b)(2) or (b)(3) of this section shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the regulated-material to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability, the effects of contact with the material or its vapor managed in the container; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for container on which the cover is installed.

(d) Whenever a regulated-material is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding material to the container as follows:

(i) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(ii) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either: the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaves the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing material from the container as follows:

(i) For the purpose of meeting the requirements of this section, an empty container as defined in § 63.921 of this subpart may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container).

(ii) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in § 63.921 of this subpart, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes, or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive,

reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in § 63.921 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(e) The owner or operator shall inspect containers using Container Level 1 controls in accordance with the procedures specified in § 63.926(a) of this subpart.

(f) For the purpose of compliance with paragraph (b)(1) of this section, containers shall be used that meet the applicable U.S. DOT regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178—Specifications for Packagings or 49 CFR part 179—Specifications for Tank Cars.

(2) Regulated-material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107 subpart B—Exemptions; 49 CFR part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173—Shippers—General Requirements for Shipments and Packaging; and 49 CFR part 180—Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in paragraph (f)(4) of this section.

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart, an owner or operator may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).

§ 63.923 Standards—Container Level 2 controls.

(a) This section applies to owners and operators subject to this subpart and required to control air emissions from containers using Container Level 2 controls.

(b) A container using Container Level 2 controls is one of the following:

(1) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(2) A container that has been demonstrated to operate with no detectable organic emissions as defined in § 63.921 of this subpart.

(3) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using Method 27 in Appendix A of 40 CFR part 60 in accordance with the procedure specified in § 63.925(b) of this subpart.

(c) Transfer of regulated-material in to or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the regulated-material to the atmosphere, to the extent practical, considering the physical properties of the regulated-material and good engineering and safety practices for handling flammable, ignitable, explosive, or other hazardous materials. Examples of container loading procedures that meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the regulated-material is filled, with subsequent purging of the transfer line before removing it from the container opening.

(d) Whenever a regulated-material is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding material to the container as follows:

(i) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(ii) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level, the completion of a batch loading after which no additional material will be added to the container within 15 minutes, the person performing the loading operation leaves the immediate vicinity of the container, or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing material from the container as follows:

(i) For the purpose of meeting the requirements of this section, an empty container as defined in § 63.921 of this subpart may be open to the atmosphere at any time (e.g., covers and closure devices are not required to be secured in the closed position on an empty container).

(ii) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in § 63.921 of this subpart, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of regulated-material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the container internal pressure is within the internal

pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in § 63.921 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(e) The owner or operator shall inspect containers using Container Level 2 controls in accordance with the procedures specified in § 63.926(a) of this subpart.

(f) For the purpose of compliance with paragraph (b)(1) of this section, containers shall be used that meet the applicable U.S. DOT regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178—Specifications for Packagings or 49 CFR part 179—Specifications for Tank Cars.

(2) Regulated-material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107 subpart B—Exemptions; 49 CFR part 172—Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173—Shippers—General Requirements for Shipments and Packaging; and 49 CFR part 180—Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in paragraph (f)(4) of this section.

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart, an owner or operator may comply with the exceptions for those packagings specified in 49 CFR 173.12(b).

§ 63.924 Standards—Container Level 3 controls.

(a) This section applies to owners and operators subject to this subpart and required to control air emissions from containers using Container Level 3 controls.

(b) A container using Container Level 3 controls is one of the following:

(1) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraphs (c)(2) of this section.

(2) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs (c)(1) and (c)(2) of this section.

(c) The owner or operator shall meet the following requirements as applicable to the type of air emission control equipment selected by the owner or operator:

(1) The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or to direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The closed-vent system and control device shall be designed and operated in accordance with the requirements of 40 CFR 63.692.

(d) Safety devices, as defined in § 63.921 of this subpart, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with this section.

§ 63.925 Test methods and procedures.

(a) Procedure for determining no detectable organic emissions for the purpose of complying with of this subpart.

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container filled with a material having an organic HAP concentration representative of the range of concentrations for the regulated-materials expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(3) 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 organic constituents in the material placed in the container, not for each individual organic constituent.

(4) 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.

(5) Calibration gases shall be as follows:

(i) Zero air (less than 10 ppmv hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration of approximately, but less than 10,000 ppmv.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60 appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(b) Procedure for determining a container to be vapor-tight for the purpose of complying with this subpart.

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A of this chapter.

(2) A pressure measurement device shall be used that has a precision of ± 2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

§ 63.926 Inspection and monitoring requirements.

(a) Owners and operators of containers using either Container Level 1 or Container Level 2 controls in accordance with the provisions of §§ 63.922 and 63.923 of this subpart, respectively, shall inspect the container and its cover and closure devices as follows:

(1) In the case when a regulated-material already is in the container at the time the owner or operator first accepts possession of the container at the facility site and the container is not emptied (i.e., does not meet the conditions for an empty container) within 24 hours after the container arrives at the facility site, the container and its cover and closure devices shall be visually inspected by the owner or operator to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (a)(3) of this section.

(2) In the case when a container used for managing regulated-material remains at the facility site for a period of 1 year or more, the container and its cover and closure devices shall be visually inspected by the owner or operator initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (a)(3) of this section.

(3) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the regulated-material shall be removed from the container and the container shall not be used to manage regulated-material until the defect is repaired.

(b) Owners and operators using Container Level 3 controls in accordance with the provisions of § 63.924 of this subpart shall inspect and monitor the closed-vent systems and control devices in accordance with the requirements of § 63.693 in 40 CFR Part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

§ 63.927 Recordkeeping requirements.

(a) Owners and operators that use Container Level 3 controls in accordance with the provisions of § 63.924 of this subpart shall prepare and maintain the following records:

(1) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of § 63.693 in 40 CFR Part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

§ 63.928 Reporting requirements.

(a) For owners and operators that use Container Level 3 controls in accordance with the provisions of § 63.924 of this subpart, the owner or operator shall prepare and submit to the Administrator the reports required for closed-vent systems and control devices in accordance with the requirements of § 63.693 in 40 CFR Part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

7. Part 63 is amended by adding subpart QQ consisting of §§ 63.940 through 63.948 to read as follows:

Subpart QQ—National Emission Standards for Surface Impoundments

Sec.

63.940 Applicability.
63.941 Definitions.
63.942 Standards—Surface impoundment floating membrane cover.
63.943 Standards—Surface impoundment cover vented to control device.
63.944 [Reserved]
63.945 Test methods and procedures.
63.946 Inspection and monitoring requirements.
63.947 Recordkeeping requirements.
63.948 Reporting requirements.

Subpart QQ—National Emission Standards for Surface Impoundments

§ 63.940 Applicability.

