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National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology; Final Rules and Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7215–7]

RIN 2060–AH68

National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; amendments.

SUMMARY: This action promulgates amendments to the ''generic'' maximum achievable control technology (MACT) standards to add national emission standards for hazardous air pollutants (NESHAP) for four additional source categories: Cyanide Chemicals Manufacturing, Carbon Black Production, Ethylene Production, and Spandex Production. The generic MACT standards provide a structural framework that allows source categories with similar emission types and MACT control requirements to be covered under one subpart, thus promoting regulatory consistency in NESHAP development. The EPA has identified these four source categories as major sources of hazardous air pollutants (HAP), including cyanide compounds, acrylonitrile, acetonitrile, carbonyl sulfide, carbon disulfide, benzene, 1,3 butadiene, toluene, and 2,4 toluene diisocyanate (TDI). Benzene is a known human carcinogen, and 1,3 butadiene is considered to be a probable human carcinogen. The other pollutants can cause noncancer health effects in humans. These standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting the application of MACT. This action also promulgates NESHAP for the heat exchange systems and wastewater operations at ethylene manufacturing facilities.

EFFECTIVE DATE: July 12, 2002.

ADDRESSES: Docket No. A–97–17 contains supporting information used in developing the generic MACT standards. Dockets established for each of the source categories to be assimilated under the generic MACT standards with this action include: Cyanide Chemicals Manufacturing (Docket No. A–2000–14), Carbon Black Production (Docket No. A–98–10), Ethylene Production (Docket No. A–98–22), and Spandex Production (Docket No. A–98–25). These dockets include source-category-specific supporting information. All dockets are located at the U.S. EPA, Air and Radiation Docket and Information Center, Waterside Mall, Room M–1500, Ground Floor, 401 M Street SW, Washington, DC 20460, and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. If no State or local representative is available, contact the EPA Regional Office staff listed in 40 CFR 63.13. For information concerning the analyses performed in developing the NESHAP, contact the following at the Emission Standards Division, U.S. EPA, Research Triangle Park, North Carolina 27711:

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SUPPLEMENTARY INFORMATION: *Docket.* The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in the case of judicial review. (*See* section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be mailed on request from the Air Docket by calling (202) 260–7548. A reasonable fee may be charged for copying docket materials.

Public Comments. The NESHAP for the four source categories mentioned above were proposed on December 6, 2000 (65 FR 76408). The comment letters received on the proposal are available in Docket No. A–97–17 or the dockets established for the four source categories (*see* **ADDRESSES**), along with a summary of the comment letters and EPA's responses to the comments. In response to the public comments, EPA adjusted the final NESHAP where appropriate.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's final NESHAP will also be available on the WWW through the Technology Transfer Network (TTN). Following the Administrator's signature, a copy of the NESHAP will be posted on the TTN's policy and guidance page for newly proposed or final rules at *http://www.epa.gov/ttn/oarpg/t3pfpr.html.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS code	SIC code	Examples of regulated entities
Industrial	325188, 325199	2819, 2869	Producers and coproducers of hydrogen cyanide and sodium cyanide.
	325182	2895	Producers of carbon black by thermal-oxidative decomposition in a closed system, thermal decomposition in a cyclic process, or thermal decomposition in a continuous process.
	325110	2869	Producers of ethylene from refined petroleum or liquid hydrocarbons.
	325222	2824	Producers of spandex.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. Not all facilities classified under the NAICS or SIC codes are affected. Other types of entities not listed could be affected. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.1104 of the final NESHAP. If you have any 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 were proposed on December 6, 2000 (65 FR 76408). This action announces EPA's final decisions on the NESHAP. Under section 307(b)(1) of the CAA, judicial review of the final NESHAP is available by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by September 10, 2002. Only those objections to the NESHAP which were raised with reasonable specificity during the period for public comment may be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's final NESHAP may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

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VII. Administrative Requirements
A. Executive Order 12866, Regulatory Planning and Review
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C. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
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E. Unfunded Mandates Reform Act of 1995
F. Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601, *et seq.*
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I. Introduction

A. What Is the Purpose of the NESHAP?

The purpose of the final NESHAP is to protect the public health by reducing emissions of HAP from facilities in four source categories: Cyanide Chemicals Manufacturing, Carbon Black Production, Ethylene Production, and Spandex Production.

B. What Is the Source of Authority for Development of NESHAP?

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The four categories of major sources for which NESHAP are being established by today's action were listed on the following dates: Cyanide Chemicals Manufacturing, July 16, 1992 (57 FR 31576) and February 12, 1998 (63 FR 6291); Carbon Black Production, June 4, 1996 (61 FR 28197); Ethylene Production, June 4, 1996 (61 FR 28197); and Spandex Production, July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit greater than 10 tons per year (tpy) of any one HAP or 25 tpy of any combination of HAP.

C. What Criteria Are Used in the Development of NESHAP?

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any health and

environmental impacts, and energy requirements.

D. Why Is the EPA Including Today's Standards in the Generic MACT Standards?

We are including NESHAP for the Cyanide Chemicals Manufacturing, Carbon Black Production, Ethylene Production, and Spandex Production source categories under the generic MACT standards to reduce the regulatory burden associated with the development of separate rulemakings. An owner or operator should consult the generic MACT standards for information on applicability of the standards to their source, compliance schedules, and standards. The generic MACT standards generally refer the owner or operator to other subparts for requirements necessary to demonstrate compliance.

We are including the NESHAP for the Cyanide Chemicals Manufacturing, Carbon Black Production, Ethylene Production, and Spandex Production source categories in the generic MACT standards to simplify the rulemaking process, to minimize the potential for duplicative or conflicting requirements, to conserve limited resources, and to ensure consistency of the air emissions requirements applied to similar emission points. We believe that the generic MACT regulatory framework is appropriate for these source categories because it allows us to incorporate specific applicability and control requirements that reflect our decisions on these source categories while also utilizing generic requirements previously established for similar emission sources that we have determined are also applicable here.

II. Summary of Major Comments and Changes Since Proposal to 40 CFR Part 63, Subpart YY and the Referenced Subparts

The major comments received regard the performance specifications for continuous parameter monitoring systems (CPMS) that were proposed as an amendment to the referenced 40 CFR part 63, subpart SS. Other comments received on subpart YY and the referenced subparts and the responses to those comments are in Docket No. A–97–17.

Several commenters stated that the proposed performance specifications for CPMS would be costly and would not provide an environmental benefit. We proposed performance specifications for CPMS to ensure that such systems are installed, calibrated, and operated in a manner that would yield accurate and reliable information regarding the performance of closed vent systems and control devices. Subpart SS currently states that ''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.'' Therefore, owners and operators are already required by subpart SS to follow written performance specifications, but not necessarily the ones that we proposed in the amendments.

We have decided not to include the performance specifications for CPMS in the final subpart SS for two reasons. First, the number and complexity of the comments would not allow for the expeditious promulgation of the standards for the four source categories we are including under subpart YY. Second, we are currently developing performance specifications for CPMS to be followed by owners and operators of all sources subject to standards under 40 CFR part 63.

Since owners and operators subject to subpart SS are currently required to follow specifications for CPMS, even though they may not be as specific as those we proposed, we have decided to wait for the rulemaking that will propose performance specifications for all of 40 CFR part 63. We decided it would be premature to promulgate performance specifications for subpart SS when the performance specifications that would ultimately be promulgated for all of 40 CFR part 63 may be significantly different as a result of possible public comments received on that rulemaking.

III. Cyanide Chemicals Manufacturing

A. Summary of Environmental, Energy, Cost, and Economic Impacts

1. What Are the Air Quality Impacts?

Nationwide baseline HAP emissions are estimated to be 238 megagrams per year (Mg/yr) (263 tpy). The final standards will reduce HAP emissions by approximately 106 Mg/yr (117 tpy). This is a 45 percent HAP emission reduction from the baseline level for this source category and a 58 percent reduction for those facilities required to install controls to comply with the final standards.

We also estimate that the final standards will reduce emissions of volatile organic compounds (VOC) by 102 Mg/yr (113 tpy). We estimate that the final standards will result in an increase in sulfur oxides (SO_X) emissions of 7.3 Mg/yr (8 tpy), an increase in nitrogen oxides (NO_X) emissions of 10.3 Mg/yr (11.4 tpy), an increase in carbon monoxide (CO) emissions of 42.1 Mg/yr (46.4 tpy), and an increase in particulate matter (PM) emissions of 0.3 Mg/yr (0.3 tpy). Increases in emissions would result from on-site combustion of fossil fuels and emission streams because of control device operations.

2. What Are the Non-Air Health, Environmental, and Energy Impacts?

We believe that there will not be significant adverse non-air health, environmental or energy impacts associated with the final standards. This is supported by impacts analyses associated with the application of the control and recovery devices required under the final standards. We determine impacts relative to the baseline that is set at the level of control in absence of the rule.

Control of equipment leaks is expected to reduce the amount of HAP-containing material that would be discharged to a facility's wastewater treatment stream through equipment washdown or from stormwater runoff.

The use of a scrubber for HAP control of emissions from vents will create HAP-containing effluent. It is anticipated that any wastewater stream created from the use of a scrubber would be treated at a facility's wastewater treatment system with other waste streams.

There are minimal solid or hazardous waste impacts expected as a result of the final standards. A small amount of solid waste may result from replacement of equipment such as seals, packing, rupture disks, and other equipment components, such as pumps and valves. A minimum amount of solid or hazardous waste could also be generated from the use of steam strippers to control wastewater emissions. The possible sources generated include organic compounds recovered in the steam stripper overhead condenser or solids removed during feed pretreatment.

The energy demands associated with the final standards will result from the use of additional electricity, natural gas, and fuel oil to run control equipment. The storage tank, transfer operations, equipment leak, and wastewater controls are not expected to require any additional energy. The total nationwide energy demand that would result from implementing the process vent controls is approximately 3.1×10^{14} Joules per year.

3. What Are the Cost and Economic Impacts?

The total estimated capital cost of the final standards is $939,000. The total estimated annual cost of the final standards is $2.4 million. These costs represent fourth quarter 1998 dollars.

We prepared an economic impact analysis to evaluate the impacts that the final standards would have on the cyanide manufacturing market, consumers, and society. The total annualized social cost (in 1998 dollars) of the final standards on the industry is $2.4 million, which is much less than 0.001 percent of total baseline revenue for the affected sources. A screening analysis indicates that no individual firm affected by the final standards for the cyanide chemicals manufacturing source category would experience costs in excess of 0.001 percent of sales. For this reason, we believe that the impact of the final standards will be minimal. No cyanide chemicals manufacturing facility closures are expected.

B. Summary of Major Comments and Changes Since Proposal

In response to comments received on the proposed standards, we made several changes to the final standards, as well as some clarifications designed to make our intentions clearer. The substantive comments and/or changes and responses made since the proposal are summarized in the following paragraphs. Our complete responses to public comments are contained in a memorandum that can be obtained from the docket (see **ADDRESSES** section).

1. Applicability of the Rule

Some commenters expressed that there was potential for confusion regarding the applicability of the rule. One commenter requested that we specifically exempt downstream equipment from the cyanide chemicals manufacturing NESHAP if the equipment is subject to another NESHAP.

Another commenter expressed that confusion regarding the overlapping requirements affecting the same equipment could be reduced if refined hydrogen cyanide (HCN) ''burned on-site as a fuel in a boiler or industrial furnace'' was excluded as part of the HCN process. The commenter explained that some producers that generate HCN as a byproduct of acrylonitrile manufacture opt to burn the byproduct HCN on-site as a fuel in boilers and/or industrial furnaces where its end use is regulated under other standards.

One commenter requested that we clarify and restrict the applicability of the rule by revising the definition of ''CCMPU'' as follows:

Cyanide chemicals manufacturing process unit or CCMPU means the equipment assembled and connected by hard-piping or duct work to process raw materials to manufacture, store, and transport a cyanide chemicals product. A cyanide chemicals manufacturing process unit shall be limited to any one of the following: an Andrussow process unit, a BMA process unit, a sodium cyanide process unit, or a Sohio hydrogen cyanide process unit * * *.

The commenter explained that, as proposed, the definition of CCMPU could include a chemical manufacturing process unit that creates HCN or sodium cyanide as an incidental or unintended byproduct that could be considered an affected source subject to the cyanide chemicals manufacturing requirements. The commenter stated that this clarification could also be fulfilled by modifying the definition for ''cyanide chemicals product,'' as follows:

Cyanide chemicals product means either hydrogen cyanide or sodium cyanide which is manufactured as the intended product of a CCMPU or a byproduct of the Sohio process. Other hydrogen cyanide or sodium cyanide byproducts, impurities, wastes and trace contaminants are not considered to be cyanide chemicals products.

Based on comments received, we made a few changes to the final standards. To avoid overlapping requirements applying to downstream boilers and/or industrial furnaces, we excluded HCN vent streams used for fuel value in boilers and/or industrial furnaces from HCN chemical manufacturing processes. Exclusion of these boilers and industrial furnaces that use vented emissions for fuel value from the requirements of the cyanide chemicals manufacturing process control requirements is consistent with what is done in other MACT standards.

We also made the commenter's suggested amendments to the ''CCMPU'' and ''cyanide chemicals product'' definitions in the final standards. These amendments were made because the intent of the commenter's suggested amendments is consistent with our intent, and we believe that the amended definitions will reduce any potential confusion regarding the applicability of the rule.

2. Process Vent Standards

BMA/Andrussow process vent MACT control level. During our evaluation of comments received on the proposed process vent standards, we reevaluated the MACT level of control established for BMA/Andrussow process vents. Based on our reevaluation, we decided to remove from the MACT analyses HCN rich vent streams that are routed to a boiler or industrial furnace for use as fuel. We did this to be consistent with other NESHAP and because these vent streams are already regulated by other standards. Once we removed these streams and adjusted the floor based on new information received from industry, the MACT floor and MACT level of control was determined to reduce HAP emissions by 98 weight-percent (rather than by 99 weight-percent) or to a concentration level of 20 parts per million by volume (ppmv). Therefore, the final standards have been modified to require that you reduce HAP emissions from Andrussow/BMA process vents by 98 weight-percent (rather than by 99 weight-percent), or to a concentration level of 20 ppmv. Because the MACT level of control has been changed to 98 weight-percent, the final standards also allow you to comply with the requirements for Andrussow/BMA process vents by routing emissions to a flare.

Wet-end process vents. One commenter requested that the final standards clarify that cyanide chemical manufacturing wastewater collection systems and treatment equipment (tanks) containing discarded wastewater are not part of the process and are not subject to the process vent requirements. The commenter explained that weak HAP and cyanide bearing wastewater is sent to, and handled in, on-site wastewater collection and treatment systems and collected in sumps and pumped into tanks where the wastewater is either recycled to recover HCN, or treated in these tanks by hydrolysis and alkaline chlorination. The commenter stated that such vents should be clarified to be subject to the requirements specified for process and maintenance wastewater control requirements under 40 CFR 63.1106 (a) and (b).

Based on this comment, we evaluated the wet end of the sodium cyanide process unit regarding the clarity of the applicability of the wet-end process vent requirements versus the applicability of discarded process wastewater vent requirements. Based on the definitions for ''wet-end process vent,'' ''wastewater,'' and ''process wastewater,'' applicability of requirements appeared to be clear. However, to avoid any potential applicability confusion, the final standards include an amended definition for ''wet-end process vent'' that specifically clarifies that discarded water that is no longer used in the production process is considered to be process wastewater and that vents from process and maintenance wastewater

operations are not wet-end process vents.

Annual emissions. One commenter stated that the MACT floor determination for Andrussow/BMA process vents was based on annual emissions and the proposed standards require compliance with the floor level of control based on a formula that calculates an overall HAP emission reduction based on hourly emission rates. The commenter requested that compliance be based on meeting the proposed weight-percent reduction on an annual basis to be consistent with the MACT floor. The commenter also requested that Item 2 of Table 9 be modified as follows:

> a. Reduce the overall annual emission of total HAP from the collection of process vents from continuous unit operations in the process unit by 99 weight-percent in accordance with paragraph (g)(4) of this section.

We agree that the MACT floor for Andrussow/BMA process vents was based on annual emissions and, therefore, compliance with MACT should also be based on annual emissions. We have amended the final standards (Item 2 of Table 9 of § 63.1103(g)) as suggested by the commenter.

3. Unsafe-to-Monitor Equipment

Two commenters expressed safety concerns with the proposed leak detection and repair (LDAR) provisions. It was expressed that many of the lines in HCN service are intentionally placed in out-of-the-way locations to minimize risk in the event of a leak. One commenter requested that we either exempt ''unsafe-to-monitor'' equipment components from the LDAR program or stay implementation of these requirements to allow adequate opportunity to investigate safer methods than those proposed. The commenter explained that a large percentage of pipeline components in HCN service that would be subject to the proposed LDAR provisions are elevated and are not accessible during operation due to safety concerns. The commenter stated that facilities already have procedures in place to ensure that there are no leaks when equipment is in HCN service. Industry feedback indicates that HCN equipment is unsafe to monitor at all times that equipment is in operation.

