

Waste NESHAP. On the same date, API submitted to the Agency a petition for reconsideration of the Rule.

In an effort to resolve this litigation in an amicable manner the parties agree to undertake the following:

4. The parties agree and acknowledge that final approval and filing of this Settlement Agreement is subject to the requirements of section 113(g) of the Clean Air Act, as amended, 42 U.S.C. § 7413(g). That subsection provides that notice of this proposed settlement agreement be given to the public, that the public shall have at least thirty days to make any comments, and that the Administrator or the Attorney General, as appropriate, must consider those comments on deciding whether to consent to this agreement. Upon execution of this Settlement Agreement by EPA, the Department of Justice, and the American Petroleum Institute, EPA shall promptly forward to the Office of the Federal Register for publication, a notice of intent to enter a Settlement Agreement in accordance with the requirements of section 113(g) of the Clean Air Act, 42 U.S.C. § 7413(g).

5. On or before December 2, 1991, EPA shall sign a notice of proposed rulemaking proposing to stay the effectiveness of Subpart FF, 40 CFR 61.340-358 until completion of the rulemaking process described in paragraphs 9 and 10 below. EPA shall promptly forward the notice to the Office of the Federal Register for publication.

6. EPA shall take final action on a proposed notice to stay the effectiveness of Subpart FF described in paragraph 5 above on or before February 14, 1992.

7. If no adverse comments are filed in response to the public notice described in paragraph 4 above, EPA and the Department of Justice shall promptly approve this proposed Settlement Agreement. If adverse comments are filed, EPA shall consider such comments and shall promptly either approve or disapprove this proposed Settlement Agreement, but in no event later than January 24, 1992.

8. If there is final approval of this Settlement Agreement by EPA and the Department of Justice, API and EPA will file with the Court a copy of the executed Settlement Agreement, together with a joint motion to hold the petition for review in abeyance pending completion of the rulemaking process described in Paragraphs 9 and 10 below.

9. Upon final approval of the Settlement Agreement EPA will, on or before March 2, 1992, sign a notice of proposed rulemaking proposing to amend Subpart FF, in accordance with section 112 of the CAA as in effect before the Clean Air Act Amendments of 1990, in a manner substantially similar to that set forth in Attachment A and containing preamble language substantially similar to Attachment B. EPA shall promptly forward the notice of proposed rulemaking to the Office of the Federal Register for publication. The notice of proposed

rulemaking shall provide for the opportunity for a public hearing and at least a 30 day comment period.

10. EPA shall sign a final action on the notice of proposed rulemaking described in paragraph 9 on or before December 1, 1992. EPA shall promptly forward such notice to the Office of the Federal Register for publication.

11. API agrees that if the final action taken by EPA pursuant to paragraph 6 provides for a stay of the effective date of Subpart FF pending completion of the rulemaking process described in paragraphs 9 and 10, API will not seek a petition for review of that action in this Court, or any other jurisdiction.

12. If at any time between March 7, 1992 and completion of the rulemaking process described in paragraphs 9 and 10 a stay of Subpart FF is not in effect, EPA and API will jointly file a motion with the court requesting the court to remand and vacate the Rule pending completion of the rulemaking action set forth in Paragraph 10.

13. If the revisions to the benzene waste operations NESHAP set forth in Attachment A, or language substantially similar thereto, are adopted as a final rule and preamble language substantially similar to Attachment B is included in the preamble to the final rule, API shall promptly file a motion with this Court seeking dismissal of its petition for review with prejudice, and shall promptly dismiss with prejudice. Except as

provided in paragraph 14 below, API also agrees to waive any right it would otherwise have to petition for judicial review of such final rule, and to waive any claim for an award of the costs of litigation pursuant to Section 307(f) of the Clean Air Act, 42 U.S.C. § 7607(f). If API is precluded by this paragraph from seeking judicial review of the final rule promulgated by EPA under Paragraph 10, and a party other than API seeks such review, EPA will not oppose any motion by API to intervene in such as action, provided that API does not, as part of such intervention, oppose or seek modification of any provision of the final rule.