The provisions of this subpart apply to the control of air emissions from surface impoundments for which another subpart of 40 CFR parts 60, 61, or 63 references the use of this subpart for such air emission control. These air emission standards for surface impoundments are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the other subparts that reference this subpart. The provisions of 40 CFR part 63, subpart AA—General Provisions do not apply to this subpart except as noted in the subpart that references this subpart.

§ 63.941 Definitions.

All terms used in this subpart shall have the meaning given to them in the Act and in this section. If a term is defined in both this section and in another subpart that references the use of this subpart, then the definition in this subpart shall take precedence when implementing this subpart.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that prevents or reduces air emissions to the atmosphere by blocking an opening in a surface impoundment cover when the device is secured in the closed position. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring loaded pressure relief valve).

Cover means an air-supported structure, rigid roof, or other device that prevents or reduces air pollutant emissions to the atmosphere by forming a continuous barrier over the material managed in a surface impoundment. A cover may have openings (such as access hatches) that are necessary for operation, inspection, maintenance, and repair of equipment in the surface impoundment on which the cover is used.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.944(a) of this subpart.

Regulated-material means the material (e.g. waste, wastewater, off-site material) required to be managed in containers using air emission controls in accordance with the standards specified in this subpart.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to the surface impoundment air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath the surface impoundment cover such as during filling of the surface impoundment or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitible, explosive, reactive, or hazardous materials.

Surface impoundment means a unit that is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquids. Examples of surface impoundments include holding, storage, settling, and aeration pits, ponds, and lagoons.

§ 63.942 Standards—Surface impoundment floating membrane cover.

(a) This section applies to owners and operators subject to this subpart and controlling air emissions from a surface impoundment using a floating membrane cover.

(b) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

(1) The floating membrane cover shall be designed to float on the liquid surface during normal operations, and form a continuous barrier over the entire surface area of the liquid.

(2) The cover shall be fabricated from a synthetic membrane material that is either:

(i) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or

(ii) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (b)(2)(i) of this section; and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(3) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(4) Except as provided for in paragraph (b)(5) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(5) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(6) The closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(c) Whenever a regulated-material is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(1) Opening of closure devices or removal of the cover is allowed at the following times:

(i) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

(ii) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the pressure in the vapor headspace underneath the cover in accordance with the cover design specifications. The device shall be designed to operate with no detectable organic emissions as defined in § 63.941 of this subpart when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the cover vapor headspace pressure is within the pressure operating range determined by the owner or operator based on the cover manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitible, explosive, reactive, or hazardous materials.

(3) Opening of a safety device, as defined in § 63.941 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect the floating membrane cover in accordance with the procedures specified in § 63.946(a) of this subpart.

§ 63.943 Standards—Surface impoundment vented to control device.

(a) This section applies to owners and operators subject to this subpart and controlling air emissions from a surface impoundment using a cover and venting the vapor headspace underneath the cover through a closed-vent system to a control device.

(b) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(1) The cover and its closure devices shall be designed to form a continuous

barrier over the entire surface area of the liquid in the surface impoundment.

(2) Each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in § 63.945(a) of this subpart.

(3) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

(4) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

(c) Whenever a regulated-material is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

(1) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

(i) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(ii) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(2) Opening of a safety device, as defined in § 63.941 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the procedures specified in § 63.946(b) of this subpart.

§ 63.944 [Reserved]

§ 63.945 Test methods and procedures.

(a) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart.

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the surface impoundment contains a material having an organic HAP concentration representative of the range of concentrations for the regulated-materials expected to be managed in the surface impoundment. During the test, the cover and closure devices shall be secured in the closed position.

(3) 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 organic constituents in the regulated-material placed in the surface impoundment, not for each individual organic constituent.

(4) 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.

(5) Calibration gases shall be as follows:

(i) Zero air (less than 10 ppmv hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration of approximately, but less than 10,000 ppmv.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

§ 63.946 Inspection and monitoring requirements.

(a) Owners and operators that use a surface impoundment equipped with a floating membrane cover in accordance with the provisions of § 63.942 of this subpart shall meet the following requirements:

(1) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform the inspections following installation of the floating membrane cover and, thereafter, at least once every year.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c) of this section.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements

specified in § 63.947(a)(2) of this subpart.

(b) Owners and operators that use a surface impoundment equipped with a cover and vented through a closed-vent system to a control device in accordance with the provisions of § 63.943 of this subpart shall inspect the air emission control equipment as follows:

(1) The owner or operator shall visually inspect the cover in accordance with the following requirements:

(i) The cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the interface of the roof edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform the inspections following installation of the cover and, thereafter, at least once every year.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.947(a)(2) of this subpart.

(2) The owner or operator shall inspect and monitor the closed-vent system and the control device in accordance with the requirements specified in § 63.693 in 40 CFR part 63 subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

(c) The owner or operator shall repair all detected defects as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (c)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative surface impoundment or tank capacity is available at the site to accept the regulated-material normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect at the next time the process or unit that is generating the regulated-material managed in the surface impoundment stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(3) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.947 of this subpart.

§ 63.947 Recordkeeping requirements.

(a) Each owner or operator shall prepare and maintain the following records:

(1) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment.

(2) A record for each inspection required by § 63.946 of this subpart that includes the following information: a surface impoundment identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(3) The owner or operator shall record for each defect detected during inspections required by § 63.946 of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.946(c)(2) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(b) Owners and operators that use a surface impoundment equipped with a fixed-roof and vented through a closed-vent system to a control device in accordance with the provisions of § 63.943 of this subpart shall prepare and maintain the records required for the closed-vent system and control device in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

§ 63.948 Reporting requirements.

Owners and operators that use a surface impoundment equipped with a fixed-roof and vented through a closed-vent system to a control device in accordance with the provisions of § 63.943 of this subpart shall prepare and submit to the Administrator the reports required for closed-vent systems and control devices in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

8. Part 63 is amended by adding subpart RR consisting of §§ 63.960 through 63.966 to read as follows:

Subpart RR—National Emission Standards for Individual Drain Systems

Sec.

63.960 Applicability.
63.961 Definitions.
63.962 Standards.
63.963 [Reserved]
63.964 Inspection and monitoring requirements.
63.965 Recordkeeping requirements.
63.966 Reporting requirements.

Subpart RR—National Emission Standards for Individual Drain Systems

§ 63.960 Applicability.

(a) The provisions of this subpart apply to the control of air emissions from individual drain systems for which another subpart of 40 CFR parts 60, 61, or 63 references the use of this subpart for such air emission control. These air emission standards for individual drain systems are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the other subparts that reference this subpart. The provisions of 40 CFR part 63, subpart A—General Provisions do not apply to this subpart except as noted in the subpart that references this subpart.

§ 63.961 Definitions.