Based on our evaluation of the comments received regarding safety concerns with the proposed LDAR provisions, we concur that there are some equipment components that may never be safe to monitor. Therefore, we have added language to the final standards specifying that you are allowed to designate ''unsafe-to-monitor'' equipment with your Notification of Compliance Status report. If it is demonstrated to the Administrator's satisfaction that designated equipment is never safe to monitor, you would not be required to monitor the designated equipment.

4. Hydrogen Fueled Flares

Destruction efficiency. One commenter expressed that a 99%+ destruction efficiency is supported for hydrogen flares based on data included in the EPA's ''Basis for Hydrogen Flaring'' report. The commenter stated that these data were based on test methods developed with the EPA and a special flare test-rig built for the experiment.

Another commenter requested that we add language to 40 CFR 63.1103(g)(4)(ii)(B) to allow an owner or operator of a cyanide manufacturing facility to include a flare control efficiency greater than 98% in the calculation of the overall HAP emission reduction, provided they can demonstrate a higher control efficiency based on technically relevant measurements that are of sufficient quality, considering data variability.

We agree with the commenters that an owner or operator of a cyanide manufacturing facility should be allowed to include a flare control efficiency greater than 98% in the calculation of their overall HAP emission reduction provided they can demonstrate a higher control efficiency for their flare. Therefore, the final standards allow an owner or operator to include a flare control efficiency greater than 98% in the calculation of their overall HAP emission reduction if they can demonstrate, to the Administrator's satisfaction, a greater control efficiency (40 CFR 63.1103(g)(4)(ii)(A)).

Flare compliance monitoring requirements. Several commenters recommended that a waiver from testing for all HCN flares be granted. Specifically, one commenter requested a waiver from testing of the net heating value using EPA Method 18, and two commenters requested that a waiver from testing the velocity, using EPA Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, be granted (40 CFR 63.11(b)(6)(ii) and (7)(i), respectively). One commenter expressed that flow velocity testing using EPA Method 2, 2A, 2C, 2D, or 2G of 40 CFR part 60, appendix A, require the insertion of a probe into the waste gas stream which poses safety risks.

Based on comments received regarding it being unsafe to test HCN-rich vent streams to flares, and our evaluation of the comments, we have included provisions in the final standards that allow an owner or operator to submit engineering calculations and/or data to substantiate that flares meet applicable heat content and flow rates under worst case conditions (40 CFR 63.987(b)(3)(v) and (4)).

IV. Carbon Black Production

A. Summary of Environmental, Energy, Cost, and Economic Impacts

1. What Are the Air Quality Impacts?

We estimate that the final NESHAP will reduce HAP emissions by 1,830 Mg/yr (2,020 tpy). This is a 26 percent HAP emission reduction from the total baseline HAP emissions, and a 95 percent HAP emission reduction for those facilities required to install controls to meet the standards.

We estimate that the final NESHAP will reduce CO emissions by 474,000 Mg/yr (522,000 tpy); VOC by 16,900 Mg/yr (18,600 tpy); hydrogen sulfide by 10,300 Mg/yr (11,300 tpy); and PM by 740 Mg/yr (820 tpy). We estimate that the final NESHAP will increase SO_X emissions by 32,900 Mg/yr (36,200 tpy) as a result of on-site combustion of fossil fuels. However, the air quality benefits of the final NESHAP (i.e., reduction in HAP, CO, VOC, and hydrogen sulfide emissions) outweigh the negative impacts associated with the anticipated increases in emissions of SO_X and NO_X.

2. What Are the Cost and Economic Impacts?

The total estimated capital cost of the final NESHAP is $54.9 million. The total estimated annual cost of the final NESHAP is $11.2 million. These costs represent fourth quarter 1998 dollars.

We prepared an economic impact analysis to evaluate the impacts the final NESHAP will have on the industry, market, consumers, and society. The total annualized social cost (in 1997 dollars) of the final NESHAP to the industry is $11.2 million, which is less than 0.001 percent of total baseline revenue for the affected sources. A screening analysis suggests only one of the firms affected by the final NESHAP will experience costs in excess of 1 percent of sales, and no firm will experience costs in excess of 1.5 percent of sales. For this reason, we believe that the impact of the final NESHAP will be minimal. We expect no facility closures as a result of the final NESHAP.

3. What Are the Non-Air Health, Environmental, and Energy Impacts?

We believe that there will not be any significant adverse non-air health, environmental or energy impacts associated with the final NESHAP. This is supported by impacts analyses associated with the application of control and recovery devices required under the final NESHAP.

There are no water pollution or solid waste impacts expected from the use of air emission control devices as a result of the final NESHAP. An increase in energy consumption will result from the use of combustion control systems. We estimate that carbon black production facilities will consume an additional 186 million cubic feet of natural gas per year to meet the regulatory requirements of the final NESHAP. This represents an increase in total domestic natural gas consumption of less than 1/100th of one percent.

B. Summary of Major Comments and Changes Since Proposal

In response to comments received on the proposed standards for the Carbon Black Production source category, we made several changes to the final NESHAP. Only one substantive change was made based on comments received on the proposal. We have summarized the relevant comment/change made in the following paragraphs. Our complete responses to public comments are contained in a memorandum that can be obtained from the docket (see **ADDRESSES** section).

One commenter requested an exemption from the closed vent system initial and annual closed vent system inspection requirements. The commenter expressed that certain safety features are incorporated into their closed vent system operations to protect against overpressure in the case of catastrophic failure of their process filter systems. Concern was expressed that the proposed initial and annual closed vent system inspection requirements may defeat these safety measures because cost-effective technology to provide leak proof seals for the extreme operating temperature ranges that occur in the carbon black production process is not available. The commenter explained that the catastrophic loss of a bag filter due to gaseous build-up and failure can result in ignition of gases, fires, and explosions. In order to prevent the failure of the compartments, industry isolates the failed compartment from the process. Safety relief valves (e.g., weighted-lid systems) are designed into the system to relieve excess pressures, to prevent fires and explosions, and to prevent loss of compartments. The commenter explained that a typical pressure relief device used in carbon black production does not seal 100 percent, but that the process emits very small amounts of HAP, and single bag failure results in emissions that lead to opacity exceedances.

We evaluated the commenter's concerns and request for exemption from closed vent system inspection requirements for specified pressure relief devices used to protect against overpressure in the case of catastrophic failure of their process filter systems. Based on safety concerns and technology considerations, we have included provisions in the final NESHAP that exempt pressure relief devices that meet specified criteria (i.e., devices used to protect against overpressure in the case of catastrophic failure of the process filter system) from the closed vent system inspection requirements of 40 CFR 63.983(b) and (c). The final NESHAP require that exempted pressure relief devices meeting criteria specified in the NESHAP be identified in your Notification of Compliance Status report.

C. New Source Review/Prevention of Significant Deterioration Applicability

A question arose concerning the potential installation of cogeneration technology at carbon black plants which would recover waste heat and gas for use as a fuel input for power generation. This technology could potentially be used to meet the HAP control requirements of the NESHAP. However, cogeneration may result in NO_X emissions during normal operation. If NO_X emission increases are great enough, they may trigger the need for preconstruction permits under the nonattainment new source review (NSR) or prevention of significant deterioration (PSD) program. It is possible, however, that we could consider the application of cogeneration technology to be a pollution control project (PCP), as defined within the context of PSD and NSR, such that cogeneration facilities installed as a result of the NESHAP would qualify for an exemption from NSR/PSD.

In 1992, we adopted an explicit PCP exclusion for electric utility steam generating units (57 FR 32314). In a July 1, 1994, guidance memorandum, we provided guidance to permitting authorities on the approvability of PCP exclusions for source categories other than electric utilities. In that guidance (available at *http://www.epa.gov/rgytgrnj/programs/artd/air/nsr/nsrmemos/pcpguide.pdf*), we indicated that add-on controls and fuel switches to less polluting fuels may qualify for an exclusion from major NSR as a PCP. To be eligible to be excluded from otherwise applicable major NSR requirements, a PCP must, on balance, be ''environmentally beneficial,'' and the permitting authority must ensure that the project will not cause or contribute to a violation of the national ambient air quality standards (NAAQS) or PSD increment, or adversely affect visibility or other air quality related values (AQRV) in a Class I area, and that offsetting reductions are secured in the case of a project which would result in a significant increase of a nonattainment pollutant. The permitting authority can make these determinations outside of the major NSR process. The 1994 guidance did not supercede existing NSR requirements, including approved State NSR programs, nor void or create an exclusion from any applicable minor source preconstruction review requirements in an approved State implementation plan (SIP). Any minor NSR permitting requirements in a SIP would continue to apply, regardless of any exclusion from major NSR that might be approved for a source under the PCP exclusion policy.

We believe that the current guidance on the PCP exclusion adequately provides for the possible exemption from major NSR for cogeneration technology resulting from the NESHAP. Permitting authorities should follow that guidance to the extent allowed under the applicable SIP in order to determine whether the installation of cogeneration technology in a given circumstance qualifies as a PCP. Projects that qualify for the exclusion would be covered under minor source regulations in the applicable SIP, and permitting authorities would be expected to provide adequate safeguards against NAAQS and increment violations and adverse impacts on AQRV in Federal Class I areas. Only in those areas where potential adverse impacts cannot be resolved through the minor NSR programs or other mechanisms would major NSR apply.

V. Ethylene Production

A. Summary of Environmental, Energy, Cost, and Economic Impacts

Environmental, energy, cost, and economic impacts were estimated for the proposed ethylene production NESHAP. No changes have been made to the provisions for process vents, storage vessels, transfer operations, or equipment leaks that would affect these estimates. The changes that were made

to the waste and heat exchange system requirements did not materially change the estimated impacts. The changes generally refined the NESHAP provisions and made them consistent with the basis of the original estimates; therefore, the impacts estimates have not been revised.

Specifically, the original estimates of impacts associated with heat exchange system requirements were estimated to be minimal because the proposed NESHAP would have required monthly monitoring which is already being performed by most facilities. As pointed out by several comments, most facilities are not testing at the inlet and outlet of each heat exchanger, as required in the proposed NESHAP, and such a requirement would result in increased compliance costs. However, this requirement has been removed from the NESHAP, making the requirements consistent with the basis of the original impacts assessment.

Although the requirements for waste have been significantly revised, they remain consistent with the basis for the original impacts assessment. The original assessment was based on the assumption that facilities with a total annual benzene (TAB) quantity less than 10 Mg/yr would have to add equipment to manage and treat waste streams. The revised waste requirements maintain this requirement. For facilities with a TAB quantity greater than 10 Mg/yr, the majority of comments regarding the impacts estimated for waste concerned the fact that costs were not included for facilities that will have to add equipment to manage and treat streams that were previously uncontrolled due to a compliance option. The revised NESHAP allow facilities to use the compliance options; therefore, it is not necessary to revise the impacts assessment.

The estimates of environmental, energy, cost, and economic impacts, which have not been revised, are presented in detail in the preamble for the proposed ethylene production NESHAP (65 FR 76433, December 6, 2000). In summary, it is estimated that the NESHAP will decrease HAP emissions by 60 percent or 992 Mg/yr (1,090 tpy) and VOC emissions by 64 percent or 9,271 Mg/yr (10,188 tpy). The annual cost (including amortized capital costs, operating and maintenance costs, and recovery credits) is estimated to range from $7,600 per year for facilities already managing and treating their waste according to the Benzene Waste Operations NESHAP to $1.3 million per year for facilities with a TAB quantity less than 10 Mg/yr that are not currently subject to the Benzene Waste Operations NESHAP requirements to manage and treat waste streams. No adverse economic impact is expected and no significant adverse non-air health, environmental, or energy impacts are expected to result from compliance with the ethylene production NESHAP.

B. Summary of Major Comments and Changes Since Proposal

Comments on the proposed NESHAP were received from ten different entities. A comprehensive summary of public comments can be found in the document entitled ''National Emission Standards for Hazardous Air Pollutants—Ethylene Production, Background Information Document for Final Standards, Summary of Public Comments and Responses'' (the ethylene production NESHAP BID). The BID contains summaries of all of the comments received with corresponding responses that describe all of the changes that have been made to the NESHAP.

The most significant comments concerned three emission types: waste, heat exchange systems, and equipment leaks. These comments also resulted in the most significant changes to the proposed NESHAP. The following sections summarize the comments received and changes that have been made regarding waste, heat exchange systems, and equipment leaks.

1. Waste Operations

Several commenters disagreed with the determination of MACT for waste for a variety of reasons. Generally, commenters argued that the MACT floor should be based on the Benzene Waste Operations NESHAP. As such, commenters viewed our proposed requirements as more stringent than the MACT floor, which they stated are not justified. Commenters mainly disagreed with the fact that the proposed waste requirements did not include the 1, 2, and 6 Mg/yr compliance options, the 10 Mg/yr TAB quantity applicability cut-off, and applicability and treatment requirements based on benzene. We considered each of the specific issues and came to the conclusions discussed in the following sections.

Compliance options. At proposal, we determined that the standard requirements of the Benzene Waste Operations NESHAP represented the MACT floor for both new and existing ethylene sources. The standard Benzene Waste Operations NESHAP requirements state that facilities with 10 Mg/yr or greater TAB quantity must control waste streams that have flow rates of at least 0.02 liters per minute (lpm), wastewater quantities of at least 10 Mg/yr, and benzene concentrations of at least 10 parts per million by weight (ppmw). In addition to the standard control requirements, the Benzene Waste Operations NESHAP includes three compliance options that allow a facility to chose which streams to manage and treat as long as certain conditions are met: either the TAB quantity for the untreated waste streams cannot exceed 2 Mg/yr, the facility TAB quantity for treated and untreated process wastewater streams is less than 1 Mg/yr, or the facility TAB quantity for all waste streams with at least 10 percent water content is less than 6 Mg/yr. These options are referred to as the 1, 2, and 6 Mg/yr compliance options. The waste or wastewater streams that can be exempted from management and treatment vary with the different compliance options. Details of these compliance options are specified in 40 CFR 61.342(c), (d), and (e) of the Benzene Waste Operations NESHAP.

Commenters disagreed with the fact that the compliance options were not included in the waste requirements for the proposed Ethylene Production NESHAP. Generally, the commenters argued that the compliance options have been found to be equivalent to the standard requirements of the Benzene Waste Operations NESHAP, through development of the Benzene Waste Operations NESHAP and the waste standards for the Petroleum Refineries NESHAP and, therefore, should be included. The commenters also noted that three of the five best performing facilities are using a compliance option.

Since proposal of the Ethylene Production NESHAP, we have obtained information on which facilities are using compliance options and what streams they are controlling. Our general finding is that, regardless of how a facility is complying with the Benzene Waste Operations NESHAP, facilities typically control continuous streams, and facilities tend not to control intermittent streams. Examples of streams that are typically not controlled are samples and maintenance waste (both during normal operations and turn-arounds). The fact that the same types of streams are typically being controlled, regardless of whether a facility is complying with the standard requirements or a compliance option, supports the finding that the 1, 2 and 6 Mg/yr compliance options are equivalent to the standard Benzene Waste Operations NESHAP requirements (and to each other) in the level of control achieved at ethylene production facilities. Therefore, we have determined that it is appropriate to include the 1, 2, and 6 Mg/yr

compliance options in the Ethylene Production NESHAP.

10 Mg/yr applicability cut-off. Under the proposed NESHAP, all ethylene production facilities that are major sources of HAP emissions, including those with a TAB quantity less than 10 Mg/yr, would have been required to comply with the waste management and treatment requirements. Facilities with a TAB quantity less than 10 Mg/yr are not currently required to comply with the management and treatment requirements of the Benzene Waste Operations NESHAP. Commenters argued that because the Benzene Waste Operations NESHAP represents the floor, the 10 Mg/yr applicability cut-off should be included in the Ethylene Production NESHAP. Commenters cited the Petroleum Refineries NESHAP as a precedent, noting that the Benzene Waste Operations NESHAP was determined to represent the MACT floor for waste control at petroleum refineries and the Petroleum Refineries NESHAP does not require control of waste at sources with a TAB quantity less than 10 Mg/yr.

Review of the practices in use at the five best performing ethylene production facilities (representing 12 percent of the industry) shows that four of the five are subject to and, therefore, are assumed to be complying with the management and treatment requirements of the Benzene Waste Operations NESHAP. Only one of the best performing facilities is not required to comply with the management and treatment requirements of the Benzene Waste Operations NESHAP because the TAB quantity for the facility is less than 10 Mg/yr. Exempting facilities with a TAB quantity less than 10 Mg/yr from management and treatment requirements would not reflect the level of control achieved by the average of the five best-performing facilities.