14. In connection with the rulemaking action described in paragraph 9 and 10, EPA may propose changes to Subpart FF that are not covered by Attachment A. However, API retains the right to comment on any matter other than proposed provisions in conformity with Attachment A. Notwithstanding Paragraph 13, API retains its right to seek judicial review of any changes not substantially similar to or unrelated to the proposed changes in Attachment A.

15. The parties agree that the sole remedy for breach of this Settlement Agreement is to proceed with the pending litigation.

16. Nothing in this Agreement in any way obviates any substantive or procedural requirement of the EPA in undertaking this rulemaking pursuant to the requirements of the Clean Air Act, as amended.

17. The parties agree that this settlement may be amended by joint motion by all parties for good cause. If any party seeks to modify the terms of this Settlement Agreement, such party agrees to consult with all other parties before filing any such motion.

Dated: 12/2/91

Ellen Siegler
Ellen Siegler
Office of General Counsel
American Petroleum Institute
1220 L Street, N.W.
Washington, D.C.
(202) 682-8271

ATTORNEY FOR PETITIONER
American Petroleum Institute

Dated: 12/2/91

Robert J. Martineau, Jr.
Robert J. Martineau, Jr.
Office of General Counsel (LE-132A)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460
(202) 260-7606

Dated: 12/2/91

Karen L. Egbert
Karen L. Egbert
Environment & Natural Resources
Division
Environmental Defense Section
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986
(202) 514-0996

ATTORNEYS FOR RESPONDENT,
U.S. Environmental Protection Agency

ATTACHMENT A

REVISIONS TO THE BENZENE WASTE NESHAP

This attachment contains the changes and clarifications to the benzene waste NESHAP. The revisions to the NESHAP are presented first with a summary description of the change. The actual wording change to the rule is then presented and highlighted in bold print and underlined.

REVISIONS TO THE BENZENE WASTE NESHAP:

WAIVER OF COMPLIANCE

Description: This revision to the rule describes the information that will be required to be submitted as part of an application for a waiver of compliance. A discussion of the waiver policy is provided in Attachment B of this settlement package.

Change to the rule:

Revise § 61.342(b) as shown:

(1) 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, or by the initial startup for a new source with an initial startup after the effective date. The owner or operator of an existing source unable to comply with the rule within this 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 § 61.10(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:

(1) 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.

REVISIONS TO THE BENZENE WASTE HESHAP:

CLARIFICATION OF WHAT WASTES ARE EXEMPT FROM THE RULE

Description: This paragraph was originally designed to clarify 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 to the rule:

Delete § 61.340(c)(3).

REVISIONS TO THE BENZENE WASTE NESHAP:
CLARIFICATION OF WHAT WASTES MUST BE CONTROLLED

Description: This revision to the NESHAP clarifies that all wastes (that contain benzene at a concentration of 10 ppm or more) at facilities with a total annual benzene-in-waste quantity of 10 Mg/yr or more are subject to the control requirements. Some facilities have incorrectly concluded that only those wastes discharged to the sewer or only wastes with 10 percent or more water were required to be controlled. However, any waste that contains benzene at a concentration of 10 ppm or more, including organic wastes with less than 10 percent water that are not discharged to an individual drain system, are subject to control. The criterion of a water content of greater than 10 percent is relevant only in identifying those wastes streams that are to be used in determining the facility's total annual benzene-in-waste quantity.

Clarification to the rule:

Revise the wording in § 61.342(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: ...

