

Environmental Protection Agency

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Part III

Environmental Protection Agency

40 CFR Part 61

National Emission Standards for
Hazardous Air Pollutants; Benzene Waste
Operations; Final Rule and Proposed
Rule

**ENVIRONMENTAL PROTECTION
AGENCY**
40 CFR Part 61
[AD-FRL-4109-6]
**National Emission Standards for
Hazardous Air Pollutants; Benzene
Waste Operations**
AGENCY: Environmental Protection
Agency (EPA).

ACTION: Final rule.

SUMMARY: Today EPA is staying the effectiveness of subpart FF of 40 CFR part 61, the national emission standards for hazardous air pollutants (55 FR 8292, March 7, 1990), as applied to all sources originally subject to the rule. The affected sources are chemical manufacturing plants, coke by-product recovery plants, petroleum refineries, and facilities at which waste management units are used to treat, store, or dispose of waste generated by chemical manufacturing plants, coke by-product plants, or petroleum refineries.

The EPA is staying the effectiveness of subpart FF until it takes final action on clarifying amendments to subpart FF. Clarifying amendments to subpart FF are proposed in a separate notice of proposed rulemaking also published in today's Federal Register. The proposed clarifying amendments will not change the basic control requirements of the current rule or the level of public health protection it provides. The EPA has committed to taking final action on the proposed clarifying amendments on or before December 1, 1992.

DATES: Effective February 24, 1992, EPA hereby stays the effectiveness of Subpart FF of 40 CFR part 61 for each chemical manufacturing plant, coke by-product recovery plant, petroleum refinery, and facility at which waste management units are used to treat, store, or dispose of waste generated by chemical manufacturing plants, coke by-product recovery plants, or petroleum refineries, from February 24, 1992 until EPA takes final action on amendments to subpart FF of 40 CFR part 61. Under section 307(b) of the Clean Air Act, judicial review of this final action is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this action.

ADDRESSES: Docket. Docket No. A-89-06, containing supporting information used in developing the final action, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air

Docket Section, Waterside Mall, room 1500, 1st Floor, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT:

Eric L. Crump, Office of Air Quality Planning and Standards, Chemicals and Petroleum Branch (MD-13), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5032.

SUPPLEMENTARY INFORMATION:
A. Overview

On May 7, 1990 (55 FR 8292), EPA promulgated under Section 112 of the Clean Air Act ("the Act"), 42 U.S.C. 7412, national emission standards for hazardous air pollutants (NESHAP) controlling emissions of benzene to the ambient air from waste operations (subpart FF of 40 CFR part 61).

The approach selected for the final rule was to base applicability of the control requirements on the total annual benzene quantity (TAB) in wastes managed at a facility. Facilities with a TAB of 10 megagrams per year (mg/yr) or more, calculated as specified in the rule, must treat the waste streams specified in the rule such that benzene in the waste streams is either below 10 parts per million (ppm) or reduced by 99 percent. Facilities with a TAB of less than 10 megagrams per year are exempt from the control requirements of subpart FF, but must comply with reporting and recordkeeping requirements. A period of 2 years was granted in the final standards to meet the control requirements of subpart FF. March 7, 1992, would have been the date by which sources would have been required to be in compliance.

Following promulgation of the rule, there were indications that the rule was poorly understood by affected facilities. Questions and comments by affected industry, consulting firms, and local, State and federal regulatory officials indicated widespread misunderstanding of many provisions of the rule. For example, a common point of confusion is how to estimate TAB for a facility, the basic criterion that determines whether the control requirements of the rule apply. Based on these and other considerations, EPA concluded that action should be taken to clarify the rule. Clarifications to the rule are proposed in a notice of proposed rulemaking that appears elsewhere in today's Federal Register.

A notice of proposed rulemaking proposing to stay the effectiveness of subpart FF was published in the Federal Register on December 9, 1991 (56 FR 64217). The public comment period on

this notice of proposal was from December 9, 1991 to January 8, 1992. All the comments submitted on the notice of proposed stay have been considered by the EPA in developing this notice of final rulemaking issuing the stay. Twelve comment letters were received. The commenters included companies affected by the rule, trade associations, and an environmental group. Comments were made on the proposed stay of effectiveness, anticipated clarifications to subpart FF, and on the development of the policy for issuing waivers of compliance for the amended rule.

Only one comment was received objecting to the proposed stay. The commenter objecting to the proposed stay contends that EPA does not have the authority to issue a stay of effectiveness longer than 90 days in duration. As discussed in the Response to Comments section of this preamble, EPA believes that it does have the authority to issue a stay of effectiveness for subpart FF. Therefore, in this notice of final rulemaking the Agency is issuing a stay of effectiveness for subpart FF. Concurrent with the issuance of this stay, EPA is proposing clarifying amendments in a separate notice of proposed rulemaking in today's Federal Register.

The following paragraphs describe the factors that led EPA to propose a stay of effectiveness for subpart FF, summarize comments submitted on the December 9, 1991 notice of proposed stay, and present EPA's responses to those comments.

B. Background to the Stay Proposal
Evidence of Confusion About the Current Rule

As discussed in the notice of proposed rulemaking proposing the stay, several types of evidence indicated that affected sources misunderstood the promulgated standards. These indicators include direct conversations and correspondence with the regulated community and EPA, review of the 90-day reports submitted under the existing rule, and litigation that was filed against the EPA by several separate potentially affected parties. Following promulgation of the rule, numerous telephone calls and letters to EPA headquarters and regional offices requested explanation of the rule. These inquiries have continued to the present, and suggest widespread confusion on many key aspects of the rule. Because so many inquiries were received, EPA included sessions on the NESHAP for benzene waste operations in a workshop on air emission standards issued under the Resource Conservation

and Recovery Act (RCRA). The workshop was presented in all 10 EPA regions to persons from industry, consulting firms, and State and Federal Governments. Questions and comments from workshop attendees confirmed widespread misunderstanding of many basic provisions of the rule.

Further, a review of the 90-day reports submitted by industrial facilities provided additional evidence of confusion about the rule. These reports were required to be submitted to EPA by each facility subject to the rule within 90 days of March 7, 1990, the promulgation date of the original standard. The incorrect assumptions evident from many of the responses indicate that many facilities may have concluded incorrectly that they are not subject to the control requirements of subpart FF, when in fact, EPA intended them to be controlled in order to meet the NESHAP risk protection goals.

Finally, several lawsuits have been filed against EPA that focus on lack of clarity in the rule. On May 7, 1990, the American Petroleum Institute (API) filed a petition for review of the promulgated standard in the U.S. Court of Appeals for the District of Columbia Circuit, *American Petroleum Institute v. EPA*, 90-1238 (D.C. Circuit). On the same date, API submitted to the Agency a petition for reconsideration of the rule, and on May 30, 1991, submitted a supplement to the petition for reconsideration. On June 3, 1991, Conoco, Inc. and Sun Refining and Marketing Company (Conoco) filed actions in the U.S. Court of Appeals for the District of Columbia Circuit, *Conoco, Inc. and Sun Refining and Marketing Company v. EPA*, 91-1266 (D.C. Cir.), and in the U.S. District Court for the District of Montana, *Conoco, Inc. and Sun Refining and Marketing Company v. EPA*, No. CV-91-113-BLG-RAW (D. Mont.). Both these suits (including the supplement to API's petition for reconsideration) concern issues related to facility applicability that the litigants believe could not be resolved by simply reading the preamble and regulation.

Extent of Projected Non-Compliance

Trade associations representing facilities subject to Subpart FF and individual companies have indicated to EPA that, because they have only just begun to understand the intent of EPA with regard to the standards, compliance by March 7, 1992 is unlikely, if not impossible for many facilities. The API petition for reconsideration discussed at length that industry-wide compliance could not be timely. To support this claim, API subsequently conducted two surveys of its member companies to determine the extent of

the petroleum refining industry's inability to comply with subpart FF by March 7, 1992. According to API, these surveys indicated that from 40 to 52 refineries subject to the control requirements of subpart FF, which represent roughly 50 percent of U.S. refining capacity, would be unable to comply by March 7, 1992. Further, the surveys indicated that, to a large degree, uncertainty about applicability of the rule has had the effect of lengthening the time needed by facilities to comply.

The EPA's Approach to Resolving Confusion About the Current Rule

To resolve the confusion concerning the current rule, the Agency has elected to stay the current rule while clarifying amendments are developed. The EPA believes that confusion about the rule regarding applicability determinations has led many facilities to assume incorrectly that controls are not required. Some facilities have realized only recently that controls must be installed to comply with the rule. Given the substantial confusion about basic rule requirements, it is the Agency's view that to cite these facilities for noncompliance with subpart FF after March 7, 1992, would unfairly penalize them. The approach selected will clarify the rule, but not penalize facilities for being confused about the original rule language.

Subpart FF is being stayed until EPA takes final action on clarifying amendments to the rule. In a separate notice of proposed rulemaking in today's **Federal Register**, clarifying amendments are proposed. The EPA has committed to taking final action on the proposed amendments on or before December 1, 1992.

Upon promulgation of the rule clarifications, facilities will have 90 days in which to comply with Subpart FF as amended. Facilities unable to comply within 90 days may apply for a waiver of compliance under § 61.10 of the General Provisions to 40 CFR part 61. As specified in the General Provisions, the Administrator may grant a waiver for up to 2 years past the promulgation date of the rule. To qualify for a waiver of compliance, facilities should first have demonstrated a good faith effort to comply with the rule. Second, to ensure that the health and environmental protection goals of the rule are not compromised during any waiver period granted for the amended rule and during the stay, the Agency plans to seek a commitment from each waiver applicant to take actions that will mitigate the benzene emissions lost due to delayed compliance.

Advantages of the Approach Selected to Clarify the Rule

The approach selected to resolve confusion concerning the requirements of subpart FF will maintain the stringency of the current rule and the level of public health and environmental protection it provides. At the same time, it will not unfairly penalize affected sources that would be out of compliance due to confusion. This approach will also promote the implementation of comprehensive multimedia control strategies. These strategies may take longer to implement than a strategy focussed on complying with Subpart FF alone, but are the most efficient and effective means of addressing releases to all media.

Another advantage of the approach is that, through the waiver process, it offers the opportunity for the Agency to obtain commitments for actions that will mitigate the benzene emissions lost due to delayed compliance. Finally, this approach will lead to a resolution of the litigation filed against EPA on subpart FF. In settlement agreements signed with EPA, the API, Conoco, and Sun have agreed to dismiss their lawsuits against EPA if clarifying amendments to the current rule are issued following the approach described above.

Due to the long lead times needed to design and install the control systems necessary to comply with subpart FF, and the comprehensive multimedia approach being taken by many facilities, EPA expects that facilities will continue their efforts toward compliance even while the rule is stayed. This means that a stay of the rule while clarifications are made will not necessarily result in a greater amount of benzene emissions and exposure than would occur without a stay. For facilities needing longer than 90 days beyond the effective date of the amended rule to comply, the Agency will seek commitments for mitigating actions to compensate for benzene emissions that occur because of delayed compliance and ensure public health protection during the waiver period.

C. Comments and Responses to Comments

Comments on the proposed stay of effectiveness were received from industry, trade associations, and an environmental group. A total of 12 letters were received. Most of these contained multiple comments. A summary of the comments received indicating action taken by EPA to respond to each comment was prepared by EPA and placed in the docket for this

action (Air Docket No. A-89-06, section VII-B).

The comments received on the notice of proposed stay and the EPA responses to them are discussed below. Many comments received addressed the summary of proposed rule clarifications outlined in the notice of proposed stay and the procedures for applying for a waiver of compliance. Both of these issues were discussed in the notice of proposed stay only for general information and are not within the scope of this rulemaking action. Issues concerning rule clarifications will be addressed in that rulemaking. (See separate notice of proposed rulemaking also published in today's Federal Register.) Issues concerning waivers of compliance will be addressed on a case-by-case basis under general guidance to be developed by EPA. Nevertheless, a brief response to certain comments is provided.

Comments on the Proposed Stay of Effectiveness for Subpart FF.

Comment: Nine letters were received indicating support for the proposed stay. These included statements of general support for the stay and specific comments on the need for the stay. Two commenters stated their belief that public health and the environment will be adequately protected during the stay. Three commenters commented favorably on the flexibility the stay provides to encourage integrated, multimedia approaches to implement multiple regulatory requirements that might encompass emissions outside the scope of the benzene waste NESHAP. An industry trade association, also a litigant, restated their support for the stay as indicated in their settlement agreement. Another commenter stated their support for one litigant's position on the stay. Two trade associations (writing under one comment response) and one corporation stated that the stay is essential. Six commenters stated their belief that more time is needed to adequately implement the regulations given the additional clarification as to EPA's intent. One commenter stated that to subject facilities to the March 7, 1992, deadline when they reasonably believed themselves to be exempt from the rule, would unfairly penalize them.

Response: For the reasons described in the notice of proposal, EPA agrees that subpart FF should be stayed. Today's final rulemaking stays the requirements of subpart FF until final action is taken by the Agency on the clarifying amendments.