All terms used in this subpart shall have the meaning given to them in the Act and in this section. If a term is defined in both this section and in another subpart that references the use of this subpart, then the definition in this subpart shall take precedence when implementing this subpart.

Closure device means a cap, cover, hatch, lid, plug, seal, valve, or other type of fitting that, when the device is secured in the closed position, prevents or reduces air emissions to the atmosphere by blocking an opening to the individual drain system. Closure devices include devices that are detachable (e.g., a plug or manhole cover), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Hard-piping means pipe or tubing that is manufactured and properly installed in accordance with relevant standards (e.g., ANSI B31–3) and good engineering practices.

Individual drain system means a stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes hard-piping, all drains and junction boxes, together with their associated sewer

lines and other junction boxes (e.g., manholes, sumps, and lift stations) conveying wastewater streams or residuals. For the purpose of this subpart, an individual drain system is not a drain and collection system that is designed and operated for the sole purpose of collecting rainfall runoff (e.g., stormwater sewer system) and is segregated from all other individual drain systems.

Junction box means a sump, manhole, or access point to a sewer line or a lift station.

Sewer line means a lateral, trunk line, branch line, or other conduit used to convey wastewater to a downstream waste management unit. Sewer lines include pipes, grates, and trenches.

Waste management unit means the equipment, structure, or device used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include: wastewater tanks, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units.

Water seal means a seal pot, p-leg trap, or other type of trap filled with water (e.g., flooded sewers that maintain liquid levels adequate to prevent air flow through the system) that creates a liquid barrier between the sewer line and the atmosphere. The liquid level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

§ 63.962 Standards.

(a) The owner or operator subject to this subpart shall control air emissions from the individual drain system using one or a combination of the following:

(1) Covers, water seals, and other air emission control equipment as specified in paragraph (b) of this section.

(2) Hard-piping.

(3) Venting of the individual drain system through a closed vent system to a control device in accordance with the following requirements:

(i) The individual drain system is designed and operated such that an internal pressure in the vapor headspace in the system is maintained at a level less than atmospheric pressure when the control device is operating, and

(ii) The closed vent system and control device are designed and operated in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

(b) Owners and operators controlling air emissions from an individual drain system in accordance with paragraph (a)(1) of this section shall meet the following requirements:

(1) The individual drain system shall be designed to segregate the organic vapors from wastewater managed in the controlled individual drain system from entering any other individual drain system that is not controlled for air emissions in accordance with the standards specified in this subpart.

(2) *Drain control requirements.* Each drain shall be equipped with either a water seal or a closure device in accordance with the following requirements:

(i) When a water seal is used, the water seal shall be designed such that either:

(A) The outlet to the pipe discharging the wastewater extends below the liquid surface in the water seal of the drain; or

(B) A flexible shield or other device is installed which restricts wind motion across the open space between the outlet of the pipe discharging the wastewater and the drain.

(ii) When a closure device is used (e.g., securing a cap or plug on a drain that is not receiving wastewater), the closure device shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the drain opening and the closure device.

(3) *Junction box control requirements.* Each junction box shall be equipped with controls as follows:

(i) The junction box shall be equipped with a closure device (e.g., manhole cover, access hatch) that is designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the junction box opening and the closure device.

(ii) If the junction box is vented, the junction box shall be vented in accordance with the following requirements:

(A) The junction box shall be vented through a closed vent system to a control device except as provided for in paragraph (b)(3)(ii)(B) of this section. The closed vent system and control device shall be designed and operated in accordance in accordance with the standards specified in § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutant Standards from Off-Site Waste and Recovery Operations.

(B) As an alternative to paragraph (b)(3)(ii)(A) of this section, the owner or operator may vent the junction box directly to the atmosphere when all of the following conditions are met:

(*1*) The junction box is filled and emptied by gravity flow (i.e., there is no pump) or is operated with no more than slight fluctuations in the liquid level. Large changes in the size of the junction box vapor headspace created by using a pump to repeatedly empty and then refill the junction box do not meet this condition.

(*2*) The vent pipe installed on the junction box shall be at least 90 centimeters in length and no greater than 10.2 centimeter in diameter.

(*3*) Water seals are installed at the liquid entrance(s) to or exit from the junction box to restrict ventilation in the individual drain system and between components in the individual drain system. The owner or operator shall demonstrate (e.g., by visual inspection or smoke test) upon request by the Administrator that the junction box water seal is properly designed and restricts ventilation.

(4) *Sewer line control requirements.* Each sewer line shall not be open to the atmosphere and shall be covered or closed in a manner such that there are no visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

(5) *Operating requirements.* The owner or operator shall operate the air emission controls required by paragraphs (b)(2) through (b)(4) of this section in accordance with the following requirements:

(i) Each closure device shall be maintained in a closed position whenever wastewater is in the individual drain system except when it is necessary to remove or open the closure device for sampling or removing material in the individual drain system, or for equipment inspection, maintenance, or repair.

(ii) Each drain equipped with a water seal and open to the atmosphere shall be operated to ensure that the liquid in the water seal is maintained at the appropriate level. Examples of acceptable means for complying with this provision include but are not limited to using a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap; continuously dripping water into the trap using a hose; or regular visual observations.

(iii) Each closed-vent system and the control device used to comply with paragraph (b)(3)(ii)(A) of this section

shall be operated in accordance with the standards specified in 40 CFR 63.693.

§ 63.963 [Reserved].

§ 63.964 Inspection and monitoring requirements.

(a) The owner or operator shall inspect the individual drain system in accordance with the following requirements:

(1) The individual drain system shall be visually inspected by the owner or operator as follows to check for defects that could result in air emissions to the atmosphere.

(i) The owner or operator shall visually inspect each drain as follows:

(A) In the case when the drain is using a water seal to control air emissions, the owner or operator shall verify appropriate liquid levels are being maintained and identify any other defects that could reduce water seal control effectiveness.

(B) In the case when the drain is using a closure device to control air emissions, the owner or operator shall visually inspect each drain to verify that the closure device is in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing plugs, caps, or other closure devices.

(ii) The owner or operator shall visually inspect each junction box to verify that closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, or gaps in the closure devices; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(iii) The owner or operator shall visually inspect the unburied portion of each sewer line to verify that all closure devices are in place and there are no defects. Defects include, but are not limited to, visible cracks, holes, gaps, or other open spaces in the sewer line joints, seals, or other emission interfaces.

(iv) The owner or operator shall perform the inspections initially at the time of installation of the water seals and closure devices for the individual drain system and, thereafter, at least once every year.

(v) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (b) of this section.

(vi) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.965(a) of this subpart.

(2) The owner or operator shall inspect and monitor the closed-vent system and the control device in accordance with the requirements specified in § 63.693 in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

(b) The owner or operator shall repair all detected defects as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 15 calendar days after detection except as provided in paragraph (b)(2) of this section.