REVISIONS TO THE BENZENE WASTE NESHAP:

CLARIFY DETERMINATIONS OF WASTE QUANTITY AND BENZENE CONCENTRATION

Description: These revisions are designed to clarify the Agency's intent within the rule with respect to three issues:

- (1) The distinction between materials that are managed in a process that is an integral part of the production operation and those that are wastes in waste management units;
- (2) Where measurements are made for applicability determinations for wastes received from offsite by treatment, storage or disposal facilities, wastes managed in sour water strippers, and wastes generated at coke by-product recovery plants; and
- (3) Whether wastes that contain less than 10 percent water or are mixed with water, or other wastes, and the mixture has more than 10 percent water, are included in the determination of total annual benzene quantity. (For example, are wastes that contain less than 10 percent water and are managed in the facility's wastewater treatment system included in the determination of the total annual benzene quantity?)

These issues are all related to the determination of waste quantity and benzene concentration, which are used to determine the facility's total annual benzene quantity and to identify, if applicable, the waste streams that must be controlled. The clarification of these issues is addressed in three parts: (1) revising the definition of "point of waste generation", (2) clarifying the points for sampling and analysis for applicability determinations, and (3) explaining specifically which waste streams are included and which ones are excluded in the determination of total annual benzene quantity.

PART I. DEFINITION OF POINT OF WASTE GENERATION

The distinction between a process unit and a waste management unit is important and is related to the "point of waste generation" because measurements of waste quantity and benzene concentration for applicability determinations (for wastes from production process operations) are made at the point of generation, where the waste leaves the process unit and before waste treatment. For waste management units that generate new wastes, the point of generation is where the waste leaves the waste management unit; this location is used to determine the benzene concentration for comparison to the control requirement criterion of a benzene concentration of 10 ppmw. (The benzene quantity in new wastes generated from the management of another waste is not included in the calculation of a facility's total annual benzene quantity. The reason is that the benzene quantity in the new waste should have already been counted when the original waste was generated.)

The EPA's approach for clarification of these issues is to simplify the definition of "point of waste generation" and to provide examples within the Preamble discussion to illustrate more clearly the Agency's intent. Under the benzene waste operations NESHAP, the definition of "waste" is broad. Waste is defined 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." For wastes other than new wastes from waste management units, the waste is generated when the waste is separated from or otherwise removed from the bulk of the material that is not waste.

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 the major stream entering the unit is a waste or if the primary function of the unit is to treat a waste stream, then the unit is a waste management unit. In this case, the point of generation of the original waste (used to determine total annual benzene quantity) is the location that the waste leaves the process unit and before it enters the waste management unit. If the major stream entering the unit is a raw material or intermediate and the primary function of the unit is to make a significant portion of the facility's product(s), then the unit is an integral part of the production process.

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 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 percent of the product that is recovered, why the specific unit was installed, and other factors.

PART II. POINTS FOR SAMPLING AND ANALYSIS

This revision is a clarification to indicate where sampling and analysis is to be performed. For purposes of total annual benzene quantity calculations, the determinations of waste quantity and benzene concentration are made at the point of waste generation, except for sour water strippers at petroleum refineries, coke by-product recovery plants, and treatment, storage, and disposal facilities (TSDF) that are subject to the control requirements of this rule. The revised rule specifies in

§ 61.355(b) and (c) where to make the determinations for these cases. Other revisions 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, and by any waste treatment. Also, clarification is made 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 §§ 355 (d), (e), (f), and (g). These sections refer back to paragraph (c) for the methods to be used in making determinations of the benzene concentration of the waste stream and the mass flow rate of benzene in the waste stream.

Another clarification 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 only requires that determinations be made at the point of generation for wastes that contain over 10 percent water [in § 61.355(a)]. In addition, the current rule does not specify determinations 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.

PART III. TOTAL ANNUAL BENZENE QUANTITY (TAB) CALCULATIONS

A. THE FOLLOWING MATERIALS ARE INCLUDED IN THE TAB CALCULATION:

- ORGANIC WASTES THAT BECOME AQUEOUS DURING MANAGEMENT,
- WASTES EXEMPTED FROM CONTROL, AND
- MATERIALS SUBJECT TO SUBPART FF THAT ARE SOLD (SUCH AS SPENT CAUSTIC).