Comment: One commenter contends that EPA lacks the legal authority to issue a stay for more than 3 months.

Specifically, the commenter contends that section 307(d)(7)(B) of the Clean Air Act limits the Agency's authority to stay the effectiveness of a rule to 3 months, and that this provision overrides any general authority of the Agency.

Response: The EPA disagrees with the commenter's contention. First, section 307(d)(7)(B) is directed towards raising objections to a rule after promulgation under specific circumstances. If reconsideration is warranted under those circumstances, the Administrator may, without going through the formal notice and comment requirements of section 307(b) or other Administrative Procedure Act requirements, administratively stay the rule. It is only logical that the authority to issue an administrative stay, without notice and comment, should be limited in time. Nothing in the provision, however, can be read to override the Agency's general rulemaking authority under the Clean Air Act. Rather, section 307(d)(7)(B) should be read as a limited exception to the notice and comment rulemaking requirements of the Clean Air Act. The Agency has not implemented this exception in proposing a stay of effectiveness for subpart FF. Consequently, a stay in this case is not necessarily limited to 3 months.

The commenter's contention that the rules of statutory construction support its position that the proposed stay is illegal is also without merit. While EPA agrees that it is a general principle of statutory construction that specific provisions should govern more general, that rule is inapposite here. As noted above, the language of section 307(d)(7)(B) is really a grant to the Agency to administratively stay a rule for a limited time and for a specific purpose without notice and comment rulemaking. It is not a constraint on the Agency's general rulemaking authority under section 301 of the Act. Moreover, EPA's interpretation of the provision is consistent with another fundamental principle of statutory construction—that two provisions of a statute should be read in harmony wherever possible. Thus, rather than being inconsistent with the principles of statutory construction, EPA's reading is wholly consistent with those principles.

Comment: One commenter, also a litigant on subpart FF, claimed that the proposed stay was not pursuant to their signed settlement agreement with the Agency, because the dates by which final action was required were different, and because the commenter did not agree to provide mitigating environmental benefits as a condition for the waiver.

Response: The dates stated in the commenter's settlement agreement require final Agency action on rule clarifications on or before March 2, 1993. The date for final action on rule clarifications stated in the proposed stay is on or before December 1, 1992. This commitment is not inconsistent with the commenter's settlement agreement for action on or before March 2, 1993.

Further, the Agency does not agree with the commenter's contention that EPA's stated policy objective of receiving a commitment for mitigative actions as a condition of any waiver of compliance for the amended rule cannot be applied to the commenter. The Agency has the obligation and authority to include conditions in a waiver of compliance that are necessary, in the Administrator's judgement, to protect public health during the waiver period. See 40 CFR 61.11. The mitigation requirements for waivers of compliance from this NESHAP are simply an exercise of the Agency's discretion under that section. (Also see "Comments on Policy for Granting Waivers of Compliance" section of this preamble for further discussion of EPA's authority.)

Each waiver application received will be reviewed by the Agency and conditions included in any waiver granted on a case-by-case basis. The fact that the general policy to be followed by the Agency in granting waivers of compliance was not included as an attachment to all settlement agreements in no way forfeits the Agency's authority and obligation to include conditions necessary to protect public health in any waiver granted.

Comment: One commenter supported the stay only for those companies making a good faith effort to comply with the originally promulgated standards. The comment claimed that the company has invested significant funds into a compliance project that would have complied by the March 7, 1992, deadline. Further, the company claims that their current accurate understanding of the intent of the rule means additional funds must be spent, and significant expenditures in new equipment could be rendered useless in complying with the standard. The company fears that even though they have made a good faith effort to comply, they will now be required to undertake mitigating actions under the waiver process because they cannot comply with the amended rule within 90 days of the expected promulgation date.

Response: The Agency commends the efforts of this commenter to comply by the March 7, 1992 deadline, because the

net result is decreased emissions of benzene from waste operations at the site. Further, the Agency believes other companies also have already made significant progress towards decreasing these emissions at their facilities. Again, the EPA emphasizes that the rule clarifications proposed separately in this *Federal Register* today are not changes to the substantive requirements of the rule, but are more detailed explanations of EPA's original intent as to how the rule should be implemented to meet the NESHAP risk protection goals.

Assuming that the commenter correctly understood the original rule, progress towards compliance should not be negated by the proposed rule clarifications. Any additional time beyond the effective date of the amended rule necessary to achieve complete compliance by the commenter should be substantially less than for those facilities that did not begin efforts towards compliance until recently. Thus, if a waiver of compliance application is submitted by the facility, minimal mitigation of benzene emissions should be necessary based on the decrease in benzene emissions from waste operations that will have already been achieved at the facility.

If the commenter incorrectly interpreted the original regulation, the stay allows the commenter to not be deemed out of compliance as of March 7, 1992, but rather to have time to institute the modifications to their compliance program to attain compliance in a timely manner. Beyond this, the good faith effort demonstrated to comply with the original rule will have a positive bearing on the Agency's consideration of a waiver application.

Comments on Specific Rule Changes

As a part of some comment letters on the stay of effectiveness, several commenters discussed technical issues regarding what they believed to be the rule clarifications based on the settlement agreements signed by the Agency. The rule clarifications are proposed for public comment in a separate notice of proposed rulemaking that appears elsewhere in this issue of the *Federal Register*. The Agency intends to consider all comments received on the proposed clarifications at the same time and to respond to these comments in the notice of final rulemaking. Therefore, the EPA will retain all rule clarification comments that were submitted as part of comments on the proposed stay and will address them with all comments received on the proposed rule clarifications published today.

Comments on the Policy for Granting Waivers of Compliance for the Amended Rule

Comment: One commenter agreed with the concept of requiring mitigating actions from sources that seek a waiver of compliance. The commenter discussed specific details of how the mitigating actions should be considered by EPA in assessing waiver applications. Another commenter argued that non-air mitigative actions should not, and could not be considered by EPA in granting waivers of compliance.

Response: Under section 112(c)(1)(B)(2) of the Clean Air Act as amended in 1977, the EPA Administrator has the authority to grant a waiver of compliance for a source for up to 2 years beyond the effective date of a standard "if he finds that such period is necessary for the installation of controls and that steps will be taken to assure that the health of persons will be protected from imminent endangerment." Regulations to implement this authority are promulgated in §§ 61.10 and 61.11 of the General Provisions of 40 CFR part 61. Section 61.11(b)(4) states that a waiver of compliance granted by EPA "will specify any additional conditions which the Administrator determines necessary to assure installation of the necessary controls within the waiver period and to assure the health of persons during the waiver period." Nothing in the statutory or regulatory language would preclude the Administrator from taking factors such as contamination to other media into account in deciding whether to grant the waiver. Indeed, the statutory and regulatory language is broad enough to authorize EPA to take steps to protect the "health of persons" during the waiver period.

For sources unable to comply with subpart FF by the effective date of the amended rule, EPA has identified reasonable and necessary measures that should be taken to protect public health by sources that receive waivers. Due to the extent of non-compliance projected and to provide information to affected sources for planning purposes, the EPA has articulated in advance the general policy that will be used in considering waiver applications for subpart FF. Guidance is being developed by EPA that will more specifically articulate this policy and instruct sources on information that should be included in a waiver application.

The EPA views its articulation of a waiver policy for subpart FF as an appropriate exercise of its authority to specify conditions necessary to protect public health during the period of any waiver granted for this rule. Waiver

applications for subpart FF will be considered by EPA on a case-by-case basis and appropriate conditions included in each waiver issued.

D. Miscellaneous

1. Paperwork Reduction Act

There are no information collection requirements associated with this stay of effectiveness.

2. Executive Order 12291

Under Executive Order 12291, EPA is required to judge whether this regulation is a "major rule" and therefore subject to certain requirements of the Order. The EPA has determined that issuing a stay for subpart FF will result in none of the adverse economic effects set forth in section I of the Order as grounds for finding a regulation to be a "major rule." This regulation should not be considered major because its annual effect on the economy is not expected to exceed \$100 million, the regulation does not significantly increase process or production costs, and the regulation does not cause significant adverse effects on domestic competition, employment, investment, productivity, innovation, or competition in foreign markets.

The Agency has not conducted a Regulatory Impact Analysis (RIA) of this regulation because this action does not constitute a major rule.

3. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis", which describes the effect of the proposed rule on small business entities. However, section 604(b) of the Regulatory Flexibility Act provides that analysis not be required when the head of an Agency certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.

This rule to stay 40 CFR part 61, subpart FF, will have the effect of easing the burdens associated with immediate compliance with subpart FF, and I, therefore, certify that this rule will not have significant economic impact on a substantial number of small entities.

List of Subjects in 40 CFR Part 61

Air pollution control, Arsenic, Asbestos, Benzene, Beryllium, Coke oven emissions, Hazardous substances, Intergovernmental relations, Mercury, Radionuclides, Reporting and recordkeeping requirements, Vinyl chloride, Volatile hazardous air pollutants.

Dated: February 24, 1992.
William K. Reilly,
Administrator.

For all of the reasons given in the preamble, part 61 of title 40 of the Code of Federal Regulations is amended as follows:

PART 61—[AMENDED]

1. The authority citation for part 61 continues to read as follows:

Authority: Secs. 101, 112, 114, 116, 301, Clean Air Act as amended (42 U.S.C. 7401, 7412, 7414, 7416, 7601).

2. Effective February 24, 1992, subpart FF of part 61 is amended by adding § 61.359 to read as follows:

§ 61.359 Stay of effective date.

The effective date for subpart FF is stayed for each chemical manufacturing plant, coke by-product recovery plant, petroleum refinery, and facility at which

waste management units are used to treat, store, or dispose of waste generated by chemical manufacturing plants, coke by-product recovery plants, or petroleum refineries, until the date final action is taken with respect to clarifying amendments to subpart FF. The Environmental Protection Agency will publish any such final action in the Federal Register.

[FR Doc. 92-4770 Filed 3-4-92; 8:45 am]

BILLING CODE 6560-50-M

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 61****[AD-FRL-4109-7]****National Emission Standards for Hazardous Air Pollutants; Benzene Waste Operations****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Notice of proposed rule.

SUMMARY: On March 7, 1990 (55 FR 8292), EPA promulgated national emission standards for hazardous air pollutants for benzene emissions from benzene waste operations, subpart FF of 40 CFR part 61. Sources affected by subpart FF include chemical manufacturing plants, coke by-product recovery plants, petroleum refineries, and facilities at which waste management units are used to treat, store, or dispose of waste generated by chemical manufacturing plants, coke by-product recovery plants, or petroleum refineries.

Today the Agency is proposing amendments to subpart FF designed to clarify provisions of the rule that have been widely misunderstood by affected sources. The proposed clarifying amendments would not change the basic control requirements of the rule or the level of public health and environmental protection it provides.

A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the proposed amendments to subpart FF.

DATES: *Comments.* Comments must be received by EPA on or before May 4, 1992.

Public Hearing. If anyone contacts EPA requesting to speak at a public hearing by March 16, 1992, a public hearing will be held on April 6, 1992 beginning at 10 a.m. A request for a hearing may be made by calling Ms. Lina Hanzely at (919) 541-5673.

Request to Speak at Hearing. Persons wishing to present oral testimony must contact Ms. Lina Hanzely at (919) 541-5673 by March 16, 1992.

ADDRESSES: *Comments.* Comments should be submitted (in duplicate if possible) to Air Docket Section (LE-131), Attention, Docket No. A-89-06, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

Public Hearing. If requested, a public hearing will be held at EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina. Persons interested in attending the hearing or

wishing to present oral testimony should contact Ms. Lina Hanzely at (919) 541-5673.

Docket. Docket No. A-89-06, containing supporting information used in developing the proposed amendments, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket Section, Waterside Mall, room 1500, 1st Floor, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Robert B. Lucas, Office of Air Quality Planning and Standards, Chemicals and Petroleum Branch (MD-13), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-0884.

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

- I. Background and Overview
- II. Proposed Amendments to Clarify Facility Applicability
- III. Other Proposed Clarifying Amendments
- IV. Compliance Dates for Amended Rule
- V. Policy for Granting Waivers of Compliance
- VI. Administrative Requirements

I. Background and Overview

On March 7, 1990 (55 FR 8292), EPA promulgated under section 112 of the Clean Air Act ("the Act"), 42 U.S.C. 7412, national emission standards for hazardous air pollutants (NESHAP) controlling emissions of benzene to the ambient air from waste operations (subpart FF of 40 CFR part 61). The NESHAP for benzene waste operations is applicable to owners or operators of chemical manufacturing plants, coke by-product recovery plants, and petroleum refineries. In addition, this subpart applies to owners and operators of facilities at which waste management units are used to treat, store, or dispose of waste generated by chemical plants, coke by-product recovery plants, or petroleum refineries.