We have determined that the MACT floor for waste includes the management and treatment of waste streams from ethylene production, regardless of a facility's TAB quantity. However, using the Benzene Waste Operations NESHAP stream applicability requirements to determine which streams must be controlled at facilities with a TAB quantity less than 10 Mg/yr may not be appropriate. The 1, 2, and 6 Mg/yr compliance options are not appropriate because their use at a facility with a TAB quantity less than 10 Mg/yr could result in no waste streams being controlled. For example, the 6 Mg/yr option allows a facility to choose which streams to manage and treat as long as the TAB quantity for all streams is less than 6 Mg/yr. If the TAB quantity for the facility is already 6 Mg/yr or less, no streams would have to be managed and treated, which is not consistent with the MACT floor level of control. Requiring facilities to comply with the standard requirements of the Benzene Waste Operations NESHAP would also not be appropriate because it may require the facilities to treat intermittent streams which are generally not controlled by the best-performing facilities that form the basis of the MACT floor determination.

We have determined that the most appropriate way to require facilities with a TAB quantity less than 10 Mg/yr to achieve the level of control achieved by the best-performing facilities is to specify the streams that must be controlled. Data received since proposal indicate that the best performing ethylene facilities control two types of streams as part of their Benzene Waste Operations NESHAP compliance strategy: (1) Spent caustic streams (wastes from the caustic washing process to remove sulfur compounds and other contaminants from the process stream), and (2) dilution steam blowdown streams (condensed steam used to quench the cracked gas condensates). We have determined that it is appropriate to apply the flow rate and concentration control applicability cut-offs in the standard requirements of the Benzene Waste Operations NESHAP to these streams. The best-performing facilities are generally not controlling intermittent streams.

Based on this information, the Ethylene Production NESHAP have been revised to require that facilities with a TAB quantity less than 10 Mg/yr manage and treat, according to the requirements of the Benzene Waste Operations NESHAP, each spent caustic and dilution steam blowdown waste stream with a benzene concentration greater than or equal to 10 ppmw, a flow rate greater than or equal to 0.02 lpm, and an annual wastewater quantity greater than or equal to 10 Mg/yr. The control requirements for these streams apply at all times except during periods of startup, shutdown, and malfunction (SSM), if the SSM precludes the ability to comply and the facility follows the provisions of their SSM plan.

Benzene as a surrogate. One modification made to the Benzene Waste Operations NESHAP requirements for the proposed Ethylene Production NESHAP waste requirements was to base the requirements on total HAP rather than benzene. For example, in the standard requirements of the Benzene Waste Operations NESHAP, a stream containing less than 10 ppmw of benzene is not required to be managed and treated. Under the proposed Ethylene Production NESHAP, streams containing less than 10 ppmw total HAP would not have been required to be managed and treated. Similarly, the Benzene Waste Operations NESHAP require streams to be treated to reduce benzene to 10 ppmw or by 99 percent while the proposed Ethylene Production NESHAP would have required streams to be treated to reduce total HAP to 10 ppmw or by 99 percent.

Several commenters disagreed with EPA's decision to base applicability and treatment requirements on total HAP rather than benzene. Commenters argued that because they are currently treating wastes based on benzene concentration, the requirement to treat wastes based on total HAP concentration is an above-the-floor option. The commenters stated that existing treatment systems are not likely to be capable of treating to the more stringent standards based on total HAP. Commenters stated that although the additional costs would be significant, the additional emission reductions would be minimal because benzene is generally an appropriate surrogate for HAP, and little additional emission reduction would be achieved.

Our original intent in proposing stream applicability and treatment requirements on total HAP content rather than benzene content was to ensure that streams containing HAP other than benzene are treated and controlled. We maintain that because compliance with the Benzene Waste Operations NESHAP represents the MACT floor and results in control of HAP other than benzene, the MACT floor includes control of HAP other than benzene. However, we have determined that it is not necessary to base stream applicability and treatment requirements on total HAP to ensure that all HAP are managed and treated. Information obtained through survey responses and comments shows that, with few exceptions, all of the waste streams from ethylene production units that contain HAP contain benzene. According to commenters (Docket A–98–22), of all the waste streams generated by 33 ethylene manufacturing production units, only two do not contain benzene but contain other HAP. One stream is generated from a reflux drum on a debutanizer column. The stream contains 1,3-butadiene and has a flow rate of 2 gallons per minute. The other stream is an intermittent stream that is generated during turnarounds that contains naphthalene. Applying the finding that the best-performing

facilities generally control continuous streams but not intermittent streams, either due to flow rate and concentration cut-offs or use of a compliance option, we have determined that controlling the continuous 1,3-butadiene stream, but not the naphthalene turnaround stream, is consistent with the MACT floor. To ensure that continuous streams that contain HAP other than benzene are controlled, while at the same time minimizing the burden of identifying these streams, we are specifically requiring management and treatment of waste streams that contain greater than or equal to 10 ppmw of 1,3-butadiene. To ensure that this requirement does not result in the control of intermittent streams that are generally not controlled, the flow rate applicability cutoffs for benzene-containing streams (0.02 lpm or 10 Mg/yr wastewater quantity) also applies to the butadiene streams.

We have determined that it is not necessary to express the treatment requirements in terms of total HAP. We agree with commenters that treatment and control devices used to remove or destroy benzene will remove and destroy the other HAP regulated by this rule to approximately the same level. Benzene can be used as a surrogate to determine treatment and control efficiencies. If no benzene is present in a regulated stream, another HAP (such as 1,3-butadiene) must be used to show that treatment and control efficiencies required for benzene are achieved for that HAP. In such cases, compliance can also be demonstrated by routing the stream to a control device that is being used to comply with the Benzene Waste Operations NESHAP.

Off-site waste treatment. Some facilities send their regulated wastes off-site for treatment by another entity. The proposed rule specified that wastes must not be transferred unless the transferee has submitted to EPA a certification that they will manage and treat the waste in accordance with the rule and that they accept the responsibility for compliance. Several commenters stated that the certification requirements should be deleted.

The final rule retains the certification requirements. The discharger has the ultimate responsibility for assuring that waste transferred to another party for off-site treatment is treated in conformity with the applicable standard. The transferee is acting as the agent of the discharger when it accepts responsibility for treating the waste. The provisions in the proposal requiring certification by the transferee are less onerous for the discharger than the only practicable alternative, which would require that the discharger actively supervise the activities of the offsite treatment facility. The certification provisions are similar to the requirements of 40 CFR part 63, subpart G (the Hazardous Organic NESHAP), and will pose no unreasonable burden on the generators or receivers of the waste.

2. Heat Exchange Systems

Sampling location. The proposed Ethylene Production NESHAP included requirements to sample cooling water at the inlet and outlet of each heat exchanger for the presence of compounds that indicate a leak. Sampling at each heat exchanger was required to address the fact that cooling water circulation rates through ethylene production units tend to be relatively high. Obtaining only one inlet and outlet sample for the entire system (for example, at the cooling tower) could result in a leak not being detected because the concentration of the leaked compound could be lower that the detection limit of the testing method used.

Several commenters argued that the requirement does not reflect the floor level of control, stating that none of the best-performing facilities are required to test at the inlet and outlet of every heat exchanger. These commenters argued that such a requirement would be an above-the-floor option that is not cost effective. Several commenters provided estimates of the additional costs associated with sampling and testing at each heat exchanger. The estimated annualized costs provided by the commenters ranged from $60,000 to $1.2 million per year for a single ethylene production unit.

One commenter suggested an approach for addressing the circulation rate issue. The commenter based the suggestion on the assumptions that: (1) The requirements of the Hazardous Organic NESHAP result in an adequate level of leak detection, and (2) the circulation rate of cooling water through an ethylene production unit is eight times the circulation rate through a Hazardous Organic NESHAP unit. Using these assumptions, the 1 ppmw leak definition of the Hazardous Organic NESHAP and the average of circulation rates reported for ethylene units in survey responses, the commenter estimated that a 6.35 pound per hour (lb/hr) leak rate would be detected at a Hazardous Organic NESHAP unit. The commenter suggested allowing facilities to decide where to test for leaks with the condition that a leak of this magnitude would be detected. The commenter stated that such a requirement would ensure a level of performance comparable to the Hazardous Organic NESHAP and would provide facilities flexibility to tailor a monitoring program to their unique circumstances. The commenter explained that one facility may choose to sample the combined cooling water flow from many heat exchangers using a test method with a relatively low detection limit, while another may sample the flow from fewer exchangers using a higher detection limit.

Based on information provided by commenters, we agree that requiring testing at the inlet and outlet of each heat exchanger does not represent the floor level of control. We find that the suggestion to allow facilities to develop a site-specific sampling plan based on performance comparable to the Hazardous Organic NESHAP would represent the floor. We have reviewed and agree with the commenter's suggested approach for establishing the floor level sampling plan based on a specified leak detection limit, with one exception. We adjusted the calculation to correct an error in calculating the average circulation rate, which resulted in a leak rate that must be detected of 6.75 lb/hr. Going beyond the floor to the proposed testing requirement would impose costs that are unreasonable given the small emissions reductions that would be achieved. The final rule allows the use of any sampling location plan that is sufficiently sensitive to detect a leak rate of 6.75 lb/hr.

Monitoring frequency. Commenters expressed concern that the proposed rule did not allow reduced heat exchanger monitoring frequency for sustained good performance, which is allowed in other LDAR programs. One of the commenters suggested that we adopt the Hazardous Organic NESHAP requirements for heat exchanges, which start with monthly monitoring and then allow quarterly monitoring. We agree with these comments in general. The floor for heat exchangers is an LDAR program with monthly monitoring. We recognize, however, that the emission performance of LDAR programs is variable and is influenced by a number of site-specific factors. We believe that providing an incentive in the final rule for reduced monitoring will encourage facilities to undertake measures to diagnose the causes of leaks and reduce the frequency of occurrence. Accordingly, the final rule includes a provision for reduced monitoring for units with sustained good performance in preventing leaks. This provision is generally consistent with the Hazardous Organic NESHAP, and we believe it is

equivalent to the floor and will provide an incentive for greater emissions reductions while minimizing monitoring burden.

The final rule requires monthly monitoring for the first 6 months. If no leaks are detected during this period, then the monitoring frequency changes to quarterly. If a leak is subsequently detected, then monthly monitoring is required until the leak is repaired. After the leak is repaired, then monthly monitoring is required for 6 months. If no leaks occur during this period, the monitoring frequency returns to quarterly.

Repair requirements. The proposed Ethylene Production NESHAP would have required a leak to be repaired within 15 days of being detected. Commenters stated that the best-performing facilities are not required to repair leaks within 15 days so this is an above-the-floor option. Commenters provided detailed comments on the steps and costs involved in repairing heat exchangers.

Our original intent in requiring repair in 15 days was to provide consistency with the repair requirements for other leaking components. Through the comments received in response to the proposed NESHAP, we have learned that repairing heat exchangers is different than repairing other types of leaking components. According to commenters, to repair a heat exchanger, it must be shut down, isolated from the process, cleaned, opened, tested to find the leak(s), and repaired. The commenters added that removing an exchanger from service often requires a unit to be shutdown. Commenters provided the contrasting example of a leaking valve, for which packing and flange bolts can often simply be tightened externally or, in extreme cases, can be externally pumped with a sealant or clamped to repair. Based on the information received in response to the proposed NESHAP, we agree that the 15-day repair period is more stringent than the floor and that the more stringent requirement is not reasonable because it does not allow adequate time for repair. We have determined that a 45-day repair period represents the floor. This is the repair period allowed by the Hazardous Organic NESHAP. In addition to extending the repair period to 45 days, we have revised the repair and delay of repair provisions to be consistent with the Hazardous Organic NESHAP.

3. Equipment Leaks

The proposed Ethylene Production NESHAP required connector monitoring. Commenters disagreed with the approach EPA used to determine the MACT floor, stating that HAP emissions from uncontrolled connectors are overestimated due to an inaccurate emission factor. One commenter (Docket A–98–22) provided an alternate emission factor based on data that they gathered from ethylene production units. According to the commenter, when their emission factor is used in the MACT floor analysis, it results in a different five best-performing facilities, of which only two perform connector monitoring. Commenters asserted that connector monitoring is, therefore, not part of the floor. In addition, one commenter explained that their study shows that there is no statistically significant difference between the average emission rates for connectors being monitored for the first time and those that are monitored as part of a continuing monitoring program. Commenters also provided cost data to show that some facilities will incur high costs to monitor connectors with no statistically measurable emissions benefit.

Due to uncertainties regarding connector emission factors used in the original MACT floor analysis, we performed an analysis using an emission factor provided by a commenter; however, this does not mean that we have accepted the commenter's emissions factor as a more accurate estimator of connector emissions (Docket A–98–22). The objective of the analyses was to determine the impact using different connector emission factors would have on which facilities are determined to be the five best-performing sources. Although this analysis resulted in a slightly different five best-performing sources, the floor was the same, since three of the five facilities are monitoring connectors. Through this analysis, we have concluded that, regardless of the emission factor used, the majority of the best-performing facilities are performing connector monitoring.

We also conducted a study of the existing permits at certain facilities that had adopted permit conditions requiring 100 percent connector monitoring annually in exchange for emissions credits to be used for operational flexibility. In setting the MACT floor we found our knowledge of existing permit conditions compelling in terms of emissions benefits and therefore relevant in establishing the MACT floor. Certainly any monitoring worthy of conducting for the purpose of obtaining emissions credits was beneficial beyond cost.

Based on these analyses, we conclude that connector monitoring is part of the MACT floor. We do not believe that the available data support the commenters' conclusion that connector monitoring should not be included in the MACT floor. However, in consideration of the data submitted by the industry, we elected to require compliance with 40 CFR part 63, subpart UU, National Emission Standards for Equipment Leaks, which requires connector monitoring, but also allows for reduced monitoring frequency for good performance instead of annual monitoring. This provides the opportunity to reduce monitoring costs in cases where a low proportion of connectors are leaking. In offering a performance-based requirement for connector monitoring, we also have provided some consistency in approach with the heat exchanger and other equipment monitoring provisions.

VI. Spandex Production

A. Summary of Environmental, Energy, Cost, and Economic Impacts

1. What Are the Air Quality Impacts?

There are no additional emissions reductions achieved by the final NESHAP. The level of control required by the final NESHAP is already in place at the two affected reaction spinning facilities.

2. What Are the Cost Impacts?

The total estimated annual compliance cost of the final NESHAP is $78,040. This estimate includes annualized capital costs for monitoring equipment purchased. Annual costs also include monitoring, recordkeeping, and reporting costs. Costs were not included for control equipment since this is already in place at the two reaction spinning process facilities.

The capital costs are estimated to be $32,820 (in 1998 dollars). The capital costs are for purchase of thermocouples and liquid flow transducers for CPMS equipment and closed vent systems leak detection monitors. These costs are more than likely an overestimate because the two affected facilities already have monitors on their carbon adsorbers.

3. What Are the Economic Impacts?

The goal of the economic impact analysis is to estimate the market response of the spandex production facilities to the final NESHAP and to determine the economic effects that may result from the final NESHAP. The Spandex Production source category contains five facilities, but only the two facilities that use the reaction spinning process are affected by the final

NESHAP. These potentially affected facilities are owned by one company.

Spandex fiber production leads to potential HAP emissions from fiber spinning lines, storage tanks, and process vents; however, the emission sources are well controlled by the affected spandex manufacturing facilities. The mandated levels of control are met at these sources; therefore, no costs for additional add-on air pollution control equipment are expected to be incurred by the spandex facilities to comply with the final NESHAP. Instead, the compliance costs for the final NESHAP relate primarily to monitoring, reporting, and recordkeeping activities. The estimated total annualized cost for the final NESHAP is $78,040, which represents less than 0.01 percent of the revenues of the companies that own the spandex manufacturing facilities. The final NESHAP are, therefore, expected to have a negligible impact on the Spandex Production source category.

The economic impacts at the facility and company levels are measured by comparing the annualized compliance cost for each entity to its revenues. A cost-to-sales ratio is first calculated and then is multiplied by 100 to convert the ratio into percentages. For the final NESHAP, a cost-to-sales ratio exceeding 1 percent is determined to be an initial indicator of the potential for a significant facility impact. Revenues at the facility level are not available, therefore estimated facility revenues received from the sale of spandex fiber are used. Both affected facilities are expected to incur positive compliance costs. The ratio of costs to estimated revenues range from a low of 0.22 percent to a high of 0.35 percent. Thus, on average, the economic impact of the final NESHAP is minimal for the facilities producing spandex fibers.

The share of compliance costs to company sales are calculated to determine company level impacts. One company owns the two affected facilities, so only one firm faces positive compliance costs from the final NESHAP. The ratio of costs to company revenues is 0.10 percent. At the company level, the final NESHAP are not anticipated to have a significant economic impact on companies that own and operate the spandex fiber facilities. For more information, consult the economic impact analysis report entitled, Economic Impact Analysis: Spandex Production, which is in the docket for the spandex source category.