B. WASTES GENERATED BY REMEDIATION ACTIVITIES ARE NOT INCLUDED IN THE TAB CALCULATION.

C. WASTE TREATMENT CANNOT BE USED TO REDUCE TAB.

This revision clarifies that the benzene in organic wastes that are discharged to the sewer and mixed with water is counted toward the facility's total annual benzene-in-waste quantity (TAB). If wastes are exempted from control because of low waste quantity, low benzene quantity, or low benzene concentration, they are still counted toward the TAB if

they contain over 10 percent water or if they mix at any time with water, or other wastes, with the resulting mixture containing over 10 percent water.

Benzene in materials that are defined as "wastes" for the purposes of this rule (which is not necessarily consistent with the RCRA definition of waste) that may be sold routinely (such as spent caustic) also count toward TAB if they have a water content greater than 10 percent. Wastes 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, are not counted toward the TAB. However, if the facility is subject to the rule because of a TAB of 10 Mg/yr or more, the wastes from remediation activities are subject to the control requirements of the rule if they have a benzene concentration of 10 ppm or more.

Waste treatment, such as processes designed to remove benzene, cannot be used to decrease TAB. TAB is determined for the waste at the point of waste generation before any waste treatment occurs.

CLARIFICATION TO THE RULE:

PART I. DEFINITION OF POINT OF WASTE GENERATION

Replace the definition of point of waste generation in § 61.341 with the following:

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.

CLARIFICATION TO THE RULE:

PART II. POINTS FOR SAMPLING AND ANALYSIS

Revise § 61.355(a)(1) as indicated by deleting "point of waste generation":

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

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

Revise § 61.355(b) as indicated:

(b) For purposes of the calculation required by § 342(c)(3)(11) 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 (1), (2), and (3), by one of the methods given in paragraphs (4) through (6).

(1) The determination of annual waste quantity for sour water streams that are processed in sour water strippers at petroleum refineries 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.

(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.

[Renumber previous paragraphs (1) through (3) as (4) through (6).]

Revise § 61.355(c) as indicated:

For the purposes of the calculation required by § 342(c)(3)(11) and § 61.355 (a), an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (1) using either of the methods given in paragraphs (2) and (3).

(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 (A) through (C).

(A) The determination for sour water streams that are processed in sour water strippers at petroleum refineries 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.

(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).

(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.

[Renumber previous paragraphs (c)(1) and (c)(2) as (c)(2) and (c)(3).]

In § 355 (d) change ... "paragraph (c)(2)"... to ... "(c)(3)"...

In § 355 (e)(3) change ... "paragraph (c)" to ... "(c)(2) or (c)(3)"...

In § 355 (e)(4) change ... "paragraph (c)" to ... "(c)(2) or (c)(3)"...

In § 355 (f)(3) change ... "paragraph (c) to ... "(c)(2) or (c)(3)"...

In § 355 (g) change ... "paragraph (c)(2)" ... to ... "(c)(3)"...

In § 61.342(c)(2) change ... "specified in § 61.355(c)" ... to ... "specified in § 61.355(c)(2) or § 61.355(c)(3)"...

CLARIFICATION TO THE RULE:

PART III. TOTAL ANNUAL BENZENE QUANTITY CALCULATIONS

Add the following to the second sentence in § 61.342(a):

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).

Add the following phrase to § 61.355(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:

[NOTE: Correct numbering by inserting "(i)" prior to "determine" and delete "(1)" in § 61.355(a)(1)(1).]

REVISIONS TO THE BENZENE WASTE NESHAP:
CLARIFICATION OF "RECYCLED TO A PROCESS"

Description: This revision clarifies that once the waste stream is recycled to a process, including to tanks used for the storage of product and 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).

Clarification to the rule:

Revise § 61.342(c)(1)(iii) as indicated:

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 a waste stream is recycled to a process, including storage in the process feed tank unless this tank is used primarily for the storage of wastes, the material is no longer subject to paragraph (c) of this section.