Elsewhere in today's Federal Register, EPA has promulgated a stay of effectiveness of subpart FF until EPA takes final action on clarifying amendments to subpart FF. As indicated in the notice promulgation and the notice of proposal (56 FR 64382, December 9, 1991) of the stay, EPA has learned that there is widespread confusion among affected industries concerning key provisions of the rule. Misunderstanding of criteria for applying controls to facilities and waste streams within facilities had led numerous affected facilities to conclude that they were not required to install controls, when, in fact, EPA intended

them to do so in order to meet the NESHAP goals for health risk protection.

With today's notice, EPA is proposing clarifying amendments to subpart FF. Following a review and consideration of comments received on today's proposed rulemaking, EPA will take final action on the proposed amendments on or before December 1, 1992. The EPA has agreed to take final action on or before this date in a settlement agreement filed in connection with litigation on subpart FF. See *API v. EPA*, No. 90-1238 (D.C. Circuit) (Settlement Agreement). Facilities subject to the rule would be required to be in compliance with all provisions of the amended rule within 90 days following promulgation, unless a waiver of compliance is obtained under §§ 61.10 and 61.11 of the General Provisions to 40 CFR part 61.

Additional information on the dates for compliance with the rule is presented in section IV of this preamble. The policy for granting waivers of compliance for the amended rule is discussed in section V.

The clarifying amendments to subpart FF that are being proposed today are discussed below. In accordance with section 112(q) of the Clean Air Act as amended in 1990, these amendments are being proposed under the authority of the Clean Air Act prior to enactment of the Clean Air Act Amendments of 1990. They are intended to clarify existing provisions of subpart FF, and would not change the basic control requirements of the rule or the level of public health and environmental protection it provides.

II. Proposed Amendments to Clarify Facility Applicability

The subpart FF NESHAP for benzene waste operations was promulgated under the authority of section 112 of the Act prior to its amendment by the Clean Air Act Amendments of 1990 ("the 1990 Amendments"). Accordingly, the rule was designed to meet NESHAP goals for protection of public health as described in the March 7, 1990 notice of final rulemaking (55 FR 8299).

In the analysis performed to support the development of subpart FF, EPA determined that the NESHAP risk protection goals could be exceeded if benzene emissions from benzene waste operations were not controlled. Rather than require all facilities to install controls, EPA structured the applicability criteria of the rule in a way that would identify that subset of facilities where controls were needed.

The approach selected for the final rule was to base facility applicability of the control requirements on the total

annual benzene quantity in all aqueous waste streams (TAB). The procedure for determining a facility's TAB is specified in §61.355(a) of the rule.

This TAB value is then compared to a facility threshold cutoff in the rule of 10 megagrams per year (Mg/yr). If the TAB is less than 10 Mg/yr, the facility is exempt from the control requirements of subpart FF, but must comply with the reporting and recordkeeping requirements of the rule. At those facilities with a TAB of 10 Mg/yr or greater, all benzene-containing waste streams (including those with less than 10 percent water) must be controlled unless it is demonstrated that exemption criteria in the rule for individual streams are met.

The general criterion for individual waste streams is that all streams containing greater than 10 parts per million by weight (ppmw) annual average benzene concentration must be controlled. The basic control requirement is to manage the waste streams in units equipped with air emission controls and to treat the streams such that the benzene in them is removed or destroyed to below 10 ppmw, or by 99 percent. In addition, treatment processes must be controlled for air emissions.

As stated in the preamble to the final rule promulgated March 7, 1990, EPA's analysis to support the development of the rule showed that including only aqueous wastes in the TAB calculation would adequately distinguish those plants where control of all waste streams was needed to meet NESHAP health risk goals from those that did not need controls. Furthermore, the analysis showed that applying controls to all waste streams (including organic streams) with a benzene concentration of 10 ppmw or more at all facilities with a TAB equal to or greater than 10 Mg/yr reduces the health risks from all facilities such that the NESHAP risk protection goals are met. This analysis of the impacts of the rule included assumptions based on EPA's intent on how the rule should be implemented. It is critical that facilities seeking to be exempt from control requirements determine the applicability of controls consistent with the intent of the rule as structured. Otherwise attainment of the NESHAP risk protection goals will be jeopardized. As discussed in the notices of proposal and promulgation of the stay of effectiveness of subpart FF, many facilities have incorrectly concluded, due to confusion on facility applicability determinations, that controls are not required.

The amendments proposed today are designed to clarify EPA's intent on

facility applicability. The amendments include clarifications on the following specific points on which there has been confusion concerning facility applicability: (1) Which wastes are included in the TAB calculation, (2) the definition of the point of generation, and (3) the prohibition against waste treatment to lower TAB below the 10 Mg/yr applicability threshold. These proposed clarifications are discussed in the following sections.

A. Wastes Included in the TAB Calculation for Applicability of Controls

For the purposes of the benzene waste operations NESHAP, waste is defined broadly as "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." This broad definition of waste is essentially the same as that used by EPA in other air standards (40 CFR part 60, subpart Kb) promulgated under the Clean Air Act.

Unfortunately, this definition has caused confusion among affected facilities that are familiar with definitions of waste used in rules that regulate solid and hazardous waste management under the Resource Conservation and Recovery Act (RCRA) and in other regulations. This confusion is evident in questions that have been received by EPA since subpart FF was promulgated. Most of these questions relate to the fate of a waste after it is generated. For example, questions have been received on whether materials that are recycled, reclaimed, or sold as a raw material for another process should be included in the TAB calculation.

Materials are regulated under subpart FF based on their potential for benzene air emissions and their potential to be managed in process or waste management units not currently regulated for air emissions. The fate of a material once it is generated (i.e., whether recycled, reclaimed or sold) does not by itself determine whether it is material subject to subpart FF. Recycled or reclaimed materials will generally be subject to subpart FF unless they are recycled within a process or are directly recycled to another process.

The current rule provides general instructions for the calculation of TAB. Except for the exemptions in § 61.340, EPA intended that all aqueous materials that meet the definition of waste in the rule should be included in the TAB calculation. Section 61.355(a), which

describes how TAB shall be calculated, specifies that the annual benzene quantity shall be estimated "for each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water" (by volume). The benzene quantity for each of these streams is then summed to calculate TAB. The language of this section has been misconstrued by affected sources to suggest that the benzene in certain streams does not have to be included in the TAB calculation.

The EPA is proposing clarifying changes, consistent with the Agency's intent, to clarify that the following wastes are included in the calculation of TAB: (1) Organic wastes that become aqueous during waste management, (2) wastes exempted from control requirements (e.g., small-quantity wastes), and (3) wastes that are sold, such as spent caustic. Changes are also proposed to clarify that wastes generated by remediation activities, such as groundwater cleanup, are not included in the TAB calculation. Finally, changes are proposed to clarify that waste treatment cannot be used to reduce a facility's TAB (see section C of this preamble).

Organic Wastes That Become Aqueous

As discussed previously, applicability of the control requirements of the rule to a facility is determined based on the facility's TAB. The need to control individual waste streams at a facility subject to the control requirements of the rule (i.e., at a facility with a TAB of 10 Mg/yr or greater) is determined based on the flow-weighted annual average benzene concentration in each waste stream at the facility.

In the proposed rule published on September 14, 1989 (54 FR 38083), the benzene in all streams (including organic streams) was included in the calculation of TAB. On the basis of comments on the proposed rule, EPA changed the method of calculating TAB in the final rule such that only the benzene in those wastes containing greater than 10 percent water are included. As EPA stated in the preamble to the final rule on March 7, 1990 (55 FR 8319):

When benzene is dissolved in water, it is highly volatile and thus easily emitted. Therefore, when aqueous wastes are managed in open sources such as open sewer systems, tanks, or surface impoundments, the benzene in the waste is quickly emitted to the atmosphere. In contrast, when benzene is dissolved in organics, it is much less volatile than benzene in aqueous waste at the same concentration. Additionally, organic wastes are more likely to be transported in closed

systems such as covered tanks than are aqueous wastes which are routinely managed in open wastewater treatment tanks.

Aqueous wastes were distinguished from organic wastes in the final rule as being those wastes that contain greater than 10 percent water.

Since promulgation of the rule, there has been confusion as to whether organic wastes that are discharged to a wastewater collection system (e.g., a chemical sewer) should be counted in the calculation of TAB. Even though the preamble to the promulgated rule as cited above clearly indicates EPA's intent that all aqueous waste should be counted in the TAB, the public has been confused on this specific point.

Organic wastes discharged to wastewater collection systems are mixed with water and other aqueous wastes. Through this mixing, the wastes that were organic when they first were generated become aqueous wastes, with the attendant higher benzene emission potential. Many affected sources have failed to include the benzene content of these new aqueous wastes in the TAB calculation. Furthermore, organic wastes discharged to collection systems are generally not being managed in closed systems (i.e., closed to the atmosphere). Consequently, the high benzene emission potential of these wastes after they become aqueous is likely to be realized as actual benzene emissions.

If a waste management unit changes benzene in organic wastes to benzene in aqueous wastes, the benzene must be included in the calculation of TAB. A revision to the rule is proposed that will clarify EPA's intent that benzene in both aqueous wastes and wastes that become aqueous through mixing with other streams is counted towards a facility's TAB. The benzene in organic streams that become aqueous is counted at the point of generation of the organic waste stream (the concentration is determined prior to mixing or comingling with other wastes). This clarification would be implemented through a proposed amendment to § 61.342(a) of the rule to indicate that a facility's TAB is the sum of the annual benzene quantity for each waste stream at the facility that has an annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time such that the mixture has an annual average water content greater than 10 percent.

Wastes Exempt From Control

There are provisions in the rule under which waste streams containing benzene may be exempt from control based on low benzene concentration, low benzene quantity, or low total waste quantity. Under § 61.342(c)(2), a

waste stream is exempt from control if it is demonstrated that the annual average benzene concentration for the stream is less than 10 ppmw. A process wastewater stream may be exempt from control under § 61.342(c)(3) if it is demonstrated that the flow rate of the stream is less than 0.02 liters per minute (L/min) or the annual waste quantity of the stream is less than 10 Mg/yr.

Questions to EPA have indicated confusion over whether the benzene in wastes that meet the exemption criteria of these provisions counts toward a facility's TAB. As previously stated, EPA intends that the benzene in all aqueous wastes and wastes that become aqueous be included in the determination of TAB. This includes the benzene in individual waste streams that may be exempt from control under §§ 61.342(c)(2) and (3). The proposed amendment to § 61.342(a) includes language to clarify that the benzene in wastes exempt from control because of low waste quantity, low benzene quantity, or low benzene concentration is counted toward a facility's TAB if the waste contains over 10 percent water or if the waste is mixed at any time with water, or with other wastes, such that the resulting mixture has an annual average water greater than 10 percent water.

Materials Subject to Subpart FF That Are Sold

The EPA has been asked if the benzene in materials that are subject to the rule and that may be sold routinely (such as spent caustic) also counts toward TAB if the materials have a water content greater than 10 percent. The Agency does intend for the benzene in these materials that meet the definition of waste in the rule to be included in the determination of TAB. As noted earlier, the fact that such materials have value and can be sold does not by itself mean that the material does not meet the definition of waste in the rule. Language included in the proposed amendment to § 61.342(a) would clarify this point.

Remediation Activities

Some facilities affected by the rule have questioned whether materials subject to the rule that are generated by remediation activities, such as the excavation of contaminated soil, the pumping and treatment of contaminated groundwater, or the recovery of product from soil or groundwater, should be counted toward the TAB. Remediation activities were not specifically addressed in the final rule promulgated on March 7, 1990. Under the current language of the rule, materials generated

by remediation activities would be wastes and subject to all provisions of the rule.

Remediation activities generally fall into three categories: (1) Those required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), (2) those required by the corrective action program under RCRA, and (3) remediation actions that are undertaken voluntarily by facilities. Remediation activities under CERCLA and RCRA must address multimedia protection, including air emissions. Consequently, benzene-containing wastes generated by CERCLA or RCRA activities would be controlled as necessary to protect public health, regardless of how they are addressed in subpart FF.

Multimedia protection is not required, however, for voluntary remediation activities and EPA is concerned that benzene-containing wastes generated by voluntary actions be managed such that public health is protected. The EPA also recognizes that including the benzene contained in remediation wastes in the calculation of TAB may trigger control of an entire facility that otherwise would not require control. This would create a disincentive for facilities to undertake voluntary remediation activities.

To avoid creating this disincentive, EPA is proposing a clarification that the benzene contained in remediation wastes be excluded from the determination of facility applicability (i.e., from the calculation of TAB). However, if a facility is subject to the control requirements of subpart FF due to a facility TAB of 10 Mg/yr or greater, then remediation wastes would be subject to the control provisions. The result of this proposed clarification would be that benzene in wastes generated during remediation activities would not affect a facility's TAB, and thus whether or not a facility was subject to the control requirements of subpart FF. However, if a facility is subject to the rule due to having a TAB of 10 Mg/yr or more, the wastes from remediation activities, including wastes generated by RCRA, CERCLA, and voluntary actions, would be subject to the control provisions of the rule.