(2) Repair of a defect may be delayed beyond 15 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the individual drain system and no alternative capacity is available at the facility site to accept the wastewater normally managed in the individual drain system. In this case, the owner or operator shall repair the defect at the next time the process or unit that is generating the wastewater managed in the individual drain system stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(3) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.965(a)(3) of this subpart.

§ 63.965 Recordkeeping requirements.

(a) Each owner or operator complying with § 63.962(a)(1) of this subpart shall prepare and maintain the following records:

(1) A written site-specific individual drain system inspection plan that includes a drawing or schematic of the individual drain system and identifies each drain, junction box, and sewer line location.

(2) A record of the date that each inspection required by § 63.964(a) of this subpart is performed.

(3) When applicable, a record for each defect detected during inspections required by § 63.964(a) of this subpart that includes the following information: the location of the defect, a description of the defect, the date of detection, the corrective action taken to repair the defect, and the date that the corrective action was completed. In the event that repair of the defect is delayed in accordance with the provisions of § 63.964(b)(2) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(b) Owners and operators that use a closed-vent system and a control device in accordance with the provisions of § 63.962(a)(3) or § 63.692(b)(3)(ii)(A) of this subpart shall prepare and maintain the records required for the closed-vent system and control device in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

§ 63.966 Reporting requirements.

Owners and operators that use a closed-vent system and a control device in accordance with the provisions of § 63.962(a)(3) or § 63.962(b)(3)(ii)(A) of this subpart shall prepare and submit to the Administrator the reports required for closed-vent systems and control devices in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

9. Part 63 is amended by adding subpart VV consisting of §§ 63.1040 through 63.1049 to read as follows:

Subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators

Sec.

63.1040 Applicability.
63.1041 Definitions.
63.1042 Standards—Separator fixed roof.
63.1043 Standards—Separator floating roof.
63.1044 Standards—Separator vented to control device.
63.1045 [Reserved]
63.1046 Test methods and procedures.
63.1047 Inspection and monitoring requirements.
63.1048 Recordkeeping requirements.
63.1049 Reporting requirements.

Subpart VV—National Emission Standards for Oil-Water Separators and Organic-Water Separators

63.1040 Applicability.

The provisions of this subpart apply to the control of air emissions from oil-water separators and organic-water separators for which another subpart of 40 CFR parts 60, 61, or 63 references the use of this subpart for such air emission control. These air emission standards for oil-water separators and organic-water separators are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the other subparts that reference this subpart. The provisions of 40 CFR part 63, subpart

A—General Provisions do not apply to this subpart except as noted in the subpart that references this subpart.

§ 63.1041 Definitions.

All terms used in this subpart shall have the meaning given to them in the Act and in this section. If a term is defined in both this section and in another subpart that references the use of this subpart, then the definition in this subpart shall take precedence when implementing this subpart.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that, when the device is secured in the closed position, prevents or reduces air emissions to the atmosphere by blocking an opening in a fixed roof or floating roof. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Continuous seal means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a separator. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

Fixed roof means a cover that is mounted on a separator in a stationary position and does not move with fluctuations in the level of the liquid managed in the separator.

Floating roof means a pontoon-type or double-deck type cover that rests upon and is supported by the liquid managed in a separator.

Liquid-mounted seal means a foam- or liquid-filled continuous seal that is mounted between the wall of the separator and the floating roof, and the seal is in contact with the liquid in a separator.

Oil-water separator means a separator as defined for this subpart that is used to separate oil from water.

Organic-water separator means a separator as defined for this subpart that is used to separate organics from water.

Metallic shoe seal means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the separator 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.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in § 63.1046(a) of this subpart.

Regulated-material means the material (e.g. waste, wastewater, off-site material) required to be managed in separators using air emission controls in accordance with the standards specified in this subpart.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to the separator air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath the separator cover. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

Separator means a waste management unit, generally a tank, that is used to separate oil or organics from water. A 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 any additional treatment units such as an air flotation unit clarifier or biological treatment unit. Examples of a separator include an API separator, parallel-plate interceptor, and corrugated-plate interceptor with the associated ancillary equipment.

§ 63.1042 Standards—Separator fixed roof.

(a) This section applies to owners and operators subject to this subpart and controlling air emissions from an oil-water separator or organic-water separator using a fixed roof.

(b) The separator shall be equipped with a fixed roof designed to meet the following specifications:

(1) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the separator.

(2) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open space between roof section joints or between the interface of the roof edge and the separator wall.

(3) Each opening in the fixed roof shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

(4) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid and its vapors managed in the separator; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the separator on which the fixed roof is installed.

(c) Whenever a regulated-material is in the separator, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(1) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(i) To provide access to the separator for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the separator, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the separator.

(ii) To remove accumulated sludge or other residues from the bottom of separator.

(2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the pressure in vapor headspace underneath the fixed roof in accordance with the separator design specifications. The device shall be designed to operate with no detectable organic emissions, as determined using the procedure specified in § 63.1046(a) of this subpart, when the device is

secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the pressure in the vapor headspace underneath the fixed roof is within the pressure operating range determined by the owner or operator based on the cover manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

(3) Opening of a safety device, as defined in § 63.1041 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect the fixed roof and any closure devices in accordance with the requirements specified in § 63.1047(a) of this subpart.

§ 63.1043 Standards—Separator floating roof.

(a) This section applies to owners and operators subject to this subpart and controlling air emissions from an oil-water separator or organic-water separator using a floating roof.

(b) The separator shall be equipped with a floating roof designed to meet the following specifications:

(1) The floating roof shall be designed to float on the liquid surface during normal operations.

(2) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the separator and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(i) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in § 63.1041 of this subpart. The total area of the gaps between the separator wall and the primary seal shall not exceed 67 square centimeters (cm^2) per meter of separator wall perimeter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm).

(ii) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the separator. The total area of the gaps between the separator wall and the secondary seal shall not exceed 6.7 square centimeters (cm^2) per meter of separator wall perimeter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(3) Except as provided for in paragraph (b)(4) of this section, each opening in the floating roof shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(4) The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(c) Whenever a regulated-material is in the separator, the floating roof shall float on the liquid (i.e., off the roof supports) and each closure device shall be secured in the closed position except as follows:

(1) Opening of closure devices is allowed at the following times:

(i) To provide access to the separator for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the separator, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position.

(ii) To remove accumulated sludge or other residues from the bottom of separator.

(2) Opening of a safety device, as defined in § 63.1041 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect the floating roof in accordance with the procedures specified in § 63.1047(b) of this subpart.

§ 63.1044 Standards—Separator vented to control device.