4. What Are the Non-Air Health, Environmental and Energy Impacts?

We believe that there would not be significant adverse environmental or energy impacts associated with the final NESHAP. The industry's baseline level of control is high, and the level of control required by the final NESHAP is currently being achieved for the emission point types. Environmental impacts from the application of the control or recovery devices proposed for the Spandex Production source category are also expected to be minimal for secondary air pollutants. In general, we determine impacts relative to the baseline that is set at the level of control in absence of the final NESHAP.

There is no incremental increase in emissions related to water pollution or solid waste as a result of the final NESHAP.

B. Summary of Major Comments and Changes Since Proposal

Comments on the proposed Spandex Production NESHAP were received from two different entities: the Institute of Clean Air Companies (ICAC) and Dupont. A summary and response to the general comments submitted can be found in Docket A–98–25.

Dupont's comments expressed concern that because the dry spinning spandex production process was not mentioned in the proposal, this could be interpreted as no standard for this source category and, as a result, these facilities would be subject to a case-by-case MACT determination. The discussion of this comment can be found in direct final amendments that are being published separately in this issue of the **Federal Register**.

VII. Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether a final regulatory action is ''significant'' and therefore subject to Office of Management and Budget (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 Executive Order 12866, it has been determined that today's final rule is not a ''significant regulatory action'' because it will not have an annual effect on the economy of $100 million or more and is therefore not subject to OMB review.

B. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the rule. The EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the rule.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to the OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and EPA's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when EPA transmits a final rule with federalism implications to OMB for review

pursuant to Executive Order 12866, EPA must include a certification from its federalism official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

Today's final rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. No facilities subject to the final rule are owned by State or local governments. Therefore, State and local governments will not have any direct compliance costs resulting from the final rule. Furthermore, EPA is directed to develop the final rule by section 112 of the CAA. Thus, the requirements of section 6 of the Executive Order do not apply to the final rule.

C. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' ''Policies that have tribal implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.''

The final rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to the final rule.

D. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. Today's final rule is not subject to Executive Order 13045 because it establishes an environmental standard based on technology, not health or safety risk. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, today's final rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

E. Unfunded Mandates Reform Act of 1995

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 must generally 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. 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, we 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 the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more by State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The total cost to the private sector is approximately $22.2 million per year. The final rule contains no mandates affecting State, local, or Tribal governments. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

We have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them.

F. Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601, et seq.

The RFA generally requires us to give special consideration to the effect of Federal regulations on small entities and to consider regulatory options that might mitigate any such impacts. We must prepare a regulatory flexibility analysis unless we determine that the rule will not have a ''significant economic impact on a substantial number of small entities.'' Small entities include small businesses, small organizations, and small governmental jurisdictions.

For the purposes of assessing the impacts of today's final rule on small entities, a small entity is defined differently for the four source categories for which we are proposing standards. Based on those definitions, there are no small entities affected by the final rule. Pursuant to the provisions of 5 U.S.C. 605(b), we have determined that the final rule will not have a significant economic impact on a substantial number of small entities.

G. Paperwork Reduction Act

The information collection requirements in today's final rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An ICR document has been prepared by EPA (ICR No.

1893.03) and a copy may be obtained from Susan Auby by mail at the U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue NW, Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. A copy may also be downloaded off the internet at *http://www.epa.gov/icr.* The information requirements are not effective until OMB approves them.

Information is required to ensure compliance with the final rule. If the relevant information were collected less frequently, EPA would not be reasonably assured that a source is in compliance with the rule. In addition, EPA's authority to take administrative action would be reduced significantly.

The final rule requires owners or operators of affected sources to retain records for a period of 5 years. The 5-year retention period is consistent with the General Provisions of 40 CFR part 63 and with the 5-year record retention requirement in the operating permit program under title V of the CAA.

The recordkeeping and reporting requirements of the final rule are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to us for which a claim of confidentiality is made will be safeguarded according to our policies in 40 CFR part 2, subpart B, ''Confidentiality of Business Information.''

The EPA expects the final rule to affect a total of 75 facilities over the first 3 years. The EPA assumes that no new facilities will become subject to the rule during each of the first 3 years. The EPA expects 75 existing facilities to be affected by the final rule, and these existing facilities will begin complying in the third year.

The estimated average annual burden for the first 3 years after promulgation of the rule for the industries and the implementing agency is outlined below. You can find the details of this information collection in the ''Standard Form 83 Supporting Statement for ICR No. 1893.03,'' in Docket No. A–97–17.

Affected entity	Total hours	Labor costs (10^3)	Capital costs (10^3)	Operating and Maintenance costs (10^3)	Total costs (10^3)
Industry	33,926	1,510	4,901	16	6,427
Implementing agency	3,465	117	0	0	117

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

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. Control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law No. 104–113) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The EPA cites the following methods in the final rule: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3B, 4, 18, 25, 25A, 27, 316, and 320. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 27, and 316. Three voluntary consensus standards were identified as acceptable alternatives to EPA test methods and procedures and are cited in the final rule.

The voluntary consensus standard, American Society of Mechanical Engineers (ASME) PTC 19–10–1981—Part 10, Flue and Exhaust Gas Analyses, is cited in the final rule for its manual method for measuring the oxygen content of exhaust gas. Part 10 of ASME PTC 19–10–1981 is an acceptable alternative to Method 3B.

The voluntary consensus standard, American Society for Testing and Materials (ASTM) D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (GC/MS), is appropriate in the cases described below for inclusion in the rule in addition to EPA Methods. Similar to EPA's performance-based Method 18, ASTM D6420–99 is also a performance-based method for measurement of gaseous organic compounds. However, ASTM D6420–99 was written to support the specific use of highly portable and automated GC/MS. While offering advantages over the traditional Method 18, the ASTM method does allow some less stringent criteria for accepting GC/MS results than required by Method 18. Therefore, ASTM D6420–99 is a suitable alternative to Method 18 where: (1) The target compounds are those listed in Section 1.1 of ASTM D6420–99, and (2) the target concentration is between 150 parts per billion by volume and 100 ppmv.

For target compounds not listed in Table 1.1 of ASTM D6420–99, but potentially detected by mass spectrometry, the regulation specifies that the additional system continuing calibration check after each run, as detailed in Section 10.5.3 of the ASTM method, must be followed, met, documented, and submitted with the data report even if there is no moisture condenser used or the compound is not considered water soluble. For target compounds not listed in Table 1.1 of ASTM D6420–99 and not amenable to detection by mass spectrometry, ASTM D6420–99 does not apply.

The voluntary consensus standard, ASTM D1946–90 (2000), Standard Practice for Analysis of Reformed Gas by Gas Chromatography, is an acceptable method for measuring process vent emissions of carbon monoxide and hydrogen for the purposes of the final rule.

The search and review results have been documented and are placed in the Generic MACT docket (Docket No. A–97–17).

I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the SBREFA, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States, prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2) and, therefore, will be effective on July 12, 2002.

J. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

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: May 15, 2002.

Christine Todd Whitman,

Administrator.

For the reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

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

2. Part 63 is amended by adding a new subpart XX to read as follows:

Subpart XX—National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations

Sec.

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Introduction

§ 63.1080 What is the purpose of this subpart?

This subpart establishes requirements for controlling emissions of hazardous air pollutants (HAP) from heat exchange systems and waste streams at new and existing ethylene production units.

§ 63.1081 When must I comply with the requirements of this subpart?

You must comply with the requirements of this subpart according to the schedule specified in § 63.1102(a).

Definitions

§ 63.1082 What definitions do I need to know?

(a) Unless defined in paragraph (b) of this section, definitions for terms used in this subpart are provided in the Clean Air Act, § 63.1103(e), and 40 CFR 61.341.

(b) The following definitions apply to terms used in this subpart:

Continuous butadiene waste stream means the continuously flowing process wastewater from the following equipment: The aqueous drain from the debutanizer reflux drum, water separators on the C4 crude butadiene transfer piping, and the C4 butadiene storage equipment; and spent wash water from the C4 crude butadiene carbonyl wash system. The continuous butadiene waste stream does not include butadiene streams generated from sampling, maintenance activities, or shutdown purges. The continuous butadiene waste stream does not include butadiene streams from equipment that is currently an affected source subject to the control requirements of another NESHAP. The continuous butadiene waste stream contains less than 10 parts per million by weight (ppmw) of benzene.

Dilution steam blowdown waste stream means any continuously flowing process wastewater stream resulting from the quench and compression of cracked gas (the cracking furnace effluent) at an ethylene production unit and is discharged from the unit. This stream typically includes the aqueous or oily-water stream that results from condensation of dilution steam (in the cracking furnace quench system), blowdown from dilution steam generation systems, and aqueous streams separated from the process between the cracking furnace and the

cracked gas dehydrators. The dilution steam blowdown waste stream does not include dilution steam blowdown streams generated from sampling, maintenance activities, or shutdown purges. The dilution steam blowdown waste stream also does not include blowdown that has not contacted HAP-containing process materials.

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include more than one heat exchanger and can include an entire recirculating or once-through cooling system.

Process wastewater means water which comes in contact with benzene or butadiene during manufacturing or processing operations conducted within an ethylene production unit. Process wastewater is not organic wastes, process fluids, product tank drawdown, cooling water blowdown, steam trap condensate, or landfill leachate. Process wastewater includes direct-contact cooling water.

Spent caustic waste stream means the continuously flowing process wastewater stream that results from the use of a caustic wash system in an ethylene production unit. A caustic wash system is commonly used at ethylene production units to remove acid gases and sulfur compounds from process streams, typically cracked gas. The spent caustic waste stream does not include spent caustic streams generated from sampling, maintenance activities, or shutdown purges.

Applicability for Heat Exchange Systems

§ 63.1083 Does this subpart apply to my heat exchange system?

The provisions of this subpart apply to your heat exchange system if you own or operate an ethylene production unit expressly referenced to this subpart XX from subpart YY of this part. The provisions of subpart A (General Provisions) of this part do not apply to this subpart except as specified in subpart YY of this part.

§ 63.1084 What heat exchange systems are exempt from the requirements of this subpart?

Your heat exchange system is exempt from the requirements in §§ 63.1085 and 63.1086 if it meets any one of the criteria in paragraphs (a) through (e) of this section.

(a) Your heat exchange system operates with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(b) Your heat exchange system contains an intervening cooling fluid, containing less than 5 percent by weight of total HAP listed in Table 1 to this subpart, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(c) 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 by volume (ppmv) or less above influent concentration, or 10 percent or less above influent concentration, whichever is greater.

(d) Your once-through heat exchange system is subject to a NPDES permit that meets all of the conditions in paragraphs (d)(1) through (4) of this section.

(1) The permit requires monitoring of a parameter or condition to detect a leak of process fluids to cooling water.

(2) The permit specifies the normal range of the parameter or condition.

(3) The permit requires monthly or more frequent monitoring for the parameters selected as leak indicators.

(4) The permit requires you to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range.

(e) Your recirculating or once-through heat exchange system cools process fluids that contain less than 5 percent by weight of total HAP listed in Table 1 to this subpart.

Heat Exchange System Requirements

§ 63.1085 What are the general requirements for heat exchange systems?

Unless you meet one of the requirements for exemptions in § 63.1084, you must meet the requirements in paragraphs (a) through (d) of this section.

(a) Monitor the cooling water for the presence of substances that indicate a leak according to § 63.1086.

(b) If you detect a leak, repair it according to § 63.1087 unless repair is delayed according to § 63.1088.

(c) Keep the records specified in § 63.1089.

(d) Submit the reports specified in § 63.1090.

Monitoring Requirements for Heat Exchange Systems

§ 63.1086 How must I monitor for leaks to cooling water?

You must monitor for leaks to cooling water by monitoring each heat exchange system according to the requirements of paragraph (a) of this section, monitoring each heat exchanger according to the requirements of paragraph (b) of this section, or monitoring a surrogate parameter according to the requirements of paragraph (c) of this section. If you elect to comply with the requirements of paragraph (a) or (b) of this section, you may use alternatives in paragraph (d)(1) or (2) of this section for determining the mean entrance concentration.

(a) *Heat exchange system.* Monitor cooling water in each heat exchange system for the HAP listed in Table 1 to this subpart (either total or speciated) or other representative substances (e.g., total organic carbon or volatile organic compounds (VOC)) that indicate the presence of a leak according to the requirements in paragraphs (a)(1) through (5) of this section.

(1) You define the equipment that comprises each heat exchange system. For the purposes of implementing paragraph (a) of this section, a heat exchange system may consist of an entire heat exchange system or any combinations of heat exchangers such that, based on the rate of cooling water at the entrance and exit to each heat exchange system and the sensitivity of the test method being used, a leak of 3.06 kg/hr or greater of the HAP in Table 1 to this subpart would be detected. For example, if the test you decide to use has a sensitivity of 1 ppmv for total HAP, you must define the heat exchange system so that the cooling water flow rate is 51,031 liters per minute or less so that a leak of 3.06 kg/hr can be detected.

(2) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (a)(2)(i) of this section. Monitor heat exchange systems at new sources according to the specifications in paragraph (a)(2)(ii) of this section.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in either paragraph (a)(2)(i)(A) or (a)(2)(i)(B) of this section, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (a)(2)(i) of this section.

(ii) Monitor the cooling water weekly for heat exchange systems at new sources.

(3) Determine the concentration of the monitored substance in the heat

exchange system cooling water using any method listed in 40 CFR part 136. Use the same method for both entrance and exit samples. You may validate 40 CFR part 136 methods for the HAP listed in Table 1 to this subpart according to the procedures in appendix D to this part. Alternative methods may be used upon approval by the Administrator.

(4) Take a minimum of three sets of samples at each entrance and exit.

(5) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 10 percent greater than the entrance mean, or a leak of 3.06 kg/hr or greater of the HAP (total or speciated) in Table 1 to this subpart or other representative substance into the cooling water is detected, you have detected a leak.

(b) *Individual heat exchangers.* Monitor the cooling water at the entrance and exit of each heat exchanger for the HAP in Table 1 to this subpart (either total or speciated) or other representative substances (e.g., total organic carbon or VOC) that indicate the presence of a leak in a heat exchanger according to the requirements in paragraphs (b)(1) through (4) of this section.

(1) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (b)(1)(i) of this section. Monitor each heat exchanger at new sources according to the specifications in paragraph (b)(1)(ii) of this section.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (b)(1)(i)(A) or (b)(1)(i)(B) of this section, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (b)(1)(i) of this section.

(ii) Monitor the cooling water weekly for heat exchangers at new sources.

(2) Determine the concentration of the monitored substance in the cooling water using any method listed in 40 CFR part 136, as long as the method is sensitive to concentrations as low as 10 ppmv. Use the same method for both entrance and exit samples. Validation of 40 CFR part 136 methods for the HAP listed in Table 1 to this subpart may be determined according to the provisions of appendix D to this part. Alternative methods may be used upon approval by the Administrator.

(3) Take a minimum of three sets of samples at each heat exchanger entrance and exit.

(4) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 1 ppmv or 10 percent greater than the entrance mean, whichever is greater, you have detected a leak.

(c) *Surrogate parameters.* You may elect to comply with the requirements of this section by monitoring using a surrogate indicator of leaks, provided that you comply with the requirements of paragraphs (c)(1) through (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) You shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling waters. The plan shall require 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) through (iv) 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 condition(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, you have detected a leak.

(iii) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (c)(1)(iii)(A) of this section. Monitor heat exchange systems at new sources according to the specifications in paragraph (c)(1)(iii)(B) of this section.

(A) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (c)(1)(iii)(A)(*1*) or (c)(1)(iii)(A)(*2*) of this section, as appropriate.

(1) If no leaks are detected, monitor quarterly thereafter until a leak is detected.

(2) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (c)(1)(iii)(A) of this section.

(B) Monitor the cooling water weekly for heat exchange systems at new sources.

(iv) The records that will be maintained to document compliance with the requirements of this section.

(2) If a leak is identified by audio, visual, or olfactory inspection, a method listed in 40 CFR part 136, or any other means other than those described in the monitoring plan, and the method(s) specified in the plan could not detect the leak, you shall revise the plan and document the basis for the changes. You shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) You 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 provide access within 2 hours after a request. If the monitoring plan is changed, you must retain the most recent superseded plan for at least 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 provide access within 2 hours after a request.

(d) *Simplifying assumptions for entrance mean concentration.* If you are complying with paragraph (a) or (b) of this section, you may elect to determine the entrance mean concentration as specified in paragraph (d)(1) or (2) of this section.

(1) Assume that the entrance mean concentration of the monitored substance is zero; or,

(2) Determine the entrance mean concentration of a monitored substance at a sampling location anywhere upstream of the heat exchanger or heat exchange system, provided that there is not a reasonable opportunity for the concentration to change at the entrance to each heat exchanger or heat exchange system.

Repair Requirements for Heat Exchange Systems

§ 63.1087 What actions must I take if a leak is detected?

If a leak is detected, you must comply with the requirements in paragraphs (a)

and (b) of this section unless repair is delayed according to § 63.1088.