B. Definition of Point of Waste Generation

As discussed earlier, subpart FF requires that the characteristics of waste streams at their "point of generation" be used for the purposes of determining a facility's TAB. Also, the point of generation characteristics determine

whether controls are applied to individual waste streams within a facility. The EPA's intent in specifying the point of generation was twofold: (1) To establish the true emission potential of a stream, prior to any losses that occur through volatilization to the atmosphere and prior to any waste treatment, and (2) to have affected facilities calculate their TAB in a manner consistent with EPA's intended structure of the rule. The definition of point of generation referred to contact with the atmosphere only to preclude losses of benzene prior to measurements, not as a means to allow reduction in TAB. This is further discussed in section II.C of this preamble, "Prohibition on the Use of Waste Treatment to Lower TAB."

Since promulgation of the rule, there has been considerable confusion about the definition of point of generation. The sources of this confusion appear to be misinterpretation of EPA's intent, the difficulty of determining whether certain units are process or waste management units, and the different definitions in the rule of point of generation depending on the type of facility (i.e., coke by-product plant; treatment, storage, or disposal facility (TSDF); or other type of facility). In addition, there has been confusion over whether storage tanks are considered to be part of a process.

To resolve this confusion, EPA is proposing to simplify the definition of point of generation in § 61.341, focusing on the difference between process and waste management units and emphasizing that the point of generation is before waste treatment. In the proposed new definition, point of generation means "the location where the waste stream exits the process unit component or storage tank prior to handling or treatment in an operation that is not an integral part of the production process, or in the case of waste management units that generate new wastes, the location where the waste stream exits the waste management component." The point of generation, as proposed in these amendments, would be defined in the same way for all facilities subject to the rule.

In addition, there are certain distinctions made in the proposed amendments between the point of generation and the point for sampling and analysis for the purposes of TAB determinations. These distinctions would be created in proposed §§ 61.355(b) and (c), which indicate where waste quantity and flow-weighted annual benzene concentration are determined for the purposes of

determining TAB. These sections specify that determinations of waste quantity and flow-weighted annual benzene concentrations are made at the point of generation unless otherwise specified by listed exceptions. The listed exceptions address sour water streams, wastes at coke by-product plants, and wastes received from offsite by TSDF. These exceptions are discussed in more detail later in this preamble.

In the simplified definition proposed for point of generation, the distinction between what is a waste management unit and what is a process unit is made based on whether the material and the unit in which it is managed are an integral part of the production process. If a material entering a unit meets the subpart FF definition of a waste or if the primary function of a unit is to treat a waste stream, then the unit is a waste management unit, and the point of generation of the waste is a location where the waste leaves the last process unit. If the primary function of the unit is to make a product or products, then the unit is an integral part of the production process and not a waste management unit.

The EPA expects that this simplification in the rule will clarify the distinction between process and waste management units in many situations. However, it will not result in a clear distinction in every situation. Therefore, even with this change, some case-by-case determinations will still be necessary. These determinations will be made by EPA regional offices.

Consider as an example a desalter at a petroleum refinery that receives crude oil and water for processing (i.e., desalting), which is an integral step in the production process. The desalter is a process unit. However, the material leaving the desalter is typically separated into two streams, desalted crude oil and oily wastewater. Under this rule, the oily wastewater is considered a waste once it is separated from the bulk of the crude oil that is being processed in the unit, and its point of generation is where it leaves the process unit in which this primary separation is made. The oily wastewater may be further processed in other units to recover an additional quantity of the oil; however, these units are managing or treating a "waste" material and may be subject to control under this rule. The distinction is more difficult if a significant portion of the crude oil is carried over with the wastewater, and the recovery of this crude oil is an essential part of the production operation. These determinations must be made on a case-by-case basis with

consideration given to factors such as the percentage of the product that is recovered, why the specific unit was installed, and other factors.

The production of monochlorobenzene (continuous process) provides another example of the distinction between process and waste management units as it pertains to the chemical processing industry. Monochlorobenzene is produced by reacting benzene with chlorine in the presence of a ferric chloride catalyst. The crude product stream leaving the reaction vessel contains monochlorobenzene product, dichlorobenzenes, benzene, hydrogen chloride, catalyst, and inert materials. This stream is passed through a series of four distillation and stripping columns to remove (1) heavy ends, (2) hydrogen chloride, (3) benzene, and (4) dichlorobenzenes. The heavy ends, hydrogen chloride, and dichlorobenzene streams are processed to separate recoverable by-products from process wastes while the recovered benzene stream is recycled directly to the reaction vessel without any further processing.

For the purposes of subpart FF, the reaction vessel and all of the four columns that process crude monochlorobenzene product are process units. The heavy ends, hydrogen chloride, and dichlorobenzene streams are considered wastes once they are separated from the crude monochlorobenzene product stream. Although these streams are fed to other units that recover some marketable or recyclable materials, they meet the Subpart FF definition of waste and units in which these streams are handled are considered to be waste management units that may be subject to control under this rule.

The benzene recycle stream in this example could be subject to subpart FF from the point that it leaves the recovery unit to the point that it is returned to the reactor. It would be a material subject to subpart FF if it was accumulated, stored, or treated prior to being returned to a process unit. Direct (in-process, closed-loop) recycle would be considered part of the process, and in this case the stream would not be included in the TAB determination or controlled under the rule. Again, such determination will be made on a case-by-case basis, taking into account the percentage of the stream that is recovered and other factors.

As noted earlier, there are certain distinctions made in §§ 61.355 (b) and (c) of the proposed amendments between the point of generation and the point for sampling and analysis for the

purposes of TAB determinations. These are discussed further below.

Materials Subject to Subpart FF Received by TSDF From Offsite

TSDF that receive wastes from offsite generated by petroleum refineries, chemical manufacturing plants, or coke by-product recovery plants (i.e., other facilities also subject to this rule) are subject to the provisions of subpart FF. Control of these wastes at TSDF may be required in either of two ways.

First, each TSDF subject to the rule must calculate its TAB, based on the characteristics of the wastes received from petroleum refineries, chemical manufacturing plants, and coke by-product recovery plants. If the TAB calculated for a TSDF is equal to or greater than 10 Mg/yr, then the facility is subject to the control requirements of the rule for those wastes received from petroleum refineries, chemical manufacturing plants, and coke by-product recovery plants.

The EPA's intent is that TAB determinations (i.e., facility applicability determinations) for TSDF be made based on the characteristics of wastes at the point where they enter the facility. Previously, this was implemented through the definition of point of generation. In the proposed amendments, it would be implemented through specifications on where to determine annual waste quantity and benzene concentration in §§ 61.355(b)(3) and (c)(1)(i)(C). At TSDF with a TAB equal to or greater than 10 Mg/yr, the characteristics of waste streams as they enter the TSDF determine whether those waste streams must be controlled to meet the requirements of the rule.

A second way that TSDF could be affected by subpart FF is if they receive any individual waste streams subject to the rule that would have had to be controlled at the generator site. Any waste received by a TSDF from a facility subject to the rule that would have had to control that waste if it had remained onsite must be controlled at the offsite TSDF.

Consider, for example, a chemical plant with a TAB above 10 Mg/yr, which makes it subject to the control provisions of the rule. If the chemical plant ships offsite one or more of their benzene-containing waste streams that require control, the TSDF must manage these wastes in compliance with the control requirements of the rule. In this case, the need for control at the TSDF is determined based on the characteristics of the waste at the generator as opposed to the first case in which the need for control is determined based on the characteristics of the waste as it enters

the TSDF. As specified in § 61.342(e)(2) of the rule, the owner or operator shipping the waste offsite must include with each offsite waste shipment a notice stating that the waste contains benzene which is required to be managed and treated in accordance with the provisions of subpart FF.

Coke By-Product Recovery Plants Subject to Subpart L

Coke by-product recovery plants subject to subpart FF are also subject to subpart L of 40 CFR part 61. Subpart L limits benzene emissions from specific sources at furnace and foundry coke by-product recovery plants.

The EPA's intent in subpart FF is that waste stream characteristics be determined where the waste exits the last unit controlled under subpart L. The EPA's assumption in having the coverage of subpart FF begin after the last unit subject to subpart L is that units subject to subpart L are already controlled for benzene emissions to meet NESHAP goals for the protection of public health. This intent previously was implemented in the definition of point of generation. In the proposed amendments, it would be implemented through specifications on where to determine annual waste quantity and benzene concentration in §§ 61.355(b)(2) and (c)(1)(i)(B).

Since promulgation of the rule, EPA has been asked to clarify the calculation of TAB for coke by-product wastes managed in subpart L units. This included a clarification on the calculation of TAB for wastes transferred between subpart L units and between subpart L units and process units, and also the acceptability of changing waste management practices within units subject to subpart L to lower a facility's TAB.

It remains EPA's intent that TAB be determined for coke by-product wastes at the point where the waste exits the production process or the last subpart L unit in which the waste is managed. Changes in waste management within the universe of production processes and subpart L units would be an acceptable means of lowering a facility's TAB, provided that the transfer of wastes among units is accomplished in totally enclosed conveyances (e.g., hard piping). This is clarified in the proposed amendments regarding coke by-product plants in §§ 61.355 (b) and (c).

Sour Water Streams

One other potential exception to EPA's general intent on point of generation has been identified since promulgation. The EPA has determined that the rule requirements as they apply

to sour water streams treated in sour water strippers may not have been consistent with the assumptions used in the analysis performed to support development of the rule. For these streams, the benzene content at the exit of the sour water stripper was used in the analysis to determine facility applicability and to estimate emissions and health risk. With this assumption, and also assuming there would be no emissions from the stripper, the analysis indicated that the NESHAP risk protection goals would be met.

Sour water streams are those that contain sulfur compounds, usually hydrogen sulfide, or ammonia. These streams are routinely stripped to remove the ammonia and sulfur compounds at petroleum refineries and coke by-product plants. Under the definition in subpart FF, these streams are wastes and the stripping process is waste treatment. In contrast to other treatment processes, however, sour water stripping is inherently controlled for air emissions (e.g., for hydrogen sulfide). Combustion is the primary control used, and this control also results in destruction of benzene emissions by 98 percent or more.

Based on these considerations, EPA has sought to clarify in the proposed amendments the requirements of the rule as they apply to sour water streams. The proposed specifications on where to determine annual waste quantity and benzene concentration in §§ 61.355 (b)(1) and (c)(1)(i)(A) indicate that these determinations would be made at the point where the treated sour water exits the sour water stripper. Definitions for sour water and sour water stripper are proposed to be added to § 61.341 to ensure that only sour water streams managed in inherently controlled treatment units qualify for this proposed exception to EPA's general intent on point of generation.

C. Prohibition on the Use of Waste Treatment to Lower TAB

Waste treatment, except as described above for inherently controlled sour water streams and wastes managed in subpart L units, cannot be used to decrease TAB to exempt a facility from the control requirements of the rule. Although the basis for EPA's analysis and EPA's intent on determining the need for controls at a facility was discussed in the preamble to both the proposed and promulgated rule, the language of the rule has been interpreted by some facilities as allowing waste treatment as a means of reducing a facility's TAB. Furthermore, as indicated by a review of the 90-day

reports submitted by facilities describing the regulatory status of waste streams and by direct questions to EPA, some facilities believe that selectively treating waste streams such that TAB is lowered to just below 10 Mg/yr qualifies a facility for an exemption from the control requirements in the rule.

The EPA's analysis identified facilities with the potential for exceeding NESHAP health risk protection goals based on TAB prior to waste treatment. To allow facilities to use waste treatment to reduce TAB would result in increased benzene emissions and would jeopardize attainment of the NESHAP health risk protection goals for several reasons.

First, the rule is structured to ensure control of treatment processes for benzene air emissions. Treatment processes used to reduce TAB such that a facility is not subject to the control provisions of the rule would not be required to be controlled. Thus, air stripping or other processes that simply transfer benzene from the waste to the air without control could be used and benzene emissions would increase.

Second, at facilities with a TAB equal to or greater than 10 Mg/yr, all benzene-containing wastes are subject to the control requirements of the rule, not just wastes included in the determination of TAB. The TAB determination includes only the benzene in wastes containing an annual average water content of greater than 10 percent. If facilities were allowed to selectively treat aqueous wastes to lower TAB to below 10 Mg/yr, benzene emissions from organic wastes, assumed by EPA to be controlled by facilities with a TAB of 10 Mg/yr or more, would remain uncontrolled. This would result in benzene emissions greater than was intended by the rule.

Finally, as stated in the preamble to the final rule, the 10 Mg/yr level of benzene in waste used to identify facilities for control "was not intended as a facility target level" (55 FR 8321). In fact, EPA assumed that, "once controls are applied, benzene emissions at most affected plants would be reduced significantly below 10 megagrams per year" (55 FR 8329). It should be noted that, at the request of commenters on the proposed rule, EPA provided a facility target option for treating process wastewater in the final rule (§ 61.342(d)(2)). Under this option, process wastewater shall be treated to achieve a total annual benzene quantity from facility process wastewater less than 1 Mg/yr, not 10 Mg/yr. If 10 Mg/yr TAB were a target, each facility could have up to 10 Mg/yr of residual benzene in aqueous wastes. This would also

increase benzene emissions beyond what was intended.