(a) This section applies to owners and operators controlling air emissions from an oil-water or organic-water separator using a fixed roof and venting the vapor headspace underneath the fixed roof through a closed-vent system to a control device.

(b) The separator shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(1) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the separator.

(2) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions, as determined using the procedure specified in § 63.1046(a) of this subpart.

(3) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the regulated-material to the atmosphere, to the extent practical, and will maintain the integrity of the equipment throughout its intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the separator; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the separator on which the fixed roof is installed.

(4) The closed-vent system and control device shall be designed and operated in accordance with the requirements of § 63.693 in 40 CFR part 63, subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

(c) Whenever a regulated-material is in the separator, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(1) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(i) To provide access to the separator for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the separator, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity,

the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the separator.

(ii) To remove accumulated sludge or other residues from the bottom of separator.

(2) Opening of a safety device, as defined in § 63.1041 of this subpart, is allowed at any time conditions require it to do so to avoid an unsafe condition.

(d) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the procedures specified in § 63.1047(c) of this subpart.

§ 63.1045 [Reserved]

§ 63.1046 Test methods and procedures.

(a) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart.

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the separator contains a material having an organic HAP concentration representative of the range of concentrations for the regulated-materials expected to be managed in the separator. During the test, the cover and closure devices shall be secured in the closed position.

(3) 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 organic constituents in the regulated-material placed in the separator, not for each individual organic constituent.

(4) 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.

(5) Calibration gases shall be as follows:

(i) Zero air (less than 10 ppmv hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration of approximately, but less than, 10,000 ppmv.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60 appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(b) Procedure for performing floating roof seal gap measurements for the purpose of complying with this subpart.

(1) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually.

(2) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(3) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the separator and measure the circumferential distance of each such location.

(4) For a seal gap measured under paragraph (b)(2) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the separator wall to the seal and multiplying each such width by its respective circumferential distance.

(5) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of the separator basin. These total gap areas for the primary seal and secondary seal then are compared to the respective standards for the seal type as specified in § 63.1043(b)(2) of this subpart.

§ 63.1047 Inspection and monitoring requirements.

(a) Owners and operators that use a separator equipped with a fixed roof in accordance with the provisions of § 63.1042 of this subpart shall meet the following requirements:

(1) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions to the atmosphere. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform the inspections following installation of the fixed roof and, thereafter, at least once every year.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d) of this section.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.1048(a)(2) of this subpart.

(b) Owners and operators that use a separator equipped with a floating roof in accordance with the provisions of § 63.1043 of this subpart shall meet the following requirements:

(1) The owner or operator shall measure the floating roof seal gaps using the procedure specified in § 63.1046(b) of this subpart in accordance with the following requirements:

(i) The owner or operator shall perform measurements of gaps between the separator wall and the primary seal within 60 days after initial operation of the separator following installation of the floating roof and, thereafter, at least once every 5 years.

(ii) The owner or operator shall perform measurements of gaps between the separator wall and the secondary seal within 60 days after initial operation of the separator following installation of the floating roof and, thereafter, at least once every year.

(iii) If a separator ceases to hold regulated-material for a period of 1 year or more, subsequent introduction of regulated-material into the separator shall be considered an initial operation for the purpose of complying with paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(iv) In the event that the seal gap measurements do not conform to the specifications in § 63.1043(b)(2) of this subpart, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.1048 (a)(2) and (b) of this subpart.

(2) The owner or operator shall visually inspect the floating roof in accordance with the following requirements:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions to the atmosphere. Defects include, but are not limited to: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the separator; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform the inspections following installation of the floating roof and, thereafter, at least once every year.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.1048(a)(2) of this subpart.

(c) Owners and operators that use a separator equipped with a fixed roof and vented through a closed-vent system to a control device in accordance with the provisions of § 63.1044 of this subpart shall inspect the air emission control equipment as follows:

(1) The owner or operator shall visually inspect the fixed roof in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform the inspections following installation of the fixed roof and, thereafter, at least once every year.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in § 63.1048(a)(2) of this subpart.

(2) The owner or operator shall inspect and monitor the closed-vent system and the control device in accordance with the requirements specified in § 63.693 in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

(d) The owner or operator shall repair all detected defects as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (d)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the separator and no alternative treatment capacity is available at the facility site to accept the regulated-material normally treated in the separator. In this case, the owner or operator shall repair the defect at the next time the process or unit that is generating the regulated-material managed in the separator stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(3) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in § 63.1048(a)(3) of this subpart.

§ 63.1048 Recordkeeping requirements.

(a) Each owner or operator shall prepare and maintain the following records:

(1) Documentation describing the design of each floating roof and fixed roof installed on a separator, as applicable to the separator. When a floating roof is used, the documentation shall include the dimensions of the separator bay or section in which the floating roof is installed.

(2) A record for each inspection required by § 63.1047 of this subpart that includes the following information: a separator identification number (or other unique identification description as selected by the owner or operator) and the date of inspection.

(3) The owner or operator shall record for each defect detected during inspections required by § 63.1047 of this subpart the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of § 63.1047(d)(2) of this section, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(b) Owners and operators that use a separator equipped with a floating roof in accordance with the provisions of § 63.1043 of this subpart shall prepare and maintain records for each inspection required by § 63.1047(b)(1) describing the results of the seal gap measurements. The records shall include the date of the measurements performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in § 63.1043(b)(2) of this subpart, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the separator was emptied, if necessary.

(c) Owners and operators that use a separator equipped with a fixed-roof and vented through a closed-vent system to a control device in accordance with the provisions of § 63.1044 of this subpart shall prepare and maintain the records required for the closed-vent system and control device in accordance with the requirements of § 63.693 in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

§ 63.1049 Reporting requirements.

(a) Owners and operators that use a separator equipped with a floating roof in accordance with the provisions of § 63.1043 of this subpart shall notify the Administrator at least 30 calendar days prior to each seal gap measurement inspection performed to comply with the requirements in § 63.1047(b)(1) of this subpart.

(b) Owners and operators that use a separator equipped with a fixed-roof and vented through a closed-vent system to a control device in accordance with the provisions of § 63.1044 of this subpart shall prepare and submit to the Administrator the reports required for

closed-vent systems and control devices in accordance with the requirements of § 63.693 in 40 CFR 63 subpart DD—National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.

10. Part 63 is amended by adding appendix D to read as follows:

Appendix D to Part 63—Alternative Validation Procedure for EPA Waste and Wastewater Methods

1. Applicability

This procedure is to be applied exclusively to Environmental Protection Agency methods developed by the Office of Water and the Office of Solid Waste. Alternative methods developed by any other group or agency shall be validated according to the procedures in Sections 5.1 and 5.3 of Test Method 301, 40 CFR Part 63, Appendix A. For the purposes of this appendix, "waste" means waste and wastewater.