(a) Repair the leak as soon as practical but not later than 45 calender days after you received the results of monitoring tests that indicated a leak. You must repair the leak unless you demonstrate that the results are due to a condition other than a leak.

(b) Once the leak has been repaired, use the monitoring requirements in § 63.1086 within 7 calender days of the repair or startup, whichever is later, to confirm that the heat exchange system has been repaired.

§ 63.1088 In what situations may I delay leak repair, and what actions must I take for delay of repair?

You may delay the repair of heat exchange systems if the leaking equipment is isolated from the process. You may also delay repair if repair is technically infeasible without a shutdown, and you meet one of the conditions in paragraphs (a) through (c) of this section.

(a) If a shutdown is expected within the next 2 months of determining delay of repair is necessary, you are not required to have a special shutdown before that planned shutdown.

(b) If a shutdown is not expected within the next 2 months of determining delay of repair is necessary, you may delay repair if a shutdown for repair would cause greater emissions than the potential emissions from delaying repair until the next shutdown of the process equipment associated with the leaking heat exchanger. You must document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delay of repair. The documentation process must include the activities in paragraphs (b)(1) through (4) of this section.

(1) State the reason(s) for delaying repair.

(2) Specify a schedule for completing the repair as soon as practical.

(3) Calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of HAP listed in Table 1 to this subpart (or other monitored substances) in the cooling water from the leaking heat exchanger by the flow rate of the cooling water from the leaking heat exchanger and by the expected duration of the delay.

(4) Determine emissions of HAP listed in Table 1 to this subpart (or other monitored substances) from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(c) If repair is delayed because the necessary equipment, parts or personnel are not available, you may delay repair a maximum of 120 calendar days. You must demonstrate that the necessary equipment, parts or personnel were not available.

Recordkeeping and Reporting Requirements for Heat Exchange Systems

§ 63.1089 What records must I keep?

You must keep the records in paragraphs (a) through (e) of this section, according to the requirements of § 63.1109(c).

(a) Monitoring data required by § 63.1086 that indicate a leak, the date the leak was detected, or, if applicable, the basis for determining there is no leak.

(b) The dates of efforts to repair leaks.

(c) The method or procedures used to confirm repair of a leak and the date the repair was confirmed.

(d) Documentation of delay of repair as specified in § 63.1088.

(e) If you validate a 40 CFR part 136 method for the HAP listed in Table 1 to this subpart according to the procedures in appendix D to this part, then you must keep a record of the test data and calculations used in the validation.

§ 63.1090 What reports must I submit?

If you delay repair for your heat exchange system, you must report the delay of repair in the semiannual report required by § 63.1110(e). If the leak remains unrepaired, you must continue to report the delay of repair in semiannual reports until you repair the leak. You must include the information in paragraphs (a) through (e) of this section in the semiannual report.

(a) The fact that a leak was detected, and the date that the leak was detected.

(b) Whether or not the leak has been repaired.

(c) The reasons for delay of repair. If you delayed the repair as provided in § 63.1088(b), documentation of emissions estimates.

(d) If a leak remains unrepaired, the expected date of repair.

(e) If a leak is repaired, the date the leak was successfully repaired.

Background for Waste Requirements

§ 63.1091 What do the waste requirements do?

This subpart requires you to comply with 40 CFR part 61, subpart FF, National Emission Standards for Benzene Waste Operations. There are some differences between the ethylene production waste requirements and those of subpart FF.

§ 63.1092 What are the major differences between the requirements of 40 CFR part 61, subpart FF, and the waste requirements for ethylene production sources?

The major differences between the requirements of 40 CFR part 61, subpart FF, and the requirements for ethylene production sources are listed in paragraphs (a) through (d) of this section.

(a) The requirements for ethylene production sources apply to all ethylene production sources that are part of a major source. The requirements do not include a provision to exempt sources with a total annual benzene quantity less than 10 megagrams per year (Mg/yr) from control requirements.

(b) The requirements for ethylene production sources apply to continuous butadiene waste streams which do not contain benzene quantities that would make them subject to the management and treatment requirements of 40 CFR part 61, subpart FF.

(c) The requirements for ethylene production sources do not include the compliance options at 40 CFR 61.342(c)(3)(ii), (d) and (e) for sources with a total annual benzene quantity less than 10 Mg/yr.

(d) If you transfer waste off-site, you must comply with the requirements in § 63.1096 rather than 40 CFR 61.342(f).

Applicability for Waste Requirements

§ 63.1093 Does this subpart apply to my waste streams?

The waste stream provisions of this subpart apply to your waste streams if you own or operate an ethylene production facility expressly referenced to this subpart XX from subpart YY of this part. The provisions of subpart A (General Provisions) of this part do not apply to this subpart except as specified in a referencing subpart.

§ 63.1094 What waste streams are exempt from the requirements of this subpart?

The types of waste described in paragraphs (a) and (b) of this section are exempt from this subpart.

(a) Waste in the form of gases or vapors that is emitted from process fluids.

(b) Waste that is contained in a segregated storm water sewer system.

Waste Requirements

§ 63.1095 What specific requirements must I comply with?

For waste that is not transferred off-site, you must comply with the requirements in paragraph (a) of this section for continuous butadiene waste streams and paragraph (b) of this section for benzene waste streams. If you

transfer waste off-site, you must comply with the requirements of § 63.1096.

(a) *Continuous butadiene waste streams.* Manage and treat continuous butadiene waste streams that contain greater than or equal to 10 ppmv 1,3-butadiene and have a flow rate greater than or equal to 0.02 liters per minute, according to either paragraph (a)(1) or (2) of this section. If the total annual benzene quantity from waste at your facility is less than 10 Mg/yr, as determined according to 40 CFR 61.342(a), the requirements of paragraph (a)(3) of this section apply also.

(1) Route the continuous butadiene stream to a treatment process or wastewater treatment system used to treat benzene waste streams that complies with the standards specified in 40 CFR 61.348. Comply with the requirements of 40 CFR part 61, subpart FF; with the changes in Table 2 to this subpart, and as specified in paragraphs (a)(1)(i) through (v) of this section.

(i) Determine the butadiene concentration of the waste stream according to 40 CFR 61.355(c)(1) through (3), except substitute ''1,3-butadiene'' for each occurrence of ''benzene.'' You may validate 40 CFR part 136 methods for 1,3-butadiene according to the procedures in appendix D to this part. You do not need to determine the butadiene concentration of a waste stream if you designate that the stream must be controlled.

(ii) Comply with 40 CFR 61.342(c)(1)(ii) and (iii) for each waste management unit that receives or manages the waste stream prior to and during treatment or recycling of the waste stream.

(iii) Comply with the recordkeeping requirements in 40 CFR 61.356(b), (b)(1) and (b)(2), except substitute ''1,3-butadiene'' for each occurrence of ''benzene'' and ''continuous butadiene waste stream'' for each occurrence of ''waste stream.''

(iv) Comply with the reporting requirements in 40 CFR 61.357(a), (a)(2), (a)(3), (a)(3)(iii) through (v), and (d)(1) and (2), except substitute ''1,3-butadiene'' for each occurrence of ''benzene'' and ''continuous butadiene waste stream'' for each occurrence of ''waste stream.''

(v) Include only the information in 40 CFR 61.357(a)(2) and (a)(3)(iii) through (v) in the report required in 40 CFR 61.357(a) and (d)(2).

(2) Comply with the process wastewater requirements of subpart G of this part. Submit the information required in § 63.146(b) in the Notification of Compliance Status required by § 63.1110(d). Submit the information required in § 63.146(c) through (e) in either the Periodic Reports required in § 63.152 or the Periodic Reports required in § 63.1110(e).

(3) If the total annual benzene quantity from waste at your facility is less than 10 Mg/yr, as determined according to 40 CFR 61.342(a), comply with the requirements of this section at all times except during periods of startup, shutdown, and malfunction, if the startup, shutdown, or malfunction precludes the ability of the affected source to comply with the requirements of this section and the owner or operator follows the provisions for periods of startup, shutdown, and malfunction, as specified in § 63.1111.

(b) *Benzene waste streams.* For benzene-containing streams, you must comply with the requirements of 40 CFR part 61, subpart FF, except as specified in Table 2 to this subpart. You must manage and treat waste streams as specified in either paragraph (b)(1) or (2) of this section.

(1) If the total annual benzene quantity from waste at your facility is less than 10 Mg/yr, as determined according to 40 CFR 61.342(a), manage and treat spent caustic waste streams and dilution steam blowdown waste streams according to 40 CFR 61.342(c)(1) through (c)(3)(i). The requirements of this paragraph (b)(1) shall apply at all times except during periods of startup, shutdown, and malfunction, if the startup, shutdown, or malfunction precludes the ability of the affected source to comply with the requirements of this section and the owner or operator follows the provisions for periods of startup, shutdown, and malfunction, as specified in § 63.1111.

(2) If the total annual benzene quantity from waste at your facility is greater than or equal to 10 Mg/yr, as determined according to 40 CFR 61.342(a), you must manage and treat waste streams according to any of the options in 40 CFR 61.342(c)(1) through (e).

§ 63.1096 What requirements must I comply with if I transfer waste off-site?

If you elect to transfer waste off-site, you must comply with the requirements in paragraphs (a) through (d) of this section.

(a) Include a notice with the shipment or transport of each waste stream. The notice shall state that the waste stream contains organic HAP 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.

(b) You may not transfer the waste stream unless the transferee has submitted to the Administrator a written certification that the transferee will manage and treat any waste stream received from a source subject to the requirements of this subpart in accordance with the requirements of this subpart.

(c) By providing this written certification to the Administrator, the certifying entity accepts responsibility for compliance with the regulatory provisions in this subpart with respect to any shipment of waste covered by the written certification. Failure to abide by any of those provisions with respect to such shipments may result in enforcement action by EPA against the certifying entity in accordance with the enforcement provisions applicable to violations of those provisions by owners or operators of sources.

(d) The certifying entity may revoke the written certification by sending a written statement to the Administrator and you. The notice of revocation must provide at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the regulatory provisions of this subpart. Upon expiration of the notice period, you may not transfer the waste stream to that off-site treatment operation. Written certifications and revocation statements to the Administrator from the transferees of waste 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 to other off-site waste treatment operators.

Implementation and Enforcement

§ 63.1097 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities

contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in §§ 63.1085, 63.1086 and 63.1095, under § 63.6(g). Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) [Reserved]

(3) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(4) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

Tables to Subpart XX of Part 63

TABLE 1 TO SUBPART XX OF PART 63.—HAZARDOUS AIR POLLUTANTS

Hazardous air pollutant	CAS No.
Benzene	71432
1,3-Butadiene	106990
Cumene	98828
Ethyl benzene	100414
Hexane	110543
Naphthalene	91203
Styrene	100425
Toluene	108883
o-Xylene	95476
m-Xylene	108383
p-Xylene	106423

TABLE 2 TO SUBPART XX OF PART 63.—REQUIREMENTS OF 40 CFR PART 61, SUBPART FF, NOT INCLUDED IN THE REQUIREMENTS FOR THIS SUBPART AND ALTERNATE REQUIREMENTS

If the total annual benzene quatity for waste from your facility is * * *	Do not comply with:	Instead, comply with:
1. Less than 10 Mg/yr	40 CFR 61.340	§ 63.1093.
	40 CFR 61.342(c)(3)(ii), (d), and (e)	There is no equivalent requirement.
	40 CFR 61.342(f)	§ 61.1096.
	40 CFR 61.355(j) and (k)	There is no equivalent requirement.
	40 CFR 61.356(b)(2)(ii), (b)(3) through (b)(5)	There is no equivalent requirement.
	The requirement to submit the information required in 40 CFR 61.357(a) to the Administrator within 90 days after January 7, 1993.	The requirement to submit the information required in 40 CFR 61.357(a) as part of the Initial Notification required in 40 CFR 63.1110(c).
	The requirement in 40 CFR 61.357(d) to submit the information in 40 CFR 61.357(d)(1) and (d)(2) if the TAB quantity from your facility is equal to or greater than 10 Mg/yr.	The requirement to submit the information in 40 CFR 61.357(d)(1) and (d)(2) for spent caustic, dilution steam blowdown, and continuous butadiene waste streams.
	The requirement in 40 CFR 61.357(d)(1) to submit the information required in 40 CFR 63.357(d)(1) to the Administrator within 90 days after January 7, 1993.	The requirement to submit the information required in 40 CFR 61.357(d)(1) as part of the Notification of Compliance Status required in 40 CFR 63.1110(d).
	40 CFR 61.357(d)(3) through (d)(5)	There is no equivalent requirement.
2. Greater than or equal to 10 Mg/yr	40 CFR 61.340	§ 61.1093.
	40 CFR 61.342(f)	§ 61.1096.
	The requirement to submit the information required in 40 CFR 61.357(a) to the Administrator within 90 days after January 7, 1993.	The requirement to submit the information required in 40 CFR 61.357(a) as part of the Initial Notification required in 40 CFR 63.1110(c).
	The requirement in 40 CFR 61.357(d) to submit the information in 40 CFR 61.357(d)(1) and (d)(2) if the TAB quantity from your facility is equal to or greater than 10 Mg/yr.	The requirement to submit the information in 40 CFR 61.357(d)(1) and (d)(2) as part of the Notification of Compliance Status required in 40 CFR 63.1110(d).

Subpart SS—[Amended]

3. Section 63.981 is amended by adding in alphabetical order a definition of *Supplemental combustion air* to read as follows:

§ 63.981 Definitions.

* * * * *

Supplemental combustion air means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

* * * * *

4. Section 63.983 is amended by:

a. Revising paragraphs (a)(3)(i) and (a)(3)(ii);

b. Revising the heading for paragraph (b); and

c. Adding paragraph (b)(4).

The revisions and additions read as follows:

§ 63.983 Closed vent systems.

(a) * * *

(3) * * *

(i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in § 63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in § 63.998(d)(1)(ii)(B).

* * * * *

(b) *Closed vent system inspection and monitoring requirements.* * * *

(4) For each bypass line, the owner or operator shall comply with paragraph (b)(4)(i) or (ii) of this section.

(i) If a flow indicator is used, take a reading at least once every 15 minutes.

(ii) If the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

* * * * *

5. Section 63.987 is amended by:

a. Revising the definition of D_j in paragraph (b)(3)(ii); and

b. Revising paragraph (b)(3)(iii).

The revisions read as follows:

§ 63.987 Flare requirements.

* * * * *

(b) * * *

(3) * * *

(ii) * * *

D_j = Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) under the conditions specified in § 63.997(e)(2)(iii)(D)(*1*) through (*3*). Hydrogen and carbon monoxide are measured by ASTM D1946–90; and

* * * * *

(iii) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in unit of standard temperature and pressure), as determined by Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

* * * * *

6. Part 63 is amended by adding § 63.992 to read as follows:

§ 63.992 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in §§ 63.983(a) and (d), 63.984, 63.985(a), 63.986(a), 63.987(a), 63.988(a), 63.990(a), 63.993(a), 63.994(a), and 63.995(a) under § 63.6(g). Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) [Reserved]

(3) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(4) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

* * * * *

7. Section 63.997 is amended by:

a. Revising paragraph (e)(2)(ii);

b. Revising paragraph (e)(2)(iii) introductory text;

c. Revising the first sentence of paragraph (e)(2)(iii)(C)(*1*);

d. Revising paragraph (e)(2)(iii)(D);

e. Adding paragraph (e)(2)(iii)(E);

f. Revising paragraph (e)(2)(iv) introductory text;

g. Removing and reserving paragraphs (e)(2)(iv)(B)(*2*) and (*3*); and

h. Adding paragraphs (e)(2)(iv)(F) through (I).

The revisions and additions read as follows:

§ 63.997 Performance test and compliance assessment requirements for control devices.

* * * * *

(e) * * *

(2) * * *

(ii) *Gas volumetric flow rate.* The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate.

(iii) *Total organic regulated material or TOC concentration.* To determine compliance with a parts per million by volume total organic regulated material or TOC limit, the owner or operator shall use Method 18 or 25A of 40 CFR part 60, appendix A, as applicable. The ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (e)(2)(iii)(D)(1) through (3) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of 40 CFR part 63 may be used. The procedures specified in paragraphs (e)(2)(iii)(A), (B), (D), and (E) of this section shall be used to calculate parts per million by volume concentration. The calculated concentration shall be corrected to 3 percent oxygen using the procedures specified in paragraph (e)(2)(iii)(C) of this section if a combustion device is

the control device and supplemental combustion air is used to combust the emissions.

* * * * *

(C) * * *

(*1*) The emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A, or American Society of Mechanical Engineers (ASME) PTC 19–10–1981–-Part 10 (available for purchase from: ASME International, Three Park Avenue, New York, NY 10016–5990, 800–843–2763 or 212–591–7722), shall be used to determine the oxygen concentration.