As outlined above, benzene emissions would increase and attainment of the NESHAP risk protection goals would be jeopardized if facilities were allowed to treat to the 10 Mg/yr TAB level. For this reason, waste treatment is not allowed to reduce a facility's TAB for the purposes of subpart FF. A revision to the rule is proposed to clarify this point. The proposed revision to § 61.342(a) would clarify EPA's intent that the benzene concentration cannot be reduced before measurement by the loss of benzene from volatilization, by mixing or diluting with other materials, or by any waste treatment.

It has been suggested that the structure of the rule does not encourage reclamation and recycling of materials at affected facilities. The EPA solicits suggestions for other structures for the rule, including supporting information, that would encourage reclamation and recycling without compromising the NESHAP risk protection goals. Supporting information should clearly describe the suggested structure and document the level of protection it would provide. Approaches suggested will be considered by the Agency when taking final action on the clarifying amendments proposed today. If another structure is adopted, it would be added as an alternative to the current structure and, therefore, the number of facilities that would require controls to meet the rule would not increase.

Any structure suggested should address the benzene emission concerns including, but not limited to, characterizing and assuring adequate control of the benzene emissions that would result from aqueous waste treatment processes, non-aqueous wastes, treatment residuals, or materials sold offsite. For example, an alternative structure could include elements such as a lower facility applicability threshold (possibly 1 or 6 Mg/yr) based on a change in the determination of "point of generation" for purposes of calculating TAB for materials that are reclaimed, recycled, or sold offsite for reclamation or recycling, coupled with requirements for control of non-aqueous wastes and management and treatment of aqueous wastes at facilities with TAB's less than the facility applicability threshold. In this example, commenters should address how these elements interact to meet the NESHAP risk protection goals.

Also, the structure should be generic in that it should be able to be applied at any facility and result in achievement of the NESHAP risk protection goals. That is, the Agency is not seeking suggestions

for structures based on site-specific control or risk protection. Finally, any structure suggested should be one that can be developed and evaluated for the level of protection it provides within the timeframe of this rulemaking (final action by December 1, 1992).

III. Other Proposed Clarifying Amendments

A. Applicability of the Rule to Wastes Generated by Maintenance Operations and Other Low-Quantity Wastes

Many of the questions EPA has received on the rule since promulgation have concerned the applicability of control requirements to maintenance wastes, particularly those generated during "turnaround." Turnaround refers to the shutdown of a plant or process unit within a plant to perform maintenance and safety checks that can be performed only when the plant or unit is not in operation.

Through discussions with the American Petroleum Institute (API) and individual companies, EPA has become aware of the frequency, duration, and quantities of wastes generated by maintenance activities. Turnaround occurs approximately once every 3 to 5 years for petroleum refineries. Turnaround for plants in other industries covered by subpart FF occurs on a similar schedule. Often, outside contractors are brought in to perform turnaround tasks. The wastes generated during turnaround include both organic wastes, such as process fluids drained from piping, and aqueous wastes, such as those generated by the washdown of process equipment and the flushing of lines.

When EPA developed the original rule, it intended benzene-containing wastes generated by maintenance operations to be included within the scope of coverage of the rule. However, it was not clear to EPA when the rule was developed in what quantity and how often these wastes were generated. Consequently, they were not specifically addressed in the rule promulgated on March 7, 1990.

The EPA also recognized that there are many low-quantity waste streams generated at a facility that do not contribute significantly to benzene emissions and health risk and that would be inefficient to control. Consequently, an exemption from control requirements for low-flow streams was included in the rule. Section 61.342(c)(3) of the rule exempts process wastewater streams from control requirements if the stream flow rate is less than 0.02 L/min or if the

annual waste quantity of the stream is less than 10 Mg/yr. However, this exemption applies only to process wastewater streams.

To reduce the confusion among affected sources about the applicability of the rule to maintenance wastes and based on the considerations described above, EPA is proposing to (1) add a requirement that facilities prepare and implement a maintenance turnaround plan, (2) add provisions relating to the exemption of small-quantity wastes, and (3) clarify how intermittently generated wastes should be included in the calculation of facility TAB.

The proposed requirement for a maintenance turnaround plan (in proposed § 61.356(m)) is designed to ensure that good engineering practices are used during equipment and unit turnarounds to minimize benzene emissions to the atmosphere. As proposed, the requirement for a management plan for turnarounds would apply to all facilities subject to the provisions of the benzene waste operations NESHAP that have TAB equal to or greater than 10 Mg/yr. The plan would cover turnaround activities, wastes generated during turnarounds, and actions taken to minimize benzene emissions. The maintenance turnaround waste management plan, to the extent practicable, should contain the following:

(1) A description and relative schedule of actions taken to complete the maintenance turnaround of each piece of equipment or process unit that contains or contacts benzene or benzene mixtures;

(2) Identification of wastes that are generated during the turnaround and estimates of the maximum waste quantity and benzene concentration of each waste generated during the turnaround;

(3) A description of how each benzene-containing waste generated during the turnaround is collected, stored, treated, and disposed;

(4) A description of actions, including good engineering practices, taken to minimize emissions of benzene to the atmosphere from collection, storage, and treatment of the benzene-containing waste generated during a maintenance turnaround.

The EPA requests comments on the following aspects of the proposed requirement for a maintenance turnaround waste management plan: (1) The need to ensure that the volume of benzene-containing wastes generated by maintenance turnaround is minimized, (2) the opportunities available for reducing the amount of waste generated by maintenance turnaround activities,

(3) the level of detail needed in a maintenance turnaround waste management plan, and (4) the reporting burden on facilities to develop and maintain a maintenance turnaround waste management plan.

The EPA is also proposing (in § 61.342(c)(3)) an additional option designed to provide an exemption for wastes generated in small quantities. Along with process wastewater, wastes from routine maintenance, equipment turnarounds, and other operations would qualify for the proposed option. Wastes could be exempted under the proposed option if the annual benzene quantity of the individual waste stream, other than process wastewater, is less than 25 kilograms per year (kg/yr) and the total annual benzene quantity in all of the exempted waste streams is less than 1 Mg/yr. Process wastewater would not be limited to a benzene quantity of 25 kg/yr.

To limit the total amount of waste exempted, several restrictions would apply. If a facility chose the proposed option to exempt low-quantity wastes, it would not be able to take advantage of the low-flow or mass quantity cutoffs for process wastewater (less than 0.02 L/min or 10 Mg/yr total mass of waste). Wastes from tank drawdown and wastes from purging prior to sampling would not qualify for the proposed exemption.

The proposed clarifications also address (in proposed § 61.355(a)(6)) how maintenance turnaround wastes and other infrequently generated wastes should be handled in calculating TAB for the purpose of determining applicability of controls. The revision clarifies that waste streams generated on an infrequent basis, such as wastes from process unit turnarounds that occur only once every 2 to 5 years, are counted in the TAB. The proposed clarification specifies that these waste streams be included in the TAB calculation for the year in which they are generated and that the benzene quantities in these wastes are not averaged over the time period between generations.

B. Control Efficiency Requirement for Vapor Recovery Systems

Standards for closed-vent systems and control devices used to comply with the rule are specified in § 61.349. A vapor recovery system (e.g., a carbon adsorption system or a condenser) is required to recover the organic emissions vented to it with an efficiency of 95 percent or greater. The proposed change would establish a performance standard for vapor recovery systems of 98 percent control efficiency for benzene emissions as an alternative to the

existing 95 percent control efficiency for the total organic compounds. This change makes the use of carbon adsorption a more practical control alternative. Because the gas composition typically released from some refinery process sewer vents (one of the sources regulated by the NESHAP) contains a high concentration of light hydrocarbons (20 weight percent based on data supplied by the American Petroleum Institute), the carbon in an adsorption system must be replaced or regenerated at a much greater frequency at the 95 percent limit for the total organic compounds than if the control efficiency is set at 98 percent for benzene alone. The extended bed life provided by the proposed option of a benzene limit would make the use of carbon adsorption more feasible for some facilities. There would be no change in the benzene emission reduction as a result of this proposed rule amendment.

C. Miscellaneous Proposed Changes

In addition to the proposed clarifications discussed previously, there are several miscellaneous revisions proposed to clarify the rule. These are discussed below.

Car-Seal Valves as an Alternative to Flow Indicators

The EPA proposes to revise the rule language in § 61.349(a)(1)(ii) on the location of flow indicators and provide an alternative to the requirement for closed vent systems to have flow indicators to ensure that the vapors are being routed to the control device. The alternative being proposed involves the use of car-seals to indicate the position of any valves that might be used to divert flow from the control device. Revisions to §§ 61.354 and 61.356 are also proposed to incorporate car seals as an option. This revision is being made to make subpart FF consistent with other NESHAP (e.g., the benzene transfer operations NESHAP, § 61.305(c)).

Clarification to the Repair Schedule for Treatment Devices

The requirement in § 61.348(g) pertaining to first attempt at repair was intended to apply only to gaskets and seals on access doors, hatches, and other similar openings on treatment processes and wastewater treatment systems. However, the language of this section may be interpreted to mean attempt at repair can be applied to the operation of the entire process or system. The proposed clarification would be implemented by changing section designations so that it is clear

the repair delay provisions apply to seals and gaskets on access doors, hatches, etc., as was originally intended and does not permit repair delays for malfunctioning treatment processes and wastewater treatment systems.

Clarification of What Wastes Are Exempt From the Rule

Section 61.340(c)(3) of the rule was originally designed to indicate that certain materials that would meet the broad definition of "waste" under this rule would be exempt from the requirements of this rule. This exemption was intended to apply to a narrow population of wastes that included primarily intermediate and product distillation reflux streams. The provision has been incorrectly interpreted to exclude materials that the Agency would consider wastes. Because there has not been a problem of a facility including process fluid reflux in the population of wastes that contain benzene, this paragraph has been deleted from the rule to avoid further misinterpretation of the intent and applicability.

Clarification of What Wastes Must Be Controlled

This revision to § 61.342(c)(1) would clarify that all wastes (that contain benzene at a concentration of 10 ppm or more and do not meet other exemption criteria) at facilities with a TAB of 10 Mg/yr or more are subject to the control requirements. Based on a review of 90-day reports submitted, it appears that some facilities have concluded incorrectly that only those wastes discharged to the sewer or only wastes with greater than 10 percent water were required to be controlled. However, any waste that contains benzene at a concentration of 10 ppm or more, including wastes with 10 percent water or less that are not discharged to an individual drain system, are subject to control.

As EPA stated in the preamble to the final rule, "at facilities that meet the applicability level, all wastes, including organics, are subject to the control requirements of the final rule unless they have a specific exclusion or meet other exemption requirements. Even though the calculation of annual benzene in waste excludes organic waste streams, benzene emissions from organic wastes contribute to the overall risk and the impacts of the rule were estimated based on the assumption that these streams would be controlled" (55 FR 8319). The Agency solicits comments on the risks associated with these waste streams. The criterion of a water content of greater than 10 percent is relevant

only in identifying those waste streams that are to be used in determining the facility's TAB.

Points for Sampling and Analysis

Minor changes, in addition to those already discussed in section II of this preamble relating to applicability determinations, are proposed to clarify EPA's intent on several questions relating to points for sampling and analysis. These are discussed below.

Questions have been received on how multiple phase wastes should be characterized. A clarification is proposed in § 61.355 that for wastes with multiple phases, the benzene concentration must characterize (or represent) the waste stream as a whole (i.e., determine the weighted average concentration from the benzene concentration and the mass of each phase).

For purposes of determining whether a stream has met the standards in § 61.348(a), the determination of benzene concentration is made at the point where the waste exits the treatment process as provided in § 61.355 (d), (e), (f), and (g). These sections refer to paragraph (c) for the methods to be used in determining the benzene concentration of the waste stream and the mass flow rate of benzene in the waste stream.

Another clarification proposed is that waste quantity and benzene concentration determinations must be made at the point of generation (unless otherwise specified) for all wastes, not only aqueous wastes. The current rule specifies that determinations be made at the point of generation only for wastes that contain more than 10 percent water (in § 61.355(a)). In addition, the current rule does not explicitly specify that determinations be made at the point of generation for wastes that are exempted from control because of a benzene concentration less than 10 ppm (§ 61.342(c)(2)). The structure of this part of the rule is such that § 61.355(a) is devoted to determining total annual benzene quantity, (b) is for determining waste quantity, and (c) is for determining benzene concentration. However, (b) and (c) currently do not specify that waste quantity and concentration were to be determined at the point of generation.

It has always been EPA's intent that determinations of waste quantity and benzene concentration for all wastes subject to Subpart FF be made at the point of generation. That this was explicitly stated in the rule only for those wastes included in the TAB calculation was an inadvertent oversight

that would be corrected with this clarification.

Clarification That Above-Ground Sewer Systems Must Meet the Wastewater Treatment Provisions

Under § 61.348(a)(5), if an owner or operator mixes any combination of process wastewater and other specified wastes for the purpose of facilitating management or treatment in a wastewater treatment system, then the requirements of § 61.348(b) apply. A revision to § 61.348(a)(5) of the rule is proposed to clarify that above-ground wastewater collection and treatment systems are also subject to these conditions.