2. Procedure

This procedure shall be applied once for each waste matrix. Waste matrix in the context of this procedure refers to the target compound mixture in the waste as well as the formulation of the medium in which the target compounds are suspended. The owner or operator shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sample plan shall include procedures for determining recovery efficiency of the relevant compounds regulated in the applicable subpart. An example of an acceptable sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR part 60, appendix A.

2.1. Sampling and Analysis

2.1.1. For each waste matrix, collect twice the number of samples required by the applicable regulation. Designate and label half the sample vials the "spiked" sample set, and the other half the "unspiked" sample set. Immediately before or immediately after sampling (immediately after in the context of this procedure means after placing the sample into the sample vial, but before the sample is capped, cooled, and shipped to the laboratory for analysis), inject, either individually or as a solution, all the target compounds into each spiked sample.

2.1.2. The mass of each spiked compound shall be 40 to 60 percent of the mass expected to be present in the waste matrix. If the concentration of the target compounds in the waste are not known, the mass of each spiked compound shall be 40 to 60 percent of the limit allowed in the applicable regulation. Analyze both sets of samples (spiked and unspiked) with the chosen method.

3. Calculations

For each pair of spiked and unspiked samples, determine the fraction of spiked compound recovered (R) using the following equations.

where:

m_r = mass spiked compound measured (μg).

m_s = total mass of compound measured in spiked sample (μg).

m_u = total mass of compound measured in unspiked sample (μg).

where:

S = theoretical mass of compound spiked into spiked sample (μg).

3.1. Method Evaluation

In order for the chosen method to be acceptable for a compound, $0.70 \le R \le 1.30$ (R in this case is an average value of all the spiked and unspiked sample set R values). If the average R value does not meet this criterion for a target compound, the chosen method is not acceptable for that compound, and therefore another method shall be evaluated for acceptance (by repeating the procedures outlined above with another method).

3.2. Records and Reports

Report the average R value in the test report and correct all reported measurements made with the method with the calculated R value for that compound by using the following equation:

$$\text{Reported Result} = \frac{\text{Measured Mass of Compound}}{\text{R for that compound}}$$

3.3. Optional Correction Step

If the applicable regulation allows for correction of the mass of the compound in the waste by a published f_m value, multiply the reported result calculated above with the appropriate f_m value for that compound.

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importing or manufacturing party shall provide reimbursement of the reasonable cost" of such procedure.

In all other cases, "any recovery of royalty underpayments as a result of the audit shall be used first to provide reimbursement for the reasonable costs of such audit," and "any remaining recovery shall be deposited with the Register."

EIA did not object to the cost allocation scheme proposed in S. 1623, provided that the verification procedure is limited to an "agreed-upon procedures" audit and there is arbitration between the primary and verification auditors in case of dispute to avoid duplication of audit work. EIA, comments at 30, and Appendix 2, at 16. The Copyright Parties recommended that the interested copyright parties who initiate the engagement of a verifying auditor should bear the cost of the verification procedure, but such cost should be reimbursable under the system proposed in S. 1623. Copyright Parties, comments at 28. AICPA recommended that the cost of the verification procedure should be borne by the copyright party(s) that engage the verification auditor, but was silent on the 5% provision in S. 1623. AICPA, comments at 5.

The interim regulation is based upon the system detailed in S. 1623, described above, with which the Copyright Parties and EIA agree.

XII. Miscellaneous—Retention of Report; Use of the Word "Verification"

AICPA had no comment on the length of time verification procedure reports should be retained by the Office. EIA and the Copyright Parties proposed that they be retained for three years. EIA, comments at 28; Copyright Parties, comments at 13. AICPA supported EIA's and the Copyright Parties' three-year proposal in its reply comments. AICPA, reply at 6. The Office has adopted the proposed three-year retention, but seeks more comments on how it should work. Should it apply equally to positive as well as negative verification procedure reports? Should it include follow-up reports if the filer and the verifying auditor come to subsequent agreements addressing the concerns of a negative report? May the Office, in its discretion, retain the report more than three years?

Last, AICPA commented that the word "verification" is a misnomer because it implies a full scale audit while the scope of the verifying auditor's work might be well less than that. AICPA recommends that the procedure to be followed by the verifying auditor be called a "second audit" or a "special audit." We have chosen to call it a "verification procedure," because the word "verification" was used in the AHRA, but we have given it its own special definition in § 201.30(b)(5), so that it will not carry the implication of a full scale audit.

List of Subjects in 37 CFR Part 201

Copyright; Digital audio recording products.

Interim Regulations

In consideration of the foregoing, the Copyright Office is amending part 201 of 37 CFR, chapter II in the manner set forth below:

PART 201—GENERAL PROVISIONS [AMENDED]

1. The authority citation for part 201 is revised to read as follows:

Authority: 17 U.S.C. 702; 17 U.S.C. 1003.

2. Section 201.30 is added to read as follows:

§ 201.30 Verification of Statements of Account.

(a) *General.* This section prescribes rules pertaining to the verification of information contained in the Statements of Account by interested copyright parties pursuant to section 1003(c) of title 17 of the United States Code.

(b) *Definitions.*

(1) *Annual Statement of Account, generally accepted auditing standards (GAAS),* and *primary auditor* have the same meaning as the definition in § 201.28 of this part.

(2) *Filer* is a manufacturer or importer of digital devices or media who is required by 17 U.S.C. 1003 to file with the Copyright Office Quarterly and Annual Statements of Account and a primary auditor's report on the Annual Statement of Account.

(3) *Interested copyright party* has the same meaning as the definition in § 201.29 of this part.

(4) *Verifying auditor* is the person retained by interested copyright parties to perform a verification procedure. He or she is independent and qualified as defined in paragraphs (j)(2) and (j)(3) of this section.

(5) *Verification procedure* is the process followed by the verifying auditor to verify the information reported on an Annual Statement of Account.

(c) *Purpose of Verification.* The purpose of verification is to determine whether there was any failure of the primary auditor to conduct the primary audit properly or to obtain a reliable result, or whether there was any error in the Annual Statement of Account.

(d) *Timing of Verification Procedure.*

(1) *Requesting a verification procedure.* No sooner than three months nor later than three years after the filing deadline of the Annual Statement of Account to be verified, any interested copyright party shall notify the Register of Copyrights of its interest in instituting a verification procedure. Such notification of interest shall also be served at the same time on the filer and the primary auditor identified in the Annual Statement of Account. Such notification shall include the year of the Annual Statement of Account to be verified, the name of the filer, information on how other interested copyright parties may contact the party interested in the verification including name, address, telephone number, facsimile number and electronic mail address, if any, and a statement establishing the party filing the notification as an interested copyright party. The notification of interest may apply to more than one Annual Statement of Account and more than one filer.