* * *

* * * * *

(D) To measure the total organic regulated material concentration at the outlet of a control device, use Method 18 of 40 CFR part 60, appendix A, or ASTM D6420–99. If you have a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream using process knowledge or the screening procedure described in Method 18. In conducting the performance test, analyze samples collected at the outlet of the combustion control device as specified in Method 18 or ASTM D6420–99 for the regulated material compounds present at the inlet of the control device. The method ASTM D6420–99 may be used only under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section.

(*1*) If the target compound(s) is listed in Section 1.1 of ASTM D6420–99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

(*2*) If the target compound(s) is not listed in Section 1.1 of ASTM D6420–99 but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.

(*3*) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.

(E) To measure the TOC concentration, use Method 18 of 40 CFR part 60, appendix A, or use Method 25A of 40 CFR part 60, appendix A, according to the procedures in paragraphs (e)(2)(iii)(E)(*1*) through (*4*) of this section.

(*1*) Calibrate the instrument on the predominant regulated material compound.

(*2*) The test results are acceptable if the response from the high level calibration gas is at least 20 times the standard deviation for the response from the zero calibration gas when the instrument is zeroed on its most sensitive scale.

(*3*) The span value of the analyzer must be less than 100 parts per million by volume.

(*4*) Report the results as carbon, calculated according to Equation 25A–1 of Method 25A of 40 CFR part 60, appendix A.

(iv) *Percent reduction calculation.* To determine compliance with a percent reduction requirement, the owner or operator shall use Method 18, 25, or 25A of 40 CFR part 60, appendix A, as applicable. The method ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of 40 CFR part 63 may be used. The procedures specified in paragraphs (e)(2)(iv)(A) through (I) of this section shall be used to calculate percent reduction efficiency.

* * * * *

(F) To measure inlet and outlet concentrations of total organic regulated material, use Method 18 of 40 CFR part 60, appendix A, or ASTM D6420–99, under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section. In conducting the performance test, collect and analyze samples as specified in Method 18 or ASTM D6420–99. You must collect samples simultaneously at the inlet and outlet of the control device. If the performance test is for a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream (i.e., uncontrolled emissions) using process knowledge or the screening procedure described in Method 18. Quantify the emissions for the regulated material compounds present in the inlet gas stream for both the inlet and outlet gas streams for the combustion device.

(G) To determine inlet and outlet concentrations of TOC, use Method 25 of 40 CFR part 60, appendix A. Measure the total gaseous non-methane organic (TGNMO) concentration of the inlet and outlet vent streams using the procedures of Method 25. Use the TGNMO concentration in Equations 4 and 5 of paragraph (e)(2)(iv)(B) of this section.

(H) Method 25A of 40 CFR part 60, appendix A, may be used instead of Method 25 to measure inlet and outlet concentrations of TOC if the condition in either paragraph (e)(2)(iv)(H)(*1*) or (*2*) of this section is met.

(*1*) The concentration at the inlet to the control system and the required level of control would result in exhaust TGNMO concentrations of 50 parts per million by volume or less.

(*2*) Because of the high efficiency of the control device, the anticipated TGNMO concentration of the control device exhaust is 50 parts per million by volume or less, regardless of the inlet concentration.

(I) If the uncontrolled or inlet gas stream to the control device contains formaldehyde, you must conduct emissions testing according to paragraph (e)(2)(iv)(I)(*1*) or (*2*) of this section.

(*1*) If you elect to comply with a percent reduction requirement and formaldehyde is the principal regulated material compound (i.e., greater than 50 percent of the regulated material compounds in the stream by volume), you must use Method 316 or 320 of 40 CFR part 63, appendix A, to measure formaldehyde at the inlet and outlet of the control device. Use the percent reduction in formaldehyde as a surrogate for the percent reduction in total regulated material emissions.

(*2*) If you elect to comply with an outlet total organic regulated material concentration or TOC concentration limit, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (by volume) formaldehyde, you must use Method 316 or 320 of 40 CFR part 63, appendix A, to separately determine the formaldehyde concentration. Calculate the total organic regulated material concentration or TOC concentration by totaling the formaldehyde emissions measured using Method 316 or 320 and the other regulated material compound emissions measured using Method 18 or 25/25A.

* * * * *

Subpart TT—[Amended]

8. Section 63.1000 is amended by adding paragraph (b) to read as follows:

§ 63.1000 Applicability.

* * * * *

(b) *Implementation and enforcement.* This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement

and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(1) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1)(i) through (v) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(i) Approval of alternatives to the nonopacity emissions standards in §§ 63.1003 through 63.1015, under § 63.6(g). Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(ii) [Reserved]

(iii) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(iv) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(v) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

* * * * *

Subpart UU—[Amended]

9. Section 63.1019 is amended by adding paragraph (f) to read as follows:

§ 63.1019 Applicability.

* * * * *

(f) *Implementation and enforcement.* This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(1) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (f)(i) through (v) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(i) Approval of alternatives to the nonopacity emissions standards in §§ 63.1022 through 62.1034, under § 63.6(g), and the standards for quality improvement programs in § 63.1035. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(ii) [Reserved]

(iii) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(iv) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(v) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

* * * * *

Subpart WW—[Amended]

10. Part 63 is amended by adding § 63.1067 to subpart WW to read as follows:

§ 63.1067 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in §§ 63.1062 and 63.1063(a) and (b) for alternative means of emission limitation, under § 63.6(g).

(2) [Reserved]

(3) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(4) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

Subpart YY—[Amended]

11. Section 63.1100 is amended by:

a. Revising the first sentence of paragraph (a);

b. Adding four entries in alphabetical order and footnotes (c) and (d) to Table 1 to § 63.1100(a);

c. Revising the first sentence of the introductory text of paragraph (g);

d. Revising paragraphs (g)(1) through (4);

e. Revising the heading for paragraph (g)(5); and

f. Adding paragraph (g)(6).

The revisions and additions read as follows:

§ 63.1100 Applicability.

(a) *General.* This subpart applies to source categories and affected sources specified in § 63.1103(a) through (h).

* * *

TABLE 1 TO § 63.1100(A)—SOURCE CATEGORY MACT [a] APPLICABILITY

Source category	Storage vessels	Process vents	Transfer racks	Equipment leaks	Wastewater streams	Other	Source category MACT requirements
* *	*		*	*	*		*
Carbon Black Production	No	Yes	No	No	No	No	§ 63.1103(f).
Cyanide Chemicals Manufacturing	Yes	Yes	Yes	Yes	Yes	No	§ 63.1103(g).
Ethylene Production	Yes	Yes	Yes	Yes	Yes	Yes [c]	§ 63.1103(e).
* *	*		*	*	*		*
Spandex Production	Yes	Yes	No	No	No	Yes [d]	§ 63.1103(h).
* *	*		*	*	*		*

[a] Maximum achievable control technology.
[c] Heat exchange systems as defined in § 63.1103(e)(2).
[d] Fiber spinning lines.

* * * * * * *

(g) *Overlap with other regulations.* Paragraphs (g)(1) through (6) of this section specify the applicability of this subpart YY emission point requirements when other rules may apply. * * *

(1) *Overlap of subpart YY with other regulations for storage vessels.* (i) After the compliance dates specified in § 63.1102, a storage vessel that must be controlled according to the requirements of this subpart and subpart G of this part is required to comply only with the storage vessel requirements of this subpart.

(ii) After the compliance dates specified in § 63.1102, a storage vessel that must be controlled according to the requirements of this subpart and subpart Ka or Kb of 40 CFR part 60 is required to comply only with the storage vessel requirements of this subpart.

(2) *Overlap of subpart YY with other regulations for process vents.* (i) After the compliance dates specified in § 63.1102, a process vent that must be controlled according to the requirements of this subpart and subpart G of this part is in compliance with this subpart if it complies with either set of requirements. The owner or operator must specify the rule with which they will comply in the Notification of Compliance Status report required by § 63.1110(a)(4).

(ii) After the compliance dates specified in § 63.1102, a process vent that must be controlled according to the requirements of this subpart and subpart III, RRR or NNN of 40 CFR part 60 is required to comply only with the process vent requirements of this subpart.

(3) *Overlap of subpart YY with other regulations for transfer racks.* After the compliance dates specified in § 63.1102, a transfer rack that must be controlled according to the requirements this subpart and subpart G of this part is required to comply only with the transfer rack requirements of this subpart.

(4) *Overlap of subpart YY with other regulations for equipment leaks.* (i) After the compliance dates specified in § 63.1102, equipment that must be controlled according to this subpart and 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart J or subpart V, is required only to comply with the equipment leak requirements of this subpart.

(ii) After the compliance dates specified in § 63.1102, equipment that must be controlled according to this subpart and subpart H of this part is in compliance with the equipment leak requirements of this subpart if it complies with either set of requirements. The owner or operator must specify the rule with which they will comply in the Notification of Compliance Status report required by § 63.1110(a)(4).

(5) *Overlap of subpart YY with other regulations for wastewater for source categories other than ethylene production.*

* * * * *

(6) *Overlap of subpart YY with other regulations for waste for the ethylene production source category.* (i) After the compliance date specified in § 63.1102, a waste stream that is conveyed, stored, or treated in a wastewater stream management unit, waste management unit, or wastewater treatment system that receives streams subject to both the control requirements of § 63.1103(e)(3) for ethylene production sources and the provisions of §§ 63.133 through 63.147 shall comply as specified in paragraphs (g)(6)(i)(A) through (C) of this section. Compliance with the provisions of this paragraph (g)(6)(i) shall constitute compliance with the requirements of this subpart for that waste stream.

(A) Comply with the provisions in §§ 63.133 through 63.137 and 63.140 for all equipment used in the storage and conveyance of the waste stream.

(B) Comply with the provisions in §§ 63.1103(e), 63.138, and 63.139 for the treatment and control of the waste stream.

(C) Comply with the provisions in §§ 63.143 through 63.148 for monitoring and inspections of equipment and for recordkeeping and reporting requirements. The owner or operator is not required to comply with the monitoring, recordkeeping, and reporting requirements associated with the treatment and control requirements in §§ 61.355 through 61.357.

(ii) After the compliance date specified in § 63.1102, compliance with § 63.1103(e) shall constitute compliance with the Benzene Waste Operations NESHAP (subpart FF of 40 CFR part 61) for waste streams that are subject to both the control requirements of § 63.1103(e)(3) for ethylene production sources and the control requirements of 40 CFR part 61, subpart FF.

12. Section 63.1101 is amended by:

a. Adding a sentence at the end of the introductory text;

b. Adding a sentence at the end of the definition of ''process vent'; and

c. Revising the definitions of ''Shutdown,'' ''Storage vessel or tank,'' and ''Total organic compounds or TOC.''

The revisions and additions read as follows:

§ 63.1101 Definitions.

* * * The definitions in this section do not apply to waste requirements for ethylene production sources.

* * * * *

Process vent * * * This definition does not apply to ethylene production sources. Ethylene process vents are defined in § 63.1103(e)(2).

* * * * *

Shutdown means the cessation of operation of an affected source or equipment that is used to comply with this subpart, or the emptying and degassing of a storage vessel. For the purposes of this subpart, shutdown includes, but is not limited to, periodic maintenance, replacement of equipment, or repair. Shutdown does not include the routine rinsing or washing of equipment in batch operation between batches. Shutdown includes the decoking of ethylene production unit furnaces.

* * * * *

Storage vessel or *tank,* for the purposes of regulation under the storage vessel provisions of this subpart, means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) that provides structural support and is designed to hold an accumulation of liquids or other materials. Storage vessel includes surge control vessels and bottoms receiver vessels. For the purposes of regulation under the storage vessel provisions of this subpart, storage vessel does not include vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships; pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere; or wastewater storage vessels. Wastewater storage vessels are covered under the wastewater provisions of § 63.1106.

* * * * *

Total organic compounds or (TOC) means the total gaseous organic compounds (minus methane and ethane) in a vent stream, with the concentrations expressed on a carbon basis.

* * * * *

13. Section 63.1102 is amended by revising paragraph (a) adding and reserving paragraph (b), and adding a Table 1 to § 63.1102 to read as follows:

§ 63.1102 Compliance schedule.

(a) *General requirements.* Affected sources, as defined in § 63.1103(a)(1)(i) for acetyl resins production, § 63.1103(b)(1)(i) for acrylic and modacrylic fiber production, § 63.1103(c)(1)(i) for hydrogen fluoride production, § 63.1103(d)(1)(i) for polycarbonate production, § 63.1103(e)(1)(i) for ethylene production, § 63.1103(f)(1)(i) for carbon black production, § 63.1103(g)(1)(i) for cyanide chemicals manufacturing, or § 63.1103(h)(1)(i) for spandex production shall comply with the appropriate provisions of this subpart and the subparts referenced by this subpart according to the schedule in paragraph (a)(1) or (2) of this section, as appropriate. Proposal and effective dates are specified in Table 1 to this section.

(1) *Compliance dates for new and reconstructed sources.* (i) The owner or operator of a new or reconstructed affected source that commences construction or reconstruction after the proposal date, and that has an initial startup before the effective date of standards for an affected source, shall comply with this subpart no later than the applicable effective date in Table 1 to § 63.1102 of this section.

(ii) The owner or operator of a new or reconstructed affected source that has an initial startup after the applicable effective date in Table 1 to § 63.1102 of this section shall comply with this subpart upon startup of the source.

(iii) The owner or operator of an affected source that commences construction or reconstruction after the proposal date, but before the effective date in Table 1 to this section, shall comply with this subpart no later than the date 3 years after the effective date if the conditions in paragraphs (a)(1)(iii)(A) and (B) of this section are met.

(A) The promulgated standards are more stringent than the proposed standards.

(B) The owner or operator complies with this subpart as proposed during the 3-year period immediately after the effective date of standards for the affected source.

(2) *Compliance dates for existing sources.* (i) The owner or operator of an existing affected source shall comply with the requirements of this subpart within 3 years after the effective date of standards for the affected source.

(ii) The owner or operator of an area source that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source shall be subject to the relevant standards for existing sources under this subpart. Such sources shall comply with the relevant standards within 3 years of becoming a major source.

(b) [Reserved].

TABLE 1 TO § 63.1102.—SOURCE CATEGORY PROPOSAL AND EFFECTIVE DATES

Source category	Proposal date	Effective date
(a) Acetal Resins Production	October 14, 1998	June 29, 1999.
(b) Acrylic and Modacrylic Fibers Production	October 14, 1998	June 29, 1999.
(c) Hydrogen Fluoride Production	October 14, 1998	June 29, 1999.
(d) Polycarbonate Production	October 14, 1998	June 29, 1999.
(e) Ethylene Production	December 6, 2000	July 12, 2002.
(f) Carbon Black Production	December 6, 2000	July 12, 2002.
(g) Cyanide Chemicals Manufacturing	December 6, 2000	July 12, 2002.
(h) Spandex Production	December 6, 2000	July 12, 2002.

14. Section 63.1103 is amended by adding paragraphs (e) through (h) to read as follows:

§ 63.1103 Source category-specific applicability, definitions, and requirements.

* * * * *

(e) *Ethylene production applicability, definitions, and requirements*—(1) *Applicability*—(i) *Affected source.* For the ethylene production (as defined in paragraph (e)(2) of this section) source category, the affected source shall comprise all emission points listed in paragraphs (e)(1)(i)(A) through (G) of this section that are associated with an ethylene production unit that is located at a major source, as defined in section 112(a) of the Act.

(A) All storage vessels (as defined in § 63.1101) that store liquids containing organic HAP.

(B) All ethylene process vents (as defined in paragraph (e)(2) of this section) from continuous unit operations.

(C) All transfer racks (as defined in paragraph (e)(2) of this section) that load HAP-containing material.

(D) Equipment (as defined in § 63.1101) that contains or contacts organic HAP.

(E) All waste streams (as defined in paragraph (e)(2) of this section) associated with an ethylene production unit.

(F) All heat exchange systems (as defined in paragraph (e)(2) of this section) associated with an ethylene production unit.

(G) All ethylene cracking furnaces and associated decoking operations.

(ii) *Exceptions.* The emission points listed in paragraphs (e)(1)(ii)(A) through (L) of this section are in the ethylene production source category but are not subject to the requirements of paragraph (e)(3) of this section.

(A) Equipment that is located within an ethylene production unit that is subject to this subpart but does not contain organic HAP.

(B) Stormwater from segregated sewers.

(C) Water from fire-fighting and deluge systems in segregated sewers.

(D) Spills.

(E) Water from safety showers.

(F) Water from testing of fire-fighting and deluge systems.

(G) Vessels storing organic liquids that contain organic HAP as impurities.

(H) Transfer racks, loading arms, or loading hoses that only transfer liquids containing organic HAP as impurities.

(I) Transfer racks, loading arms, or loading hoses that vapor balance during all transfer operations.

(J) Air emissions from all ethylene cracking furnaces, including furnace stack emissions during decoking operations.

(K) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

(L) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships.