The intent of the provisions for wastewater treatment systems is to prevent dilution from being used to lower the benzene concentration in affected waste streams to below 10 ppmw. A treatment process (e.g., a steam stripper) that complies with § 61.348(a) is not considered to be part of a wastewater treatment system provided that the reduction in benzene concentration in waste streams treated by the process is not achieved through dilution.

Alternative Control Devices

Section 61.349(a) of the rule specifies requirements for closed-vent systems and control devices used to comply with subpart FF. Requirements are specified for three types of devices most likely to be used. These are enclosed combustion devices, vapor recovery systems, and flares.

Since promulgation of the rule, EPA has been asked what requirements apply to control devices other than those identified in the rule. Consequently, a revision to § 61.349 is proposed that would add a new provision for control devices other than enclosed combustion devices, vapor recovery systems, or flares. The change will allow owners or operators, prior to the installation of the control device, to demonstrate through the use of test data and design information that an alternative control device achieves 95 percent control of the organic compounds or 98 percent control of benzene.

Under the proposed provision, owners or operators who propose to use an alternative control device would be required to develop and submit to EPA for approval, information documenting that the proposed device would meet the performance requirements of the rule. Following EPA approval, parameters indicating the operation and maintenance of the device in

accordance with the rule would have to be monitored. Under § 61.349(e), the EPA Administrator would be able to request an owner or operator of an alternative control device to conduct a performance test at any time. Minor changes are also proposed to requirements for monitoring, recordkeeping, and reporting to incorporate the change for alternative control devices.

Clarification on Reporting Requirements

This is a minor revision to clarify that all chemical plants, petroleum refineries, coke by-product recovery plants, and facilities managing wastes from these industries are subject to the reporting requirements. If the facility has no benzene onsite in wastes, products, by-products, or intermediates, the facility must simply submit an initial report to that effect.

Clarify Alternative Means of Emission Limitation

This revision would add some minor clarifying words to § 61.353(a) on alternative means of emission limitation to make that section consistent with the General Provisions in subpart A of part 61 (§ 61.12(d)(1)).

Clarification on Loading Waste Into Containers

This revision is a minor clarification to § 61.345(a)(2) to indicate that the requirement for submerged loading of containers is not for all potentially pumpable wastes. The requirement for submerged loading is only for wastes that are actually pumped into the container.

Clarification of "Recycled to a Process"

This proposed revision to § 61.342(c)(1)(iii) would clarify that once the waste stream is recycled to a process, including tanks used for the storage of production process feed, product or intermediates, the material is no longer subject to the rule (i.e., the storage tank, if it is not used primarily as a waste storage tank, is not subject to the control requirements of the rule).

Monitoring Requirements for Wastewater Treatment Systems

When an owner or operator mixes any combination of process wastewater and other specified wastes for the purpose of facilitating management or treatment in a wastewater treatment system, then the requirements of § 61.348(b) apply. Waste management units in the wastewater treatment system must be controlled for air emissions unless (1) the benzene content of each waste stream entering the unit is

less than 10 ppmw and (2) the total annual benzene quantity contained in all waste streams managed or treated in units comprising the system that are not controlled for air emissions is less than 1 Mg/yr. The benzene in waste streams managed or treated in enhanced biodegradation units is not included in the determination of total annual benzene for the second condition.

Monitoring requirements for owners and operators complying with the wastewater treatment provisions of § 61.348(b) described above are included in § 61.354(b) of the rule. Section 61.354(b) requires monitoring of the flow rate of each wastewater stream exiting the wastewater treatment system. This is an inadvertent error. To monitor compliance with § 61.348(b), EPA's intent is that the flow rate and benzene concentration of each stream entering a unit not controlled for air emissions be monitored, except for biodegradation units. For biodegradation units, the benzene concentration of waste streams entering the unit should be monitored. A change to § 61.354(b) is proposed to make this section consistent with EPA's intent.

IV. Compliance Dates for Amended Rule

In general, the owner or operator of a facility subject to a NESHAP promulgated in 40 CFR part 61 must be in compliance with the NESHAP within 90 days of the effective date of the standard, unless a waiver of compliance is granted by the Administrator. The effective date for a NESHAP is defined as the date of its promulgation in the *Federal Register*. The maximum waiver period that may be granted by the Administrator for a NESHAP promulgated under the authority of section 112 of the Clean Air Act prior to the 1990 Amendments is 2 years.

The NESHAP for benzene waste operations was promulgated on March 7, 1990. In the final rule, a 2-year waiver of compliance for the control requirements of the rule was granted to all facilities, making the date for compliance with the control requirements March 7, 1992. However, all facilities subject to the rule were required to submit a report to EPA within 90 days of the promulgation date as required by § 61.10 of the General Provisions to 40 CFR part 61. Also, the rule required that a report describing the regulatory status of each waste stream containing benzene be submitted within 90 days of the promulgation date. These reports were due by June 5, 1990.

The final date for compliance with the control requirements of the rule would have been March 7, 1992. In a separate notice in today's *Federal Register*, EPA promulgated a stay of effectiveness of

subpart FF until final action is taken on clarifying rule amendments. Clarifying rule amendments are proposed with today's notice, and EPA expects to take final action on the proposed amendments by December 1, 1992.

Compliance with the amended rule would be required for existing sources within 90 days of the effective date of the rule amendments, unless a waiver of compliance is obtained pursuant to 40 CFR 61.10 and 61.11. New sources would have to be in compliance at startup.

The EPA expects that some population of existing facilities will not be able to comply fully with the amended rule within 90 days of promulgation. A facility may apply for a waiver of compliance for an additional period of up to 2 years past the effective date under § 61.10(b) of the General Provisions to 40 CFR part 61. The policy EPA will follow in reviewing waiver applications for the amended rule is discussed in section V of this preamble.

In addition, because the clarifying amendments are expected to affect facilities' understanding of the rule, all facilities subject to the rule would be required to submit a new report describing the regulatory status of benzene-containing waste streams to EPA. The requirements for the content of this report are described in § 61.357(a) of the rule. If an owner or operator, after reviewing the amended rule, believes his last report reflected a correct interpretation of the rule and has not changed, submission of a copy of the original report with a statement that it is still valid for that facility would be adequate to meet the requirement for a new report.

V. Policy for Granting Waivers of Compliance

The owner or operator of an existing source unable to come into complete compliance with the NESHAP for benzene waste operations within 90 days of the promulgation of amendments to the rule may apply for a waiver of compliance.

The procedure for applying for a waiver is described in § 61.10 of the General Provisions to 40 CFR part 61. A request for a waiver must be in writing and, in addition to the requirements of § 61.10, include a description of interim emission control steps that will be taken during the waiver period.

As specified in § 61.11, the Administrator may grant a waiver of up to 2 years based on information provided in the waiver request and other information. Any waiver issued will be in writing and will identify the sources covered, specify a date the

waiver expires, dates by which steps toward compliance are to be taken, and any additional conditions which the Administrator determines necessary to ensure protection of public health during the waiver period. An owner or operator will be notified prior to the denial of a waiver request and given an opportunity to present additional information or arguments before a final determination is made. The Administrator will not deny any waiver application solely because an applicant does not project full compliance within 2 years. This is an exception to current EPA policy, which would require compliance to be attained within 2 years. However, the Administrator believes it is reasonable to make an exception for this NESHAP in order to promote the multimedia compliance approaches being undertaken by many facilities, and considering that a commitment for actions to mitigate the effects of delayed compliance will be obtained from all facilities receiving waivers. In no event will a waiver be granted for a period of time exceeding 2 years or longer than the time needed to install the control equipment or process changes that the source intends to construct or implement to comply with this standard. If a source is not in compliance with the emission requirements and mitigating offsets required at the end of 2 years, then the source would be considered to be in violation of the NESHAP and would need to incorporate the compliance schedule in a federally enforceable consent order or administrative order as applicable.

In evaluating requests for waivers of compliance with the benzene waste operations NESHAP, additional specific factors will be considered by the Administrator, as outlined in § 61.342(b) of the proposed amendments. The EPA is preparing a document to provide guidance on how the waiver policy will be implemented. The following is a general discussion of the policy.

The EPA believes that it is essential that the risk to human health from benzene emissions that will continue during any waiver period be mitigated through reduction of other emissions or through other actions taken at the facility that have an equal or greater environmental benefit. It is the goal of the waiver policy to receive an enforceable commitment from a facility to obtain mitigating environmental benefits for the benzene emissions that result from extending the original compliance date. Such mitigation projects would initially be implemented through the compliance waiver process

and must contain enforceable interim steps toward compliance.

Although subpart FF would not be enforceable during any period that the standard is stayed, EPA encourages those facilities that can meet the requirements of subpart FF before the new effective date of the rule to do so. For sources requesting a waiver, EPA would consider the facility's good faith effort to comply with the requirements of subpart FF at the earliest possible date after March 7, 1992.

In general, EPA will consider mitigating actions taken by sources that reduce risk to the population and environment that are not currently required by regulation or taken in advance of future known regulatory requirements.

The EPA prefers actions that can be demonstrated to result in quantifiable emission and pollution reductions rather than nonquantifiable improvements. The EPA encourages sources to make permanent, rather than temporary, investments in emissions reductions when planning for waiver consideration.

These mitigating actions should consider, in the following order of highest lowest priority, additional benzene emission reductions from benzene waste operations not otherwise required under this rule, benzene emissions reductions from sources other than benzene waste operations, emission reductions of air pollutants other than benzene, reductions in pollutants transferred to media other than air (such as groundwater or surface water), or nonquantifiable benefits.

It is recognized that some facilities may request compliance waivers for this rule to implement comprehensive construction programs that will not only lead to compliance with subpart FF of part 61, but compliance with other regulations addressing releases to air, water, and land. EPA encourages this approach to implement these comprehensive multi-media control programs; provided the effect of the delayed compliance with the benzene waste operation NESHAP is mitigated. The EPA realizes that the environmental benefits of some comprehensive compliance strategies may accrue after the end of the waiver period. In limited situations and within a limited duration after the end of the waiver period, EPA will take into consideration such benefits toward the mitigation goal of the waiver applicant. The EPA will address the specifics of such situations in future guidance.

The EPA will also consider nonquantifiable case-specific features of waiver applications, in addition to

quantified emissions reductions. For example, EPA will look favorably upon applications that stress pollution prevention/source reduction measures, as well as plans that offer compliance with other environmental regulations in advance of regulatory deadlines, or actions that are not currently required by regulation.

VI. Administrative Requirements

A. Paperwork Reduction Act

The information collection requirements in the proposed amendments to subpart FF have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* OMB approved the Information Collection Request Document prepared by EPA (ICR No. 1541) for the original rule promulgated on March 7, 1990 as No. 2060-0183. An amendment to this document has been prepared by EPA, and a copy may be obtained from Ms. Sandy Farmer, Information Policy Branch, EPA, 401 M Street, SW. (PM-233), Washington, DC 20460, or by calling (202)260-2740. The public reporting burden for this collection of information is estimated to average 11.9 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA." The final rule will respond to any OMB or public comments on the information collection requirements contained in the proposed amendments.

B. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis" which describes the effect of the proposed rule on small business entities. However, section 604(b) of the Regulatory Flexibility Act provides that analysis not be required when the head of an Agency certifies that the rule will not, if promulgated,

have a significant economic impact on a substantial number of small entities.

The proposed amendments to 40 CFR part 61, subpart FF, are intended to clarify the rule and would not affect the number of facilities subject to the rule or the controls that must be installed to comply. I therefore certify that this rule will not have significant economic impact on a substantial number of small entities.

C. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by EPA in the development of this rulemaking. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated revisions, and EPA responses to significant comments, the contents of the docket, except for interagency review materials, will serve as the record in case of judicial review [Section 307(d)(7)(A)].

D. Executive Order 12291

Under Executive Order 12291, EPA is required to judge whether this regulation is a "major rule" and therefore subject to certain requirements of the Order. The EPA has determined that the proposed clarifying amendments to subpart FF would result in none of the adverse economic effects set forth in section I of the Order as grounds for finding a regulation to be a "major rule." The EPA does not believe these proposed amendments to the regulation are major because the economic effects of the amendments do not meet the \$100 million threshold, the amendments would not significantly increase process or production costs, and the amendments would not cause significant adverse effects on domestic competition, employment, investment, productivity, innovation, or competition in foreign markets.

The Agency has not conducted a Regulatory Impact Analysis (RIA) of this proposed regulation because this action does not constitute a major rule.

List of Subjects in 40 CFR Part 61

Air pollution control, Arsenic, Asbestos, Benzene, Beryllium, Coke oven emissions, Hazardous substances, Intergovernmental relations, Mercury, Radionuclides, Reporting and recordkeeping requirements, Vinyl chloride, Volatile hazardous air pollutants.

Dated: February 24, 1992.
William K. Reilly,
Administrator.