(2) *Coordination and selection of verifying auditor.* The Copyright Office will publish in the **Federal Register** notice of having received a notification of interest to institute a verification procedure. Interested copyright parties have one month from the date of publication of the **Federal Register** notice to notify the party interested in instituting the verification procedure of their intent to join with it and to participate in the selection of the verifying auditor. Any dispute about the selection of the verifying auditor shall be resolved by the parties themselves.

(3) *Notification of the filer and primary auditor.* As soon as the verifying auditor has been selected, and in no case later than two months after the publication in the **Federal Register** of the notice described in paragraph (d)(2) of this section, the joint interested copyright parties shall notify the Register of Copyrights, the filer, and the primary auditor identified in the Annual Statement of Account to be verified, that they intend or do not intend to initiate a verification procedure.

(4) *Commencement of the verification procedure.* The verification procedure shall begin no sooner than one month after notice of intent to initiate a verification procedure was given to the filer and the primary auditor by the joint interested copyright parties. The joint interested copyright parties shall grant the filer or the primary auditor a postponement of the beginning of the verification procedure of up to one additional month if either one requests

it. Verification procedures shall be conducted at reasonable times during normal business hours.

(5) *Anti-duplication rules.* A filer shall be subject to no more than one verification procedure per calendar year. An Annual Statement of Account shall be subject to a verification procedure only once.

(e) *Scope of verification.* The verifying auditor shall limit his or her examination to verifying the information required in the Annual Statement of Account. To the extent possible, the verifying auditor shall inspect the information contained in the primary auditor's report and the primary auditor's working papers. If the verifying auditor believes that access to the records, files, or other materials in the control of the filer is required according to GAAS, he or she may, after consultation with the primary auditor, require the production of these documents as well. The verifying auditor and the primary auditor shall act in good faith using reasonable professional judgment, with the intention of reaching a reasonable accommodation as to the necessity and scope of examination of any additional documents, but the decision to require the production of additional documents is solely that of the verifying auditor.

(f) *Verification Report.* Upon concluding the verification procedure, the verifying auditor shall render a report enumerating in reasonable detail the procedures performed by the verifying auditor and his or her findings. Such findings shall state whether there was any failure of the primary auditor to conduct properly the primary audit or obtain a reliable result, and whether there was any error in the Annual Statement of Account, itemized by amount and by the filer's elected fiscal year. If there was such failure or error, the report shall specify all evidence from which the verifying auditor reached such conclusions. Such evidence shall be listed and identified in an appendix to the report in sufficient detail to enable a third party to reasonably understand or interpret the evidence on which the verifying auditor based his or her conclusion. If there was no such failure or error, the report shall so state.

(g) *Distribution of Report.* Copies of the verifying auditor's report shall be subject to the confidentiality provisions of § 201.29 and shall be distributed as follows:

(1) One copy, excluding the appendix, if applicable, shall be filed with the Register of Copyrights.

(2) One copy, with the appendix, if applicable, shall be submitted to each of the interested copyright parties who retained the services of the verifying auditor and who are authorized to receive such information according to § 201.29.

(3) One copy, with the appendix, if applicable, shall be submitted to the filer of the Annual Statement of Account.

(4) One copy, with the appendix, if applicable, shall be submitted to the primary auditor.

(h) *Retention of Report.* The Register of Copyrights will retain his or her copy of the verifying auditor's report for three years following the date the copy of the verifying auditor's report is filed.

(i) *Costs of Verification.* The joint interested copyright parties who requested the verification procedure shall pay the fees of the verifying auditor and the primary auditor for their work performed in connection with the verification procedure, except, if the verification procedure results in a judicial determination or the filer's agreement that royalty payments were understated on the Annual Statement of Account, then,

(1) if the amount is less than five percent (5%) of the amount stated on the Annual Statement of Account, that amount shall first be used to pay the fees of the verifying auditor and the primary auditor, and any remaining amount plus any applicable interest on the total amount shall be deposited, allocated by the filer's elected fiscal year, with the Register of Copyrights, or

(2) if the amount is equal to or greater than five percent (5%) of the amount stated on the Annual Statement of Account, the filer shall pay the fees of the verifying auditor and the primary auditor, and, in addition, shall deposit the amount found to be due plus any applicable interest on the total amount, allocated by the filer's elected fiscal year, with the Register of Copyrights.

(j) *Independence and qualifications of verifying auditor.*

(1) The verifying auditor shall be qualified and independent as defined in this section. If the filer has reason to believe that the verifying auditor is not qualified or independent, it shall raise the matter with the joint interested copyright parties before the commencement of the verification procedure, and if the matter is not resolved, it may raise the issue with the American Institute of Certified Public Accountants' Professional Ethics Division and/or the verifying auditor's State Board of Accountancy while the verification procedure is being performed.

(2) A verifying auditor shall be considered qualified if he or she is a certified public accountant or works under the supervision of a certified public accounting firm.

(3) A verifying auditor shall be considered independent if:

(i) he or she is independent as that term is used in the Code of Professional Conduct of the American Institute of Certified Public Accountants, including the Principles, Rules and Interpretations of such Code applicable generally to attest engagements (collectively, the "AICPA Code"); and (ii) he or she is independent as that term is used in the Statements on Auditing Standards promulgated by the Auditing Standards Board of the AICPA and Interpretations thereof issued by the Auditing Standards Division of the AICPA.

Dated: June 6, 1996.

Marybeth Peters,

Register of Copyrights.

Approved by:

James H. Billington,

The Librarian of Congress.

[FR Doc. 96–15390 Filed 6–17–96; 8:45 am]

BILLING CODE 1410–30–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–5521–5]

RIN 2060–AD98

NESHAPS 5

National Emission Standards for Hazardous Air Pollutants for Shipbuilding and Ship Repair (Surface Coating) Operations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: On December 15, 1995, the EPA issued national emission standards for hazardous air pollutants (NESHAP) under Section 112 of the Clean Air Act as amended in 1990 for shipbuilding and ship repair (surface coating) operations. The NESHAP requires existing and new major sources to control emissions using the maximum achievable control technology to control hazardous air pollutants. This action revises the compliance date for sources subject to this standard and revises the date for submittal of implementation plans. Specifically, this action extends the June 13, 1996 deadline for submittal of an implementation plan to December 16, 1996. The compliance date is extended from December 16, 1996 to December 16, 1997. This action is being taken because the EPA has learned that sufficient time was not provided to

prepare the implementation plans and establish the necessary inventory management systems to ensure compliance with the standard. This action is also being taken to improve coordination of compliance with the NESHAP with the anticipated implementation of the control techniques guidelines (CTG) requirements for shipbuilding and ship repair facilities.