(iii) *Exclusions.* The provisions of this subpart do not apply to process units and emission points subject to subparts F, G, H, I and CC of this part.

(iv) *Compliance schedule.* The compliance schedule for the ethylene production source category is specified in § 63.1102.

(2) *Definitions. Ethylene process vent* means a gas stream with a flow rate greater than 0.005 standard cubic meters

per minute containing greater than 20 parts per million by volume HAP that is continuously discharged during operation of an ethylene production unit, as defined in this section. Ethylene process vents are gas streams that are discharged to the atmosphere (or the point of entry into a control device, if any) either directly or after passing through one or more recovery devices. Ethylene process vents do not include relief valve discharges; gaseous streams routed to a fuel gas system; leaks from equipment regulated under this subpart; episodic or nonroutine releases such as those associated with startup, shutdown, and malfunction; and in situ sampling systems (online analyzers).

Ethylene production or production unit means a chemical manufacturing process unit in which ethylene and/or propylene are produced by separation from petroleum refining process streams or by subjecting hydrocarbons to high temperatures in the presence of steam. The ethylene production unit includes the separation of ethylene and/or propylene from associated streams such as a C_4 product, pyrolysis gasoline, and pyrolysis fuel oil. Ethylene production does not include the manufacture of SOCMI chemicals such as the production of butadiene from the C_4 stream and aromatics from pyrolysis gasoline.

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water). A heat exchange system can include an entire recirculating or once-through cooling system.

Transfer rack means the collection of loading arms and loading hoses at a single loading rack that is used to fill tank trucks and/or railcars with organic HAP. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves. Transfer rack does not include racks, arms, or hoses that contain organic HAP only as impurities; or racks, arms, or hoses that vapor balance during all loading operations.

Waste means any material resulting from industrial, commercial, mining, or agricultural operations, or from community activities, that is discarded or is being accumulated, stored, or physically, chemically, thermally, or biologically treated prior to being discarded, recycled, or discharged.

Waste stream means the waste generated by a particular process unit, product tank, or waste management unit. The characteristics of the waste stream (e.g., flow rate, HAP concentration, water content) are determined at the point of waste generation. Examples of a waste stream include process wastewater, product tank drawdown, sludge and slop oil removed from waste management units, and landfill leachate.

(3) *Requirements.* The owner or operator must control organic HAP emissions from each affected source emission point by meeting the applicable requirements specified in Table 7 to this section. An owner or operator must perform the applicability assessment procedures and methods for process vents specified in § 63.1104, except for paragraphs (d), (g), (h), (i), (j), (l)(1), and (n). An owner or operator must perform the applicability assessment procedures and methods for equipment leaks specified in § 63.1107. General compliance, recordkeeping, and reporting requirements are specified in §§ 63.1108 through 63.1112. Minimization of emissions from startup, shutdown, and malfunctions must be addressed in the startup, shutdown, and malfunction plan required by § 63.1111; the plan must also establish reporting and recordkeeping of such events. Procedures for approval of alternate means of emission limitations are specified in § 63.1113.

TABLE 7 TO § 63.1103(E).—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE AN ETHYLENE PRODUCTION EXISTING OR NEW AFFECTED SOURCE?

If you own or operate . . .	And if . . .	Then you must . . .
(a) A storage vessel (as defined in § 63.1101) that stores liquid containing organic HAP.	(1) The maximum true vapor pressure of total organic HAP is ≥3.4 kilopascals but <76.6 kilopascals; and the capacity of the vessel is ≥4 cubic meters but ≤95 cubic meters.	(i) Fill the vessel through a submerged pipe; or (ii) Comply with the requirements for storage vessels with capacities ≥95 cubic meters.
(b) A storage vessel (as defined in § 63.1101) that stores liquid containing organic HAP.	(1) The maximum true vapor pressure of total organic HAP is ≥3.4 kilopascals but ≥76.6 kilopascals; and the capacity of the vessel is ≥95 cubic meters.	(i) Comply with the requirements of subpart WW of this part; or (ii) Reduce emissions of total organic HAP by 98 weight-percent by venting emissions through a closed vent system to any combination of control devices and meet the requirements of § 63.982(a)(1).
(c) A storage vessel (as defined in § 63.1101) that stores liquid containing organic HAP.	(1) The maximum true vapor pressure of total organic HAP is ≥76.6 kilopascals.	(i) Reduce emissions of total organic HAP by 98 weight-percent by venting emissions through a closed vent system to any combination of control devices and meet the requirements of § 63.982(a)(1).
(d) An ethylene process vent (as defined in paragraph (e)(2) of this section).	(1) The process vent is at an existing source and the vent stream has a flow rate ≥0.011 scmm and a total organic HAP concentration ≥50 parts per million by volume; or the process vent is at a new source and the vent stream has a flow rate ≥0.008 scmm and a total organic HAP concentration ≥30 parts per million by volume.	(i) Reduce emissions of organic HAP by 98 weight-percent; or reduce organic HAP or TOC to a concentration of 20 parts per million by volume; whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices and meet the requirements specified in § 63.982(b) and (c)(2).
(e) A transfer rack (as defined in paragraph (e)(2) of this section).	(1) Materials loaded have a true vapor pressure of total organic HAP ≥3.4 kilopascals and ≥76 cubic meters per day (averaged over any consecutive 30-day period) of HAP-containing material is loaded.	(i) Reduce emissions of organic HAP by 98 weight-percent; or reduce organic HAP or TOC to a concentration of 20 parts per million by volume; whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices as specified in § 63.1105; or

TABLE 7 TO § 63.1103(E).—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE AN ETHYLENE PRODUCTION EXISTING OR NEW AFFECTED SOURCE?—Continued

If you own or operate . . .	And if . . .	Then you must . . .
		(ii) Install process piping designed to collect the HAP-containing vapors displaced from tank trucks or railcars during loading and to route it to a process, a fuel gas system, or a vapor balance system, as specified in § 63.1105.
(f) Equipment (as defined in § 63.1101) that contains or contacts organic HAP.	(1) The equipment contains or contacts ≥5 weight-percent organic HAP; and the equipment is not in vacuum service.	Comply with the requirements of subpart UU of this part.
(g) Processes that generate waste (as defined in paragraph (e)(2) of this section).	(1) The wastewater contains any of the following HAP: benzene, cumene, ethyl benzene, hexane, naphthalene, styrene, toluene, o-xylene, m-xylene, p-xylene, or 1,3-butadiene.	(i) Comply with the waste requirements of subpart XX of this part. For ethylene manufacturing process unit waste stream requirements, terms have the meanings specified in subpart XX.
(h) A heat exchange system (as defined in paragraph (e)(2) of this section).	.....	Comply with the heat exchange system requirements of subpart XX of this part.

(f) *Carbon black production applicability, definitions, and requirements*—(1) *Applicability*—(i) *Affected source.* For the carbon black production source category (as defined in paragraph (f)(2) of this section), the affected source shall comprise each carbon black production process unit located at a major source, as defined in section 112(a) of the Act. The affected source for the carbon black production source category includes all waste management units, maintenance wastewater, and equipment components that contain or contact HAP that are associated with the carbon black production process unit.

(ii) *Compliance schedule.* The compliance schedule for the carbon black production and acetylene decomposition carbon black production affected sources, as defined in paragraph (f)(1)(i) of this section, is specified in § 63.1102.

(2) *Definitions. Carbon black production* means the production of carbon black by either the furnace, thermal, acetylene decomposition, or lampblack processes.

Carbon black production unit means the equipment assembled and connected by hard-piping or duct work to process raw materials to manufacture, store, and transport a carbon black product. For the purposes of this subpart, a carbon black production process unit includes reactors and associated operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A carbon black production 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.

Dryer means a rotary-kiln dryer that is heated externally and is used to dry wet pellets in the wet pelletization process.

Main unit filter means the filter that separates the carbon black from the tailgas.

Process filter means the filter that separates the carbon black from the conveying air.

Purge filter means the filter that separates the carbon black from the dryer exhaust.

(3) *Requirements.* (i) Table 8 to this section specifies the carbon black production standards applicability for existing and new sources. Applicability assessment procedures and methods are specified in § 63.1104. An owner or operator of an affected source is not required to perform applicability tests or other applicability assessment procedures if they opt to comply with the most stringent requirements for an applicable emission point pursuant to this subpart. General compliance, recordkeeping, and reporting requirements are specified in §§ 63.1108 through 63.1112. Procedures for approval of alternative means of emission limitations are specified in § 63.1113.

(ii) Pressure relief devices used to protect against overpressure in the case of catastrophic failure of your process filter system are exempt from the closed vent system inspection requirements of § 63.983(b) and (c). Exempt pressure relief devices must be designated and identified in your Notification of Compliance Status report.

TABLE 8 TO § 63.1103(F).—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A CARBON BLACK PRODUCTION EXISTING OR NEW AFFECTED SOURCE?

If you own or operate . . .	And if . . .	Then you must . . .
(a) A carbon black production main unit filter process vent.	(1) The HAP concentration of the emission stream is equal to or greater than 260 parts per million by volume[a].	(i) Reduce emissions of HAP by using a flare meeting the requirements of subpart SS of this part; or (ii) Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).

[a] The weight-percent organic HAP is determined according to the procedures specified in § 63.1104(e).

(g) *Cyanide chemicals manufacturing applicability, definitions, and requirements*—(1) *Applicability*—(i) *Affected source.* For the cyanide chemicals manufacturing source category, the affected source shall include each cyanide chemicals manufacturing process unit located at a major source, as defined in section 112(a) of the Act. The affected source shall also include all waste management units, maintenance wastewater, and equipment (as defined in § 63.1101) that contain or contact cyanide chemicals that are associated with the cyanide chemicals manufacturing process unit.

(ii) *Compliance schedule.* The compliance schedule for the affected source, as defined in paragraph (f)(1)(i) of this section, is specified in § 63.1102.

(2) *Definitions. Andrussow process unit* means a process unit that produces hydrogen cyanide by reacting methane and ammonia in the presence of oxygen over a platinum/rhodium catalyst. An Andrussow process unit begins at the point at which the raw materials are stored and ends at the point at which refined hydrogen cyanide is reacted as a raw material in a downstream process, burned on-site as fuel in a boiler or industrial furnace, or is shipped offsite. If raw hydrogen cyanide from the reactor is reacted with sodium hydroxide to form sodium cyanide prior to the refining process, the unit operation where sodium cyanide is formed is considered to be part of the Andrussow process unit.

Blausaure Methane Anlage (BMA) process unit means a process unit that produces hydrogen cyanide by reacting methane and ammonia over a platinum catalyst. A BMA process unit begins at the point at which raw materials are stored and ends at the point at which refined hydrogen cyanide is reacted as a raw material in a downstream process, burned on-site as a fuel in a boiler or industrial furnace, or is shipped offsite. If raw hydrogen cyanide from the reactor is reacted with sodium hydroxide to form sodium cyanide prior to the refining process, the unit operation where sodium cyanide is formed is considered to be part of the BMA process unit.

Byproduct means a chemical that is produced coincidentally during the production of another chemical.

Cyanide chemicals manufacturing process unit or *CCMPU* means the equipment assembled and connected by hard-piping or duct work to process raw materials to manufacture, store, and transport a cyanide chemicals product. A cyanide chemicals manufacturing process unit shall be limited to any one of the following: an Andrussow process unit, a BMA process unit, a sodium cyanide process unit, or a Sohio hydrogen cyanide process unit. For the purpose of this subpart, a cyanide chemicals manufacturing process unit includes reactors and associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A cyanide chemicals 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.

Cyanide chemicals product means either hydrogen cyanide, potassium cyanide, or sodium cyanide which is manufactured as the intended product of a CCMPU or a byproduct of the Sohio process. Other hydrogen cyanide, potassium cyanide, or sodium cyanide byproducts, impurities, wastes, and trace contaminants are not considered to be cyanide chemicals products.

Dry-end process vent means a process vent originating from the drum filter or any other unit operation in the dry end of a sodium cyanide manufacturing process unit. For the purposes of this subpart, the dry end of the sodium cyanide process unit begins in the unit operation where water is removed from the sodium cyanide, usually in the drum filter, and ends when the sodium cyanide is used as a raw material in a downstream process, or is shipped offsite.

Organic HAP means, for purposes of applicability of the requirements of this subpart, all hydrogen cyanide compounds.

Raw hydrogen cyanide means hydrogen cyanide that has not been through the refining process. Raw hydrogen cyanide usually has a hydrogen cyanide concentration less than 10 percent.

Refined hydrogen cyanide means hydrogen cyanide that has been through the refining process. Refined hydrogen cyanide usually has a hydrogen cyanide concentration greater than 99 percent.

Refining process means the collection of equipment in a cyanide chemicals manufacturing processing unit used to concentrate raw hydrogen cyanide from a concentration around 10 percent or less to refined hydrogen cyanide at a concentration greater than 99 percent.

Sodium cyanide process unit means a process unit that produces sodium cyanide by reacting hydrogen cyanide and sodium hydroxide via the neutralization, or wet, process. A sodium cyanide process unit begins at the unit operation where refined hydrogen cyanide is reacted with sodium hydroxide and ends at the point the solid sodium cyanide product is shipped offsite or used as a raw material in a downstream process. If raw hydrogen cyanide is reacted with sodium hydroxide to form sodium cyanide prior to the hydrogen cyanide refining process, the unit operation where sodium cyanide is formed is not considered to be part of the sodium cyanide process unit. For this type of process, the sodium cyanide process unit begins at the point that the aqueous sodium cyanide stream leaves the unit operation where the sodium cyanide is formed. In situations where potassium hydroxide is substituted for sodium hydroxide to produce potassium cyanide, the process unit is still considered a sodium cyanide process unit.

Sohio hydrogen cyanide process unit means a process unit that produces hydrogen cyanide as a byproduct of the acrylonitrile production process when acrylonitrile is manufactured using the Sohio process. A Sohio hydrogen cyanide process unit begins at the point the hydrogen cyanide leaves the unit operation where the hydrogen cyanide is separated from the acrylonitrile (usually referred to as the heads column). The Sohio hydrogen cyanide process unit ends at the point refined hydrogen cyanide is reacted as a raw material in a downstream process, burned on-site as fuel in a boiler or industrial furnace, or is shipped offsite. If raw hydrogen cyanide is reacted with sodium hydroxide to form sodium cyanide prior to the refining process, the unit operation where sodium cyanide is formed is considered to be part of the Sohio hydrogen cyanide process unit.

Wet-end process vent means a process vent originating from the reactor, crystallizer, or any other unit operation in the wet end of the sodium cyanide process unit. For the purposes of this subpart, the wet end of the sodium cyanide process unit begins at the point at which the raw materials are stored and ends just prior to the unit operation where water is removed from the sodium cyanide, usually in the drum filter. Wastewater streams containing discarded wastewater from the sodium cyanide production process are not considered to be part of the wet-end sodium cyanide process. Discarded wastewater that is no longer used in the production process is considered to be process and/or maintenance wastewater. Vents from process and maintenance wastewater operations are not wet-end process vents.

(3) *Requirements.* Table 9 to this section specifies the cyanide chemicals

manufacturing standards applicable to existing and new sources. Applicability assessment procedures and methods are specified in § 63.1104. An owner or operator of an affected source is not required to perform applicability tests or other applicability assessment procedures if they opt to comply with the most stringent requirements for an applicable emission point pursuant to this subpart. General compliance, recordkeeping, and reporting requirements are specified in §§ 63.1108 through 63.1112. Procedures for approval of alternative means of emission limitations are specified in § 63.1113.

(4) *Determination of overall HAP emission reduction for a process unit.* (i) The owner or operator shall determine the overall HAP emission reduction for process vents in a process unit using Equation 1 of this section. The overall organic HAP emission reduction shall be determined for all process vents in the process unit.

$$RED_{CCMPU} = \left(\frac{\sum_{i=1}^{n} \left(E_{unc,i} \right) \left(\frac{R_i}{100} \right)}{\sum_{i=1}^{n} \left(E_{unc,i} \right) + \sum_{j=1}^{m} \left(E_{unc,j} \right)} \right) * 100 \qquad \text{[Equation 1]}$$

Where:

RED_{CCMPU}=Overall HAP emission reduction for the group of process vents in the CCMPU, percent.

E_{unc},i=Uncontrolled HAP emissions from process vent i that is controlled by using a combustion, recovery, or recapture device, kg/yr.

n=Number of process vents in the process unit that are controlled by using a combustion, recovery, or recapture device.

R_i=Control efficiency of the combustion, recovery, or recapture device used to control HAP emissions from vent i, determined in accordance with paragraph (g)(4)(ii) of this section.

E_{unc},j=Uncontrolled HAP emissions from process vent j that is not controlled by using a combustion, recovery, or recapture device, kg/yr.

m=Number of process vents in the process unit that are not controlled by using a combustion, recovery, or recapture device.

(ii) The control efficiency shall be assigned as specified in paragraph (g)(4)(ii) (A) or (B) of this section.