PART 61 [AMENDED]

For the reasons set out in the preamble, title 40, chapter 1, part 61 of the Code of Federal Regulations is proposed to be amended as follows:

1. The authority citation for part 61 continues to read as follows:

Authority: Sections 101, 112, 114, 116, 301 Clean Air Act as amended (42 U.S.C. 7401, 7412, 7414, 7416, 7601).

§ 61.340 [Amended]

2. In § 61.340, paragraph (c)(3) is removed.

3. Section 61.341 is amended by revising the definition for "point of waste generation" and by adding definitions in alphabetical order to read as follows:

§ 61.341 Definitions.

* * * * *

Car-seal means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

* * * * *

Flow indicator means a device which indicates whether gas flow is present in a line or vent system.

* * * * *

Point of waste generation means the location where the waste stream exits the process unit component or storage tank prior to handling or treatment in an operation that is not an integral part of the production process, or in the case of waste management units that generate new wastes after treatment, the location where the waste stream exits the waste management unit component.

* * * * *

Sour water stream means a stream that: (1) Contains ammonia or sulfur compounds (usually hydrogen sulfide) at concentrations of 10 ppm by weight or more, (2) is generated from separation of water from a feed stock, intermediate, or product that contained ammonia or sulfur compounds, and (3) requires treatment to remove the ammonia or sulfur compounds.

Sour water stripper means a unit that: (1) Is designed and operated to remove ammonia or sulfur compounds (usually hydrogen sulfide) from sour water streams, (2) has the sour water streams transferred to the stripper through hard piping or other enclosed system, and (3) is operated in such a manner that the offgases are sent to a sulfur recovery unit, processing unit, incinerator, flare, or other combustion device.

* * * * *

4. Section 61.342 is amended by revising paragraphs (a), (b), (c)(1) introductory text, (c)(1)(iii), (c)(2), (c)(3), and (g) to read as follows:

§ 61.342 Standards: General.

(a) An owner or operator of a facility at which the total annual benzene quantity from facility waste is less than 10 megagrams per year (Mg/yr) shall be exempt from the requirements of paragraphs (b) and (c) of this section. The total annual benzene quantity from facility waste is the sum of the annual benzene quantity for each waste stream at the facility that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Other specific requirements for calculating the total annual benzene waste quantity are as follows:

(1) Wastes that are exempted from control under §§ 61.342(c)(2) and 61.342(c)(3) are included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

(2) The benzene in a material subject to this subpart that is sold is included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10 percent.

(3) Benzene in wastes generated by remediation activities, such as the excavation of contaminated soil, pumping and treatment of groundwater, and the recovery of product from soil or groundwater, are not included in the calculation of total annual benzene quantity; however, if the facility's total annual benzene quantity is 10 Mg/yr or more, wastes generated by remediation activities are subject to the requirements of paragraphs (c) through (g) of this section.

(4) The total annual benzene quantity is calculated using the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except as specified in § 61.355(c)(1)(i) (A) through (C).

(b) Each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr as

determined in paragraph (a) of this section shall be in compliance with the requirements of paragraphs (c) through (g) of this section no later than 90 days following the effective date, unless a waiver of compliance has been obtained under § 61.11, or by the initial startup for a new source with an initial startup after the effective date.

(1) The owner or operator of an existing source unable to comply with the rule within the required time may request a waiver of compliance under § 61.10.

(2) As part of the waiver application, the owner or operator shall submit to the Administrator a plan under § 61.160(b)(3) that is an enforceable commitment to obtain environmental benefits to mitigate the benzene emissions that result from extending the compliance date. The plan shall include the following information:

(i) A description of the method of compliance, including the control approach, schedule for installing controls, and quantity of the benzene emissions that result from extending the compliance date,

(ii) If the control approach involves a compliance strategy designed to obtain integrated compliance with multiple regulatory requirements, a description of the other regulations involved and their effective dates, and

(iii) A description of the actions to be taken at the facility to obtain mitigating environmental benefits, including how the benefits will be obtained, the schedule for these actions, and an estimate of the quantifiable benefits that directly result from these actions.

(c) * * *

(1) For each waste stream that contains benzene, including (but not limited to) organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the owner or operator shall:

* * * * *

(iii) Each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in §§ 61.343 through 61.347 of this subpart. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to paragraph (c) of this section.

(2) A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates

initially and, thereafter, at least once per year that the flow-weighted annual average benzene concentration for the waste stream is less than 10 ppmw as determined by the procedures specified in § 61.355(c)(2) or § 61.355(c)(3) of this subpart.

(3) A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates initially, and thereafter, at least once per year that the conditions specified in either paragraph (c)(3)(i) or (c)(3)(ii) of this section are met.

(i) The waste stream is process wastewater that has a flow rate less than 0.02 liters per minute or an annual wastewater quantity of less than 10 Mg/yr, or

(ii) All of the following conditions are met:

(A) The owner or operator does not choose to exempt process wastewater under paragraph (c)(3)(i) of this section,

(B) The annual benzene quantity in the waste stream, other than process wastewater, is less than 25 kg/yr,

(C) The total annual benzene quantity in all waste streams chosen for exemption in paragraph (c)(3)(ii) does not exceed 1.0 Mg/yr,

(D) The total annual benzene quantity in a waste stream chosen for exemption is determined for the year in which the waste is generated and is not averaged over the period of years in which the waste might be generated as specified in § 61.355(a)(6),

(E) The waste is not product tank drawdown, and

(F) The waste is not material that is generated from purging prior to sampling of a waste or process fluid.

* * * * *

(g) Permission to use an alternative means of compliance to meet the requirements of §§ 61.342 through 61.352 of this subpart may be granted by the Administrator as provided in § 61.353 of this subpart.

5.-6. Paragraph (a)(2) of § 61.345 is amended by revising the first sentence to read as follows:

§ 61.345 Standards: Containers.

(a) * * *

(2) When a waste is transferred into a container by pumping, the owner or operator shall perform the transfer using a submerged fill pipe. * * *

* * * * *

7. Section 61.348 is amended by adding a new sentence at the end of paragraph (a)(5) to read as follows:

§ 61.348 Standards: Treatment processes.

(a) * * *

(5) * * * These provisions apply to above-ground wastewater treatment

systems as well as those that are at or below ground level.

* * * * *

8. Section 61.349 is amended by revising paragraphs (a)(1)(ii), (a)(2)(ii), and (e); and by adding paragraph (a)(2)(iv) to read as follows:

§ 61.349 Standards: Closed-vent systems and control devices.

(a) * * *

(1) * * *

(ii) Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions of this subpart shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in paragraph (a)(1)(ii)(B) of this section.

(A) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.

(B) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required.

* * * * *

(2) * * *

(ii) A vapor recovery system (e.g., a carbon adsorption system or a condenser) shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.

* * * * *

(iv) A control device other than those described in paragraphs (a)(2)(i) through (iii) of this section may be used provided that the following conditions are met:

(A) The device shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.

(B) The owner or operator shall develop test data and design information that documents the control device will achieve an emission control efficiency of either 95 percent or greater for organic compounds or 98 percent or greater for benzene;

(C) The owner or operator shall identify:

(1) The critical operating parameters that affect the emission control performance of the device,

(2) The range of values of these operating parameters that ensure the emission control efficiency specified in paragraph (a)(2)(iv)(A) of this section is maintained during operation of the device, and

(3) How these operating parameters will be monitored to ensure the proper operation and maintenance of the device.

(D) The owner or operator shall submit the information and data specified in paragraphs (a)(2)(iv)(B) and (C) of this section to the Administrator prior to operation of the alternative control device.

(E) The control device shall not be judged as in compliance with requirements of § 61.349 of this subpart until the Administrator has approved the use of the alternative control device.

(e) The Administrator may request at any time an owner or operator demonstrate that a control device meets the applicable conditions specified in paragraph (a)(2) of this section by conducting a performance test using the test methods and procedures as required in § 61.355 of this subpart, and for control devices subject to paragraph (a)(2)(iv), the Administrator may specify alternative test methods and procedures, as appropriate.

9. Section 61.353 is amended by revising paragraph (a) to read as follows:

§ 61.353 Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in benzene emissions at least equivalent to the reduction in benzene emissions from the source achieved by the applicable design, equipment, work practice, or operational requirements in §§ 61.342 through 61.349 of this subpart, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

10. Section 61.354 is amended by revising paragraphs (b), (c)(6)(i), (c)(7)(i), (c)(8), and (d) and by adding paragraphs (c)(9) and (f) to read as follows:

§ 61.354 Monitoring of operations.

(b) If an owner or operator complies with the requirements of § 61.348(b) of this subpart, then the owner or operator shall install, calibrate, operate, and maintain according to manufacturer's specifications equipment as follows:

(1) For the first exempt waste management unit in each waste treatment train, other than an enhanced biodegradation unit, equipment to continuously monitor and record the flow rate and benzene concentration of each waste stream entering the unit.

(2) For each enhanced biodegradation unit that is the first exempt waste management unit in a treatment train, equipment to continuously monitor and record the benzene concentration of each waste stream entering the unit.

(c) * * *

(6) * * *

(i) A monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the condenser; or

(7) * * *

(i) A monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the benzene concentration level in the exhaust vent stream from the carbon bed; or

(8) For a vapor recovery system other than a condenser or carbon adsorption system, a monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the benzene concentration level in the exhaust vent stream from the control device.

(9) For a control device subject to the requirements of § 61.349(a)(2)(iv) of this subpart, devices to monitor the parameters as specified in § 61.349(a)(2)(iv)(C) of this subpart.

(d) For a carbon adsorption system that does not regenerate the carbon bed directly on site in the control device (e.g., a carbon canister), either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon

adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and either the organic concentration or the benzene concentration in the gas stream vented to the carbon adsorption system.

(f) Owners or operators using a closed vent system that contains any bypass line that could divert a vent stream from a control device used to comply with the provisions of this subpart shall do the following:

(1) Visually inspect the bypass line valve at least once every month, checking the position of the valve and the condition of the car-seal or closure mechanism required under § 61.349(a)(1)(ii) of this subpart to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(2) Visually inspect the readings from each flow monitoring device required by § 61.349(a)(1)(ii) of this subpart at least once each operating day to check that vapors are being routed to the control device as required.

11. Section 61.355 is amended by revising paragraphs (a)(1) introductory text, (a)(1)(i), (a)(1)(ii), (b) introductory text, (c) introductory text, (e)(3), (e)(4), (f)(3), (i) introductory text, (i)(3), (i)(3)(ii)(C), (i)(3)(iii), (i)(3)(iv), and (i)(4); by adding paragraph (a)(6); by redesignating paragraphs (b)(1), (b)(2), and (b)(3) as (b)(4), (b)(5), and (b)(6); by adding paragraphs (b)(1), (b)(2), and (b)(3); by redesignating paragraphs (c)(1) and (c)(2) as (c)(2) and (c)(3); and by adding (c)(1) to read as follows:

§ 61.355 Test methods, procedures, and compliance provisions.

(a) * * *

(1) For each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in § 61.342(a), the owner or operator shall:

(i) Determine the annual waste quantity for each waste stream using the procedures specified in paragraph (b) of this section.

(ii) Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in paragraph (c) of this section.

(6) The benzene quantity in a waste stream that is not generated at least once each year (e.g., wastes generated during maintenance turnarounds that occur only once every 2 to 5 years) shall be included in the determination of total annual benzene quantity from facility waste for the year in which the waste is generated unless the waste stream is otherwise excluded from the determination of total annual benzene quantity from facility waste in accordance with § 61.355 (a) through (c) of this subpart. The benzene quantity in this waste stream shall not be annualized or averaged over the time interval between the activities that resulted in generation of the waste, for purposes of determining the total annual benzene quantity from facility waste.

(b) For purposes of the calculation required by § 61.342(c)(3)(ii) and § 61.355(a), an owner or operator shall determine the annual waste quantity at the point of waste generation, unless otherwise provided in paragraphs (b)(1), (2), and (3) of this section, by one of the methods given in paragraphs (b)(4) through (6) of this section.

(1) The determination of annual waste quantity for sour water streams that are processed in sour water strippers shall be made at the point that the treated water exits the sour water stripper.

(2) The determination of annual waste quantity for wastes at coke by-product plants subject to and complying with the control requirements of §§ 61.132, 61.133, 61.134, or 61.139 of subpart L of this part shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

(i) The transfer of wastes between units complying with the control requirements of subpart L of this part, process units, and the ammonia still is made through hard piping or other enclosed system.

(ii) The ammonia still meets the definition of a sour water stripper in § 61.341.

(3) The determination of annual waste quantity for wastes that are received at treatment, storage, or disposal facilities from offsite shall be made at the point where the waste enters the treatment, storage, or disposal facility.

(c) For the purposes of the calculation required by § 61.342(c)(3)(ii) and § 61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph

(c)(1) using either of the methods given in paragraphs (c)(2) and (c)(3) of this section.

(1) The determination of flow-weighted annual average benzene concentration shall meet all of the following criteria:

(i) The determination shall be made at the point of waste generation except for the specific cases given in paragraphs (c)(1)(i)(A) through (C) of this section.