REVISIONS TO THE BENZENE WASTE NESHAP:

ADD DEFINITIONS FOR

- SOUR WATER STREAMS
- SOUR WATER STRIPPER

Description: This revision is to add definitions for the subject terms because they are used in other revisions to the rule that relate to the calculation of total annual benzene-in-waste quantity.

Change to the rule:

Add the following definitions to § 61.341:

"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 the 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.

REVISIONS TO THE BENZENE WASTE NESHAP:

SMALL BENZENE QUANTITY EXEMPTIONS

Description: This revision is designed to provide an exemption for wastes generated in small quantities, such as those from routine maintenance, equipment turnarounds, and other operations. To exempt these wastes, the facility cannot take advantage of the low flow or mass quantity cutoffs for process wastewater (0.02 liters per minute or 10 Mg/yr of waste). Wastes from tank drawdown and wastes from purging prior to sampling do not qualify for this exemption. Wastes other than tank drawdown and purge material generated prior to sampling can be exempted if the annual benzene quantity of the individual waste stream, other than process wastewater, is less than 25 kg/yr and the total annual benzene quantity in all of the exempted waste streams is less than 1 Mg/yr. Process wastewater is not limited to a benzene quantity of 25 kg/yr. The calculation of total annual benzene quantity for these exempted wastes is counted entirely in the year in which they are generated and are not averaged or annualized over the time periods between episodes of generation.

Change to the rule:

Replace § 61.342(c)(3) with the following:

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 (1) or (11) are met.

(1) 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

(11) 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)(11) 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.

REVISIONS TO THE BENZENE WASTE NESHAP:

SMALL BENZENE QUANTITY EXEMPTIONS

Description: Changes to "Recordkeeping" to reflect the addition of the small benzene quantity exemptions.

Changes to the rule:

RECORDKEEPING REQUIREMENTS FOR SMALL QUANTITY EXEMPTION
[§ 61.342 (c)(3)]

Revise § 61.356 (b)(2), as shown:

§ 61.356 (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.

REVISIONS TO THE BENZENE WASTE NESHAP:
PROCESS TURNAROUND WASTE MANAGEMENT PLAN

Description: This revision is designed to ensure that good engineering practices are used during equipment and unit turnarounds to minimize benzene emissions to the atmosphere. As drafted, the requirement for a "management plan" for turnarounds would apply to all facilities subject to the provisions of the Benzene Waste Operations NESHAP. 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.

Change to the rule:

§ 61.356 RECORDKEEPING REQUIREMENTS

Add:

§ 61.356 (m)

(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/year 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 shutdown 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.

REVISIONS TO THE BENZENE WASTE NESHAP:

HANDLING OF PROCESS TURNAROUND WASTE IN CALCULATING TAB

Description: This revision clarifies how waste streams that are generated on an occasional basis, such as wastes from process unit turnarounds that occur only once every 2 to 5 years, are handled in calculating a facility's total annual benzene quantity (TAB). The rule requires that intermittent 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 generation thereby reducing their impact on TAB.

Clarification to the rule:

§ 61.355 TEST METHODS, PROCEDURES, AND COMPLIANCE PROVISIONS

Add:

§ 61.355 (a)(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 purpose of determining the total annual benzene quantity from facility waste.

REVISIONS TO THE BENZENE WASTE NESHAP:

CLARIFICATION THAT ABOVE-GROUND SEWER SYSTEMS MUST MEET THE WASTEWATER TREATMENT PROVISIONS

Description: This revision to the NESHAP is a clarification that above-ground wastewater collection and treatment systems must meet the provisions for wastewater treatment systems. The wastewater treatment system must meet either the standards given for tanks, surface impoundments, containers, individual drain systems, and oil-water separators or it must meet the alternative provisions of § 61.348(b)(2). The alternative provisions require controls on the units until the benzene concentration is less than 10 ppm and the total annual benzene quantity contained in all waste streams managed or treated in exempt waste management units comprising the facility wastewater treatment systems is less than 1 Mg/yr. Even if an above-ground system is used, the wastes must be controlled until the benzene quantity is less than 1 Mg/yr.