(A) If the process vent is controlled using a flare in accordance with the provisions of § 63.987, or a combustion device in accordance with the provisions of § 63.988(b)(2), for which a performance test has not been conducted, the control efficiency shall be assumed to be 98 weight-percent. For hydrogen-fueled flares, an owner or operator may use a control efficiency greater than 98 weight-percent if they can provide engineering calculations and supporting information demonstrating a greater control efficiency.

(B) If the process vent is controlled using a combustion, recovery, or recapture device for which a performance test has been conducted in accordance with the provisions of § 63.997, the control efficiency shall be the efficiency determined by the performance test.

(5) *Source category specific modifications to testing procedures.* (i) When identifying equipment subject to any equipment leak requirements, an owner or operator is allowed to designate specific components of such equipment as never being safe to monitor with their Notification of Compliance Status report and periodic compliance reports. In order for an owner or operator to designate such equipment as never being safe to monitor, they must certify that monitoring such equipment at any time the CCMPU is operating is never safe (e.g., monitoring this equipment would present an unreasonable hazard or preclude testing personnel from meeting emergency evacuation requirements). If it is demonstrated to the Administrator's satisfaction that equipment designated by the owner or operator as never safe to monitor is appropriately designated, an owner or operator will not be required to monitor such equipment.

(ii) For process vent hydrogen cyanide emissions that are vented to a control device other than a flare during startup, shutdown, and malfunction, the design evaluation must include documentation that the control device being used achieves the required control efficiency during the reasonably expected maximum flow rate and emission rate during startup, shutdown, and malfunction.

(iii) If a facility controls process vent emissions during startup, shutdown, and malfunction by using a flare, an owner or operator is not required to perform flow rate and heat content testing as specified in § 63.987(b)(3)(ii) and (iii). In lieu of performing flow rate and heat content testing, an owner or operator is required to submit engineering calculations that substantiate that a flare meets the applicable heat content or flow rates, or provide data from a compliance assessment that the flare is in compliance under worst case conditions (e.g., maximum operating conditions).

(iv) If flare velocity and net heating value testing, as specified in § 63.11(b)(6)(ii) and (b)(7)(i), would create an unreasonable hazard for testing personnel, an owner or operator is allowed to submit engineering calculations that substantiate vent stream velocity and heat content of a flare in lieu of test data. These calculations are required to be submitted with the facilities' compliance test notification report for approval by the Administrator.

(v) The data from any performance test method used to measure HCN concentrations must be validated using EPA Method 301 (40 CFR part 63, appendix A).

TABLE 9 TO § 63.1103(G).—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A CYANIDE CHEMICALS MANUFACTURING EXISTING OR NEW AFFECTED SOURCE?

If you own or operate . . .	And if . . .	Then you must . . .
(a) A storage vessel	(1) The storage vessel contains refined hydrogen cyanide.	(i) Reduce emissions of hydrogen cyanide by using a flare meeting the requirements of § 63.982(b); or (ii) Reduce emissions of hydrogen cyanide by 98 weight-percent, or to a concentration of 20 parts per million by volume, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(c)(1) or (d).
(b) A process vent from a continuous unit operations in an Andrussow, BMA, or Sohio hydrogen cyanide process unit.		(i) Reduce overall annual emissions of total HAP from the collection of process vents from continuous unit operations in the process by 98 weight-percent in accordance with paragraph (g)(4) of this section. Any control device used to reduce emissions from one or more process vents from continuous unit operations in the process unit must meet the applicable requirements specified in § 63.982(a)(2); or (ii) Reduce emissions of total HAP from each process vent from a continuous unit operation in the process unit by using a flare meeting the requirements specified in § 63.982(b); or (iii) Reduce emissions of total HAP from each process vent from a continuous unit operation in the process unit by 98 weight-percent or to a concentration of 20 parts per million by volume, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(c)(2) or (d).
(c) One or more wet end process vents, as defined in paragraph (g)(2) of this section, in a sodium cyanide process unit.		(i) Reduce overall annual emissions of total HAP from the collection of process vents from continuous unit operations in the process unit by 98 weight-percent in accordance with paragraph (g)(4) of this section. Any control device used to reduce emissions from one or more process vents from continuous unit operations in the process unit must meet the applicable requirements of § 63.982(a)(2); or (ii) Reduce emissions of total HAP from each wet-end process vent in the process unit by using a flare meeting the requirements of § 63.982(b); or (iii) Reduce emissions of total HAP from each wet-end process vent by 98 weight-percent, or to a concentration of 20 parts per million by volume, by venting emissions through a closed vent system and any combination of control devices meeting the requirements of § 63.982(c)(2) or (d).
(d) One or more dry end process vents, as defined in paragraph (g)(2) of this section, in a sodium cyanide process unit.		(i) Reduce overall annual emissions of sodium cyanide from the collection of process vents from continuous unit operations in the process unit by 98 weight-percent in accordance with paragraph (g)(4) of this section. Any control device used to reduce emissions from one or more process vents from continuous unit operations in the process unit must meet the applicable requirements of § 63.982(a)(2); or (ii) Reduce emissions of sodium cyanide from each dry-end process vent in the process unit by 98 weight-percent by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(c)(2) or (d).

TABLE 9 TO § 63.1103(G).—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A CYANIDE CHEMICALS MANUFACTURING EXISTING OR NEW AFFECTED SOURCE?—Continued

If you own or operate . . .	And if . . .	Then you must . . .
(e) A transfer rack	(1) The transfer rack is used to load refined hydrogen cyanide into tank trucks and/or rail cars.	(i) Reduce emissions of hydrogen cyanide by using a flare meeting the requirements of § 63.982(b); or (ii) Reduce emissions of hydrogen cyanide by 98 weight-percent, or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements specified in § 63.982(c)(1), (c)(2), or (d).
(f) A new cyanide chemicals manufacturing process unit that generates process wastewater.	(1) The process wastewater is from HCN purification, ammonia purification, or flare blowdown.	(i) Achieve a combined removal and control of HAP from wastewater of 93 weight-percent.
(g) A cyanide chemicals manufacturing process unit that generates maintenance wastewater.	(1) The maintenance wastewater contains hydrogen cyanide or acetonitrile.	(i) Comply with the requirements of § 63.1106(b).
(h) An item of equipment listed in § 63.1106(c)(1) that transports or contains wastewater liquid streams from a cyanide chemicals manufacturing process unit.	(1) The item of equipment meets the criteria specified in § 63.1106(c)(1) through (3) and either (c)(4)(i) or (ii).	(i) Comply with the requirements in Table 35 of subpart G of this part.
(i) Equipment, as defined under § 63.1101	(1) The equipment contains or contacts hydrogen cyanide and operates equal to or greater then 300 hours per year.	(i) Comply with either subpart TT or UU of this part, and paragraph (g)(5) of this section, with the exception that open-ended lines that contain or contact hydrogen cyanide are exempt from any requirements to install a cap, plug, blind flange, or second valve to be capped.

(h) *Spandex production applicability, definitions, and requirements*—(1) *Applicability*—(i) *Affected source.* For the spandex production (as defined in paragraph (h)(2) of this section) source category, the affected source shall comprise all emission points listed in paragraphs (h)(1)(i)(A) through (C) of this section that are associated with a reaction spinning spandex production process unit located at a major source, as defined in section 112(a) of the Act.

(A) All process vents (as defined in § 63.1101).

(B) All storage vessels (as defined in § 63.1101) that store liquids containing organic HAP.

(C) All spandex fiber spinning lines using a spinning solution having organic HAP.

(ii) *Exceptions.* The emission points listed in paragraphs (h)(1)(ii)(A) and (B) of this section are in the spandex production source category but are not subject to the requirements of paragraph (h)(3) of this section.

(A) Equipment that is located within a spandex production process unit that is subject to this subpart but does not contain organic HAP.

(B) Vessels storing organic liquids that contain organic HAP as impurities.

(iii) *Compliance schedule.* The compliance schedule for affected sources, as defined in paragraph (h)(1)(i) of this section, is specified in paragraph (b) of § 63.1102.

(2) *Definitions. Fiber spinning line* means the group of equipment and process vents associated with spandex fiber spinning operations. The fiber spinning line includes the blending and dissolving tanks, spinning solution filters, spinning units, spin bath tanks, and the equipment used downstream of the spin bath to wash, draw, or dry on the wet belt the spun fiber.

Spandex or spandex fiber means a manufactured synthetic fiber in which the fiber-forming substance is a long-chain polymer comprised of at least 85 percent by mass of a segmented polyurethane.

Spandex production means the production of synthetic spandex fibers.

Spandex production process unit means a process unit that is specifically used for the production of synthetic spandex fibers.

(3) *Requirements.* Table 10 to this section specifies the spandex production source category requirements for new and existing sources. An owner or operator must perform the applicability assessment procedures and methods for process vents specified in § 63.1104, excluding paragraphs (b)(1), (d), (g), (h), (i), (j), (l)(1), and (n). General compliance, recordkeeping, and reporting requirements are specified in §§ 63.1108 through 63.1112. Minimization of emissions from startup, shutdown, and malfunctions must be addressed in the startup, shutdown, and malfunction plan required by § 63.1111; the plan must also establish reporting and recordkeeping of such events. Procedures for approval of alternate means of emission limitations are specified in § 63.1113.

TABLE 10 TO § 63.1103(H)—WHAT ARE MY REQUIREMENTS IF I OWN OR OPERATE A SPANDEX PRODUCTION PROCESS UNIT AT A NEW OR EXISTING SOURCE?

If you own or operate . . .	And if . . .	Then you must . . .
(a) A storage vessel (as defined in § 63.1101) that stores liquid containing organic HAP.	(1) The maximum true vapor pressure of the organic HAP is ≥ 3.4 kilopascals; and the capacity of the vessel is ≥ 47 cubic meters.	(i) Comply with the requirements of subpart WW of this part; or (ii) Reduce emissions of organic HAP by 95 weight-percent by venting emissions in through a closed vent system to any combination of control devices meeting the requirements of subpart SS of this part, as specified in § 63.982(a)(1).
(b) A process vent		Reduce emissions of organic HAP by 95 weight-percent, or reduce organic HAP or TOC to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).
(c) A fiber spinning line		Operate the fiber spinning line such that emissions are captured and vented through a line closed vent system to a control device that complies with the requirements of § 63.982(a)(2). If a control device other than a flare is used, HAP emissions must be reduced by 95 weight-percent, or total organic HAP or TOC must be reduced to a concentration of 20 parts per million by volume, whichever is less stringent.

15. Section 63.1104 is amended by:

a. Revising the last sentence of paragraph (a);

b. Revising the first sentence of paragraph (e) introductory text;

c. Revising the first sentence of paragraph (f)(1);

d. Revising the last sentence of paragraph (k) introductory text; and

e. Revising the first sentence of paragraph (m)(2)(i) introductory text.

The revisions are to read as follows:

§ 63.1104 Process vents from continuous unit operations: applicability assessment procedures and methods.

(a) * * * The owner or operator of a process vent is not required to determine the criteria specified for a process vent that is being controlled (including control by flare) in accordance with the applicable weight-percent, TOC concentration, or organic HAP concentration requirement in § 63.1103.

* * * * *

(e) *TOC or Organic HAP concentration.* The TOC or organic HAP concentrations shall be determined based on paragraph (e)(1), (e)(2), or (k) of this section, or any other method or data that have been validated according to the protocol in Method 301 of appendix A of 40 CFR part 63. * * *

* * * * *

(f) * * *

(1) Use Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate. * * *

* * * * *

(k) * * * If a process vent flow rate or process vent organic HAP or TOC concentration is being determined for comparison with the applicable flow rate or concentration value presented in the tables in § 63.1103 to determine control requirement applicability, engineering assessment may be used to determine the flow rate or concentration for the representative operating conditions expected to yield the highest flow rate or concentration.

* * * * *

(m) * * *

(2) *Process change.* (i) Whenever a process vent becomes subject to control requirements under this subpart as a result of a process change, the owner or operator shall submit a report within 60 days after the performance test or applicability assessment, whichever is sooner. * * *

* * * * *

16. Add § 63.1105 to read as follows:

§ 63.1105 Transfer racks.

(a) *Design requirements.* The owner or operator shall equip each transfer rack with one of the control options listed in paragraphs (a)(1) through (4) of this section.

(1) A closed vent system designed to collect HAP-containing vapors displaced from tank trucks or railcars during loading and to route the collected vapors to a flare. The owner or operator must meet the requirements of § 63.982(a)(3).

(2) A closed vent system designed to collect HAP-containing vapors displaced from tank trucks or railcars during loading and to route the collected vapors to a control device other than a flare. The owner or operator must meet the requirements of § 63.982(a)(3).

(3) Process piping designed to collect the HAP vapors displaced from tank trucks or railcars during loading and to route the collected vapors to a process where the HAP vapors shall predominantly meet one of, or a combination of, the ends specified in paragraphs (a)(3)(i) through (iv) of this section or to a fuel gas system. The owner or operator must meet the requirements of § 63.982(a)(3).

(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 HAP;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(4) Process piping designed to collect the HAP vapors displaced from tank trucks or railcars during loading and to route the collected vapors to a vapor balance system. The vapor balance system must be designed to route the

collected HAP 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 collected HAP vapors to a process.

(b) *Operating requirements.* An owner or operator of a transfer rack shall operate it in such a manner that emissions are routed through the equipment specified in paragraph (a) of this section.

(c) *Control device operation.* Whenever HAP emissions are vented to a control device used to comply with the provisions of this subpart, such control device shall be operating.

(d) *Tank trucks and railcars.* The owner or operator shall load HAP-containing materials only into tank trucks and railcars that meet the requirement in paragraph (d)(1) or (2) of this section and shall maintain the records specified in paragraph (i) of this section.

(1) Have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or

(2) Have been demonstrated to be vapor-tight within the preceding 12 months as determined by the procedures in paragraph (h) of this section. Vapor-tight means that the pressure in a truck or railcar tank will not drop more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals.

(e) *Pressure relief device.* The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the loading equipment of each tank truck or railcar shall begin to open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to the requirements of this paragraph.

(f) *Compatible system.* The owner or operator of a transfer rack subject to the provisions of this subpart shall load HAP-containing materials only to tank trucks or railcars equipped with a vapor collection system that is compatible with the transfer rack's closed vent system or process piping.

(g) *Loading while systems connected.* The owner or operator of a transfer rack subject to this subpart shall load HAP-containing material only to tank trucks or railcars whose collection systems are connected to the transfer rack's closed vent system or process piping.

(h) *Vapor tightness procedures.* For the purposes of demonstrating vapor tightness to determine compliance with paragraph (d)(2) of this section, the procedures and equipment specified in paragraphs (h)(1) and (2) shall be used.

(1) The pressure test procedures specified in Method 27 of appendix A to 40 CFR part 60.

(2) A pressure measurement device that has a precision of ± 2.5 millimeters of mercury or better and that is capable of measuring above the pressure at which the tank truck or railcar is to be tested for vapor tightness.

(i) *Recordkeeping.* The owner or operator of a transfer rack shall record that the verification of DOT tank certification or Method 27 of appendix A to 40 CFR part 60 testing required in § 63.84(c) has been performed. Various methods for the record of verification can be used, such as a check-off on a log sheet, a list of DOT serial numbers or Method 27 data, or a position description for gate security showing that the security guard will not allow any trucks on-site that do not have the appropriate documentation.

17. Subpart YY is amended by adding § 63.1114 to read as follows:

§ 63.1114 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in § 63.1103(a)(3), (b)(3) through (5), (c)(3), (d)(3), (e)(3), (f)(3), (g)(3) and (4), and (h)(3) under § 63.6(g). Follow the requirements in § 63.1113 to request permission to use an alternative means of emission limitation. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) [Reserved]

(3) Approval of major changes to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(4) Approval of major changes to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major changes to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7215–8]

RIN 2060–AH68

National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule; amendments.

SUMMARY: The EPA is taking direct final action to amend the ''generic'' maximum achievable control technology (MACT) standards to clarify the agency's intent concerning dry spinning spandex production processes. The national emission standards for hazardous air pollutants (NESHAP) for the Spandex Production source category, along with the NESHAP for three other source categories, are being included in the Generic MACT rule in this issue of the **Federal Register**.

DATES: The direct final rule will be effective on September 25, 2002 without further notice, unless significant adverse comments are received by August 12, 2002, or by August 26, 2002 if a public hearing is requested. See the proposed rule in this issue of the **Federal Register** for information on the hearing. If we receive timely adverse comments, we will withdraw this direct final rule and take final action pursuant to the proposed rule.

ADDRESSES: *Comments.* By U.S. Postal Service, send comments (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–98–25, U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. In person or by courier, deliver comments (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–98–25, U.S. EPA, 401 M Street, SW., Washington DC 20460. The EPA requests that a separate copy of each public comment be sent to the contact person listed below (*see* **FOR FURTHER INFORMATION CONTACT**). Comments may