(A) The determination for sour water streams that are processed in sour water strippers shall be made at the point that the treated water exits the sour water stripper.

(B) The determination for wastes at coke by-product plants subject to and complying with the control requirements of §§ 61.132, 61.133, 61.134, or 61.139 of subpart L of this part shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

(1) The transfer of wastes between units complying with the control requirements of subpart L of this part, process units, and the ammonia still is made through hard piping or other enclosed system.

(2) The ammonia still meets the definition of a sour water stripper in § 61.341.

(C) The determination for wastes that are received from offsite shall be made at the point where the waste enters the treatment, storage, or disposal facility.

(ii) Volatilization of the benzene by exposure to air shall not be used to reduce the benzene concentration determination.

(iii) Mixing or diluting the waste stream with other wastes or other materials shall not be used to reduce the benzene concentration determination.

(iv) The determination shall be made prior to any treatment of the waste that removes benzene, except as specified in (c)(1)(i)(A) through (C) of this section.

(v) For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene contained in each phase of the waste.

(e) * * *
 (3) The mass flow rate of benzene entering the treatment process (E_b) shall be determined by computing the product of the flow rate of the waste stream entering the treatment process, as determined by the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling and analytical procedures

specified in paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over a 3-hour period. The mass flow rate of benzene entering the treatment process is calculated as follows:

$$E_b = \frac{K}{n \times 10^6} \left[\sum_{i=1}^n V_i C_i \right]$$

Where:

E_b = Mass flow rate of benzene entering the treatment process, kg/hour.

K = Density of the waste stream, kg/m³.

V_i = Average volume flow rate of waste entering the treatment process during each run i , m³/hour.

C_i = Average concentration of benzene in the waste stream entering the treatment process during each run i , ppmw.

n = Number of runs.

(4) The mass flow rate of benzene exiting the treatment process (E_a) shall be determined by computing the product of the flow rate of the waste stream exiting the treatment process, as determined by the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling and analytical procedures specified in paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over the same 3-hour period at which the mass flow rate of benzene entering the treatment process is determined. The mass flow rate of benzene exiting the treatment process is calculated as follows:

$$E_a = \frac{K}{n \times 10^6} \left[\sum_{i=1}^n V_i C_i \right]$$

Where:

E_a = Mass flow rate of benzene exiting the treatment process, kg/hour.

K = Density of the waste stream, kg/m³.

V_i = Average volume flow rate of waste exiting the treatment process during each run i , m³/hour.

n = Number of runs.

* * * * *

(f) * * *

(3) The mass flow rate of benzene entering the combustion unit shall be determined by computing the product of the flow rate of the waste stream entering the combustion unit, as determined by the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling procedures paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 9 runs conducted over a 3-hour period. The mass flow rate of benzene into the combustion unit is calculated as follows:

$$E_b = \frac{K}{n \times 10^6} \left[\sum_{i=1}^n V_i C_i \right]$$

Where:

- E_b = Mass flow rate of benzene into the combustion unit, kg/hour.
- K = Density of the waste stream, kg/m³.
- V_i = Average volume flow rate of waste entering the combustion unit during each run i , m³/hour.
- C_i = Average concentration of benzene in the waste stream entering the combustion unit during each run i , ppmw.
- n = Number of runs.

(i) An owner or operator using a performance test to demonstrate compliance of a control device with either the organic reduction efficiency requirement or the benzene reduction efficiency requirement specified under § 61.342(a)(2) of this subpart shall use the following procedures:

(3) The mass flow rate of either the organics or benzene entering and exiting the control device shall be determined as follows:

(ii) * * *

(C) The organic concentration or the benzene concentration, as appropriate, in the vent stream entering and exiting the control shall be determined using Method 18 from Appendix A of 40 CFR Part 60.

(iii) The mass of organics or benzene

entering and exiting the control device during each run shall be calculated as follows:

$$M_{aj} = K V_{aj} \left[\sum_{i=1}^n C_{ai} MW_i \right] (10^{-6})$$

$$M_{bj} = K V_{bj} \left[\sum_{i=1}^n C_{bi} MW_i \right] (10^{-6})$$

Where:

- M_{aj} = Mass of organics or benzene in the vent stream entering the control device during run j , kg.
- M_{bj} = Mass of organics or benzene in the vent stream exiting the control device during run j , kg.
- V_{aj} = Volume of vent stream entering the control device during run j at standard conditions, m³.
- V_{bj} = Volume of vent stream exiting the control device during run j at standard conditions, m³.
- C_{ai} = Organic concentration of compound i or the benzene concentration measured in the vent stream entering the control device as determined by Method 18, ppm by volume on a dry basis.
- C_{bi} = Organic concentration of compound i or the benzene concentration measured in the vent stream exiting the control device as determined by Method 18, ppm by volume on a dry basis.
- MW_i = Molecular Weight of organic compound i in the vent stream or the molecular weight of benzene, kg/kg-mol.
- n = Number of organic compounds in the vent stream; if benzene reduction efficiency is being demonstrated, then $n=1$.
- K = Conversion factor molar volume = 0.0418 kg-mol/m³ (at 293°K and 760 mm Hg).
- 10^{-6} = Conversion from ppm, ppm⁻¹.

(iv) The mass flow rate of organics or benzene entering and exiting the control device shall be calculated as follows:

$$E_a = \left(\sum_{j=1}^n M_{aj} \right) / T$$

$$E_b = \left(\sum_{j=1}^n M_{bj} \right) / T$$

Where:

- E_a = Mass flow rate of organics or benzene entering the control device, kg/hour.
- E_b = Mass flow rate of organics or benzene exiting the control device, kg/hour.
- M_{aj} = Mass of organics or benzene in the vent stream entering the control device during run j , kg.
- M_{bj} = Mass of organics or benzene in vent stream exiting the control device during run j , kg.
- T = Total time of all runs, hour.
- n = Number of runs.

(4) The organic reduction efficiency or the benzene reduction efficiency for the control device shall be calculated as follows:

$$R = \frac{E_a - E_b}{E_a} \times 100$$

Where:

- R = Total organic reduction efficiency or benzene reduction efficiency for the control device, percent.
- E_a = Mass flow rate of organics or benzene entering the control device, kg/hr.
- E_b = Mass flow rate of organics or benzene exiting the control device, kg/hr.

12. Section 61.356 is amended by revising paragraphs (b)(2), (f)(2)(ii) (E) through (G), (j)(3), (j)(8), and (j)(9); and by adding paragraphs (f)(2)(ii)(H), (j)(12), and (m) to read as follows:

§ 61.356 Recordkeeping requirements.

(b) * * *

(2) For each waste stream exempt from § 61.342(c)(1) of this subpart in accordance with § 61.342(c)(3) of this subpart, the records shall include:

(i) all measurements, calculations, and other documentation used to determine that the continuous flow of process wastewater is less than 0.02 liters per minute or the annual waste quantity of process wastewater is less than 10 Mg/yr, or

(ii) all measurements, calculations, and other documentation used to determine that the total annual benzene quantity in each waste stream that is not process wastewater is less than 25 kg/yr and that the sum of the total annual benzene quantity in all exempt waste streams does not exceed 1.0 Mg/yr.

(f) * * *

(2) * * *

(ii) * * *

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level or the design outlet benzene concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system that regenerates the carbon bed directly on-site in the control device such as a fixed-bed adsorber, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device, such as a carbon canister, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(H) For a control device subject to the requirements of § 61.349(a)(2)(iv), the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also include all of the information submitted under § 61.349(a)(2)(iv).

(j) * * *

(3) Periods when the closed vent system and control device are not

operated as designed including all periods and the duration when:

(i) Any valve car-seal or closure mechanism required under § 61.349(a)(1)(ii) of this subpart is broken or the by-pass line valve position has changed.

(ii) The flow monitoring devices required under § 61.349(a)(1)(ii) of this subpart indicate that vapors are not routed to the control device as required.

(8) If a condenser is used, then the owner or operator shall maintain continuous records of the parameters selected to be monitored in accordance with § 61.354(c)(6) of this subpart. If concentration of organics or concentration of benzene in the control device outlet gas stream is monitored, then the owner or operator shall record all 3-hour periods of operation during which the concentration of organics or the concentration of benzene in the exhaust stream is more than 20 percent greater than the design value. If the temperature of the condenser exhaust stream and coolant fluid is monitored, then the owner or operator shall record all 3-hour periods of operation during which the temperature of the condenser exhaust vent stream is more than 6° C above the design average exhaust vent stream temperature, or the temperature of the coolant fluid exiting the condenser is more than 6° C above the design average coolant fluid temperature at the condenser outlet.

(9) If a carbon adsorber is used, then the owner or operator shall maintain continuous records of the concentration of organics or the concentration of benzene in the control device outlet gas stream. If the concentration of organics or the concentration of benzene in the control device outlet gas stream is monitored, then the owner or operator shall record all 3-hour periods of operation during which the concentration of organics or the concentration of benzene in the exhaust stream is more than 20 percent greater than the design value. If the carbon bed regeneration interval is monitored, then the owner or operator shall record each occurrence when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time.

(12) If a control device subject to the requirements of § 61.349(a)(2)(iv) of this subpart is used, then the owner or operator shall maintain records of the parameters that are monitored and each occurrence when the parameters monitored are outside the range of values specified in § 61.349(a)(2)(iv)(C)

of this subpart, or other records as specified by the Administrator.

(m) Each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr as determined in accordance with the procedures specified in § 61.355(a) of this subpart shall have a plan for the management of benzene containing wastes generated from the emptying and purging of equipment and process units that are shut down temporarily for inspection, maintenance, and repair work (i.e., a maintenance turnaround).

(1) The provisions of this plan shall be implemented during each maintenance turnaround at the facility.

(2) This plan shall specify the procedures used by the owner or operator that are consistent with pollution prevention and good air pollution control practices to limit emissions of benzene to the atmosphere from activities associated with the maintenance turnaround of equipment or process units that contain or contact benzene or benzene mixtures.

(3) The owner or operator shall modify and update the plan as needed following each maintenance turnaround based on the actions taken and wastes generated during the preceding maintenance turnaround.

(4) The maintenance turnaround waste management plan shall be in the facility operating record by the date the facility becomes subject to the provisions of this subpart and shall be maintained for the life of the facility or until the facility is no longer subject to the provisions of this subpart.

13. Section 61.357 is amended by revising paragraphs (a) introductory text, (a)(4), (d)(1), (d)(3)(iii), (d)(6)(iii)(D), and (d)(7); and by adding paragraph (d)(6)(iii)(I) to read as follows:

§ 61.357 Reporting requirements.

(a) Each owner or operator of a chemical plant, petroleum refinery, coke by-product recovery plant, and any facility managing wastes from these industries shall submit to the Administrator within 90 days after the effective date of this subpart, or by the initial startup for a new source with an initial startup after the effective date, a report that summarizes the regulatory status of each waste stream subject to § 61.342 and is determined by the procedures specified in § 61.355(c) of this subpart to contain benzene. Each owner or operator subject to this subpart who has no benzene onsite in wastes, products, by-products, or intermediates shall submit an initial

report that is a statement to this effect. For all other owners or operators subject to this subpart, the report shall include the following information:

(4) The information required in paragraphs (a)(1), (2), and (3) of this section should represent the owner's or operator's best estimate of the waste stream characteristics based on existing information and current configuration and operating conditions. An owner or operator only needs to list in the report those waste streams that contact materials containing benzene. The report does not need to include a description of the controls to be installed to comply with the standard or other information required in § 61.10(a) of this part.

(d) * * *

(1) Within 90 days after March 5, 1992, unless a waiver of compliance under § 61.11 of this part is granted, or by the date of initial startup for a new source with an initial startup after the effective date, a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests

have been carried out in accordance with this subpart. If a waiver of compliance is granted under § 61.11, the certification of equipment necessary to comply with these standards shall be submitted by the date the waiver of compliance expires.

(3) * * *

(iii) For each process wastewater stream identified as being controlled for benzene emissions in accordance with the requirements of this subpart, the table shall report the following information for the process wastewater stream as determined at the exit to the treatment process: Annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.

(6) * * *

(iii) * * *

(D) Each 3-hour period of operation during which the average concentration of organics or the average concentration of benzene in the exhaust gases from a carbon adsorber, condenser, or other vapor recovery system is more than 20 percent greater than the design

concentration level of organics or benzene in the exhaust gas.

(J) Each 3-hour period of operation during which the parameters monitored are outside the range of values specified in § 61.349(a)(2)(iv)(C) of this subpart, or any other periods specified by the Administrator for a control device subject to the requirements of § 61.349(a)(2)(iv) of this subpart.

(7) Beginning one year after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph (d)(1) of this section, the owner or operator shall submit annually to the Administrator a report that summarizes all inspections required by §§ 61.342 through 61.354 of this subpart during which detectable emissions are measured or a problem (such as a broken seal, gap or other problem) that could result in benzene emissions is identified, including information about the repairs or corrective action taken.

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