Clarification to the rule:

Add to paragraph § 61.348(a)(5):

If an owner or operator aggregates or mixes any combination of process wastewater, product tank drawdown, or landfill leachate subject to § 61.342(c)(1) of this subpart together with other waste streams to create a combined waste stream for the purpose of facilitating management or treatment of waste in a wastewater treatment system, then the wastewater treatment system shall be operated in accordance with paragraph (b) of this section. These provisions apply to above-ground wastewater treatment systems as well as those that are at or below-ground level.

REVISIONS TO THE BENZENE WASTE NESHAP:
VAPOR RECOVERY (CARBON CANISTER) CONTROL STANDARD

Description: This revision to the NESHAP establishes 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 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 change to a benzene limit makes the use of carbon adsorption, a proven and safe control alternative, much more feasible. There would be no change in the benzene emission reduction as a result of this rule revision.

Change to the rule:

Replace § 61.349(a)(2)(ii) with the following:

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.

REVISIONS TO THE BENZENE WASTE NESHAP:

VAPOR RECOVERY (CARBON CANISTER) CONTROL STANDARD

Description: Changes to "Monitoring, "Test Methods", and "Recordkeeping" to reflect the alternative performance limit of 98-percent control of benzene for vapor recovery systems.

Changes to the rule:

§ 61.354 MONITORING OF OPERATIONS

§ 61.354 (c)(6)

For a condenser, either: (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;....

§ 61.354 (c)(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;..

§ 61.354 (c)(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.

§ 61.354 (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.

§ 61.355 TEST METHODS, PROCEDURES, AND COMPLIANCE PROVISIONS

§ 61.355 (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 § 61.349 (a)(2) of this subpart shall use the following procedures:...

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

§ 61.355 (1)(3)(ii)(C) The organic concentration or the benzene concentration, as appropriate, in the vent stream entering and exiting the control device shall be determined using method 18 from appendix A of 40 CFR part 60.

§ 61.355 (1)(3)(iii) The mass of organics or benzene entering and exiting the control device during each run shall be calculated as follows:

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.
- C_{aj} = Organic concentration of compound 1 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_{bj} = Organic concentration of compound 1 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 in the vent stream or the molecular weight of benzene, kg/kg-mole.
- n = Number of organic compounds in the vent stream; if benzene reduction efficiency is being demonstrated, then $n = 1$.

§ 61.355 (1)(3)(iv) The mass flow rate of organics or benzene entering and exiting the control device shall be calculated as follows:

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 the vent stream existing the control device during run j, kg.

§ 61.355 (1)(4) The organic reduction efficiency or the benzene reduction efficiency for the control device shall be calculated as follows:

Where:

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

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/hour.

E_b = Mass flow rate of organics or benzene exiting the control device, kg/hour.

§ 61.356 RECORDKEEPING REQUIREMENTS

Amend § 61.356 (f)(2)(11) (E)

(F)

(G)

(E) Insert "or the design outlet benzene concentration level," in the 2nd sentence

(F) Insert "or the design exhaust vent stream benzene concentration level," in the 2nd sentence

(G) Insert "or the design exhaust vent stream benzene concentration level;" in the 2nd sentence

§ 61.356 (j)

insert (1) prior to "Dates..." in 1st paragraph.

§ 61.356 (j)(8)

insert "or concentration of benzene" in 2nd sentence

insert "or the concentration of benzene" in 2nd sentence

§ 61.356 (j)(9)

insert "or the concentration of benzene" in 1st sentence

insert "or the concentration of benzene" in 2nd sentence

insert "or the concentration of benzene" in 2nd sentence

§ 61.357 REPORTING REQUIREMENTS

§ 61.357 (d)(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.