This action also removes the requirement that implementation plans be approved by the EPA. This requirement is being removed because it was not EPA's intent for the implementation plan to be the mechanism for enforcing the rule.

DATES: The direct final rule will be effective August 19, 1996 unless significant, adverse comments are received by July 18, 1996. If the effective date is delayed, timely notice will be published in the Federal Register.

ADDRESSES: Comments should be submitted to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–92–11, Room M–1500, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: Dr. Mohamed Serageldin, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711, telephone number (919) 541–2379.

SUPPLEMENTARY INFORMATION:

Regulated Entities. The regulated category and entities affected by this action include:

Category	Examples of regulated entities
Industry	Facilities that build, repair, repaint, convert, or alter ships. The term ship means any marine or fresh-water vessel, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). Note: An offshore oil and gas drilling platform is not considered a ship for purposes of this regulation.
Federal Govt ...	Federal Agencies which undertake shipbuilding or repair operations (see above) such as the Navy and Coast guards.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine wheher your facility is regulated by this action, you should carefully examine the applicability criteria in § 63.782 of the regulation. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Any significant and timely adverse comments received on any portion of this direct final rule will be addressed in a subsequent final rule based on the proposed rule contained in the Proposed Rules Section of this **Federal Register** that is identical to this direct final rule. If no significant and timely adverse comments are received on this direct final rule, then the direct final rule will become effective August 19, 1996 and no further action is contemplated on the parallel proposal published today.

I. Basis for Changes to Rule

A. Compliance Date

The EPA is extending the compliance date from December 16, 1996 to December 16, 1997 to allow time for sources to develop the necessary inventory management systems, administrative controls, and to allow coordination of compliance plans for this rule and the CTG, which is planned for publication in the near future. When the final NESHAP was issued, the EPA selected a one-year compliance period to allow time for sources to deplete existing inventories of coatings and to conduct compliance planning procedures. Since the final rule was issued on December 15, 1995, the EPA has learned that there are a number of companies subject to this rule that presently do not have inventory management systems necessary to ensure compliance, and that some facilities are relying on outside consultants to develop such systems. In such cases, at least one year is needed to establish the paint inventory management and administrative control system. Additionally, at the time the final NESHAP was issued, EPA expected to issue final guidance for the CTG for shipbuilding and ship repair (surface coating) operations in the near future. Issuance of this CTG has been delayed. Since control techniques for volatile organic compound emissions could affect the compliance approach selected for the NESHAP, the EPA believes that it is appropriate to extend the compliance date for the NESHA. allow coordination with rules adopte by States to implement the CTG. Based on the anticipated schedule for issuance of the CTG, the EPA believes that extension of the compliance date to December 16, 1997 should provide sufficient time to allow coordination of compliance planning for both the NESHAP and any applicable State rules.

B. Implementation Plan

The EPA is extending the June 13, 1996 deadline for submittal of implementation plans to December 16, 1996. The deadline for submitting these plans is being extended because the EPA has learned that sufficient time was not provided to prepare the implementation plans and establish the necessary paint inventory management and administrative control systems to ensure compliance with the standard. Because information available to the EPA during the development of the NESHAP suggested that most shipyards had some form of inventory management system, the EPA expected that 180 days should be sufficient to prepare the implementation plan. Due to information received from the industry since the final rule was issued, the EPA believes that one year is a more appropriate time-frame for selection of the compliance approach and development of the implementation plan. Therefore, this document revises the date for submittal of implementation plans to December 16, 1996.

This action also removes the requirement that implementation plans be approved by the EPA. This requirement is being eliminated since it was not the EPA's intent for the implementation plan to be the mechanism for enforcing the rule and, if the plans are subject to approval, some people might argue that was the role of the plan. The implementation plan will serve to provide guidance and assist in enforcement of the rule.

II. Administrative Requirements

A. Paperwork Reduction Act

The information collection requirements of the previously promulgated NESHAP were submitted to and approved by the Office of Management and Budget (OMB). A copy of this Information Collection Request (ICR) document (OMB number 1414.02) 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 should have no impact on the

information collection burden estimates made previously. The change to the implementation plan requirements merely extends the date for submission of plans from existing sources. These changes do not impose new requirements. Consequently, the ICR has not been revised.

B. Executive Order 12866 Review

Under Executive Order 12866, the EPA must determine whether the proposed regulatory action is "not 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 affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in 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 obligations of recipients thereof; or

(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.

The Shipbuilding NESHAP promulgated on December 15, 1995 was determined to not be a "significant regulatory action" under Executive Order 12866. Therefore, a regulatory impact analysis was not prepared. The amendments issued today extend dates for submittal of implementation plans and the compliance date and remove the requirement for approval of implementation plans. These changes do not add any additional control requirements or costs. Therefore, this regulatory action does not affect the previous decision and is not considered to be significant.

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 Section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities.

D. Submission to Congress and the General Accounting Office

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

E. Unfunded Mandates

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

The EPA has determined that the action promulgated today does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Reform Act do not apply to this action.

List of Subjects in 40 CFR Part 63

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

Dated: June 7, 1996.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I, part 63, subpart II, of the Code of Federal Regulations 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.

Subpart II—National Emission Standards for Shipbuilding and Ship Repair (Surface Coating)

2. Section 63.784 is amended by revising paragraph (a) to read as follows:

§ 63.784 Compliance dates.

(a) Each owner or operator of an existing affected source shall comply within two years after the effective date of this subpart.

* * * * *

3. Section 63.787 is amended by revising paragraphs (b)(1)(ii) and (b)(4) and by removing and reserving paragraph (b)(2) to read as follows:

§ 63.787 Notification requirements.

* * * * *

(b) * *

(1) * *

(ii) Not later than one year after the effective date of this subpart, submit the implementation plan to the Administrator along with the notification required by § 63.9(b)(2) or (b)(5) of subpart A, as applicable.

(2) [Reserved]

* * * * *

(4) *Major sources that intend to become area sources by the compliance date.* Existing major sources that intend to become area sources by the December 16, 1997 compliance date may choose to submit, in lieu of the implementation plan required under paragraph (b)(1) of this section, a statement that, by the compliance date, the major source intends to obtain and comply with federally enforceable limits on their potential to emit which make the facility an area source.

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[FR Doc. 96–15439 Filed 6–17–96; 8:45 am]
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40 CFR Part 63

[AD–FRL–5520–5]

RIN 2060–AF33

Hazardous Air Pollutant List; Modification

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is amending the list of hazardous air pollutants in Clean Air Act Section 112(b)(1) by removing the compound caprolactam (CAS No. 105–60–2). This rulemaking was initiated in response to a petition to delete the substance caprolactam which was filed by AlliedSignal, Inc., BASF Corporation, and DSM Chemicals North