REVISIONS TO THE BENZENE WASTE NESHAP:
CHANGE TO ALLOW ALTERNATIVE CONTROL DEVICES

Description: This revision to the NESHAP adds a new provision for control devices that is a performance standard option for controls 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. Note that under § 61.349(e) the Administrator may request at any time an owner or operator to conduct a performance test. Minor changes are also made to requirements for monitoring, recordkeeping, and reporting.

Changes to the rule:

Add new paragraph § 61.349(a)(2)(iv):

A control device other than those described in paragraphs (i) through (iii) 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) of this section is maintained during operation of the device,

(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 (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.

Revise paragraph § 61.349(e) as indicated:

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.

Add a new paragraph to the monitoring requirements -- § 61.354(c)(9):

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

Add a new paragraph to the recordkeeping requirements --
§ 61.356(f)(2)(11)(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).

Add a new paragraph to the recordkeeping requirements --§ 61.356(j)(12):

If a control device subject to the requirements of § 61.349(a)(2)(iv) 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), or other records as specified by the Administrator.

Add a new paragraph to the reporting requirements --
§ 61.357(d)(6)(iii)(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), or any other periods specified by the Administrator for a control device subject to the requirements of § 61.349(a)(2)(iv).

REVISIONS TO THE BENZENE WASTE NESHAP:
CLARIFY ALTERNATIVE MEANS OF EMISSION LIMITATION

Description: This revision includes the addition of some minor clarifying words to the section on alternative means of emission limitation to make that section consistent with the General Provisions given in Subpart A [§ 61.12(d)(1)].

Clarification to the rule:

Revise § 61.353(a) as indicated:

If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in benzene 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...

REVISIONS TO THE BENZENE WASTE NESHAP:

CAR-SEAL VALVES AS AN ALTERNATIVE TO FLOW INDICATORS

Description: The change revises the language per the location of flow indicators and provides 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. The approach has been used in other NESHAP (e.g., the Benzene Transfer Operations NESHAP, § 61.305 (c)).

Change to the rule:

§ 61.349 STANDARDS: CLOSED VENT SYSTEMS AND CONTROL DEVICES

Replace:

§ 61.349 (a)(1)(ii) Vents 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 (B) below.

(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.

§ 61.354 MONITORING OF OPERATIONS (CLOSED VENT SYSTEMS)

Add:

61.354 (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)(11) 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)(11) of this subpart at least once each operating day to check that vapors are being routed to the control device as required.

§ 61.356 RECORDKEEPING REQUIREMENTS

Replace § 61.356 (j)(3) with

(3) Periods when the closed vent system and control device is 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)(11) 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)(11) of this subpart indicate that vapors are not routed to the control device as required.

§ 61.357 REPORTING REQUIREMENTS

Revise § 61.357 (d)(7)

change "... §§ 61.342 through 61.352 ..."
to "... §§ 61.342 through 61.354..."

§ 61.341 DEFINITIONS

Add:

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.

REVISIONS TO THE BENZENE WASTE NESHAP:

CLARIFICATION TO THE REPAIR SCHEDULE FOR TREATMENT DEVICES

Description: As the rule is currently formatted or structured, the requirement for the first attempt at repair can be applied to all treatment process and devices. However, the requirement in § 61.348(g) was intended to apply only to gaskets and seals on access doors, hatches, and other similar openings rather than the operation of the entire unit. This clarification allows delays for seals and gaskets on access doors, hatches, etc. as was originally intended and does not permit repair delays for malfunctioning treatment operations.

Change to the rule:

§ 61.348 STANDARDS: TREATMENT PROCESSES

Change § 61.348 (f) to § 61.348 (e)(1), and § 61.348(g) to § 61.348 (e)(2).

Change § 61.348 (h) to (f), and § 61.348(i) to (g).

REVISIONS TO THE BENZENE WASTE NESHAP:
CLARIFICATION FOR LOADING WASTES INTO CONTAINERS

Description: This revision is a minor clarification 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 to the rule:

Replace the first sentence in § 61.345(a)(2) with the following:

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

(Replaces "Loading a pumpable waste into a container shall be performed by the owner or operator using a submerged fill pipe.")