

Dated: May 28, 1999.  
**Carol M. Browner,**  
*Administrator.*  
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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

[AD-FRL-6355-6]  
 RIN 2060-AH47

**National Emission Standards for Hazardous Air Pollutants: Group IV Polymers and Resins**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed denial of petition for reconsideration and notice of public hearing.

**SUMMARY:** Promulgated standards for the Group IV Polymers and Resins were published in the **Federal Register** on September 12, 1996. Two sets of petitioners have petitioned the EPA to reconsider the equipment leak standards contained in the promulgated rule as they pertain to polyethylene terephthalate (PET) facilities. After consideration of the petitioners' comments and data, and a reanalysis of the equipment leak program, the EPA has determined to retain without modification the equipment leak provisions of the promulgated rule.

Today's notice provides the opportunity to provide public comment on the new equipment leak analysis, which was conducted based on comments and additional data provided by the petitioners.

**DATES:** Comments. Comments must be received on or before August 9, 1999. For information on submitting

electronic comments see the **SUPPLEMENTARY INFORMATION** section of this document.

**Public Hearing.** A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the EPA's decision to retain the equipment leak standards based on the comments and data provided by the petitioners and on the reanalysis incorporating those comments and data. If anyone contacts the EPA requesting to speak at a public hearing by July 1, 1999, a public hearing will be held on July 8, 1999, beginning at 9:30 a.m. Persons interested in attending the hearing or wishing to present oral testimony should contact Ms. Maria Noell at (919) 541-5607, Organic Chemicals Group (MD-13). If held, the public hearing will take place at the EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina.

**ADDRESSES: Comments.** Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102) Attention: Docket No. A-92-45, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460. The EPA requests that a separate copy also be sent to Mr. Keith Barnett, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, telephone (919) 541-5605, fax (919) 541-3470, and electronic mail: [barnett.keith@epa.gov](mailto:barnett.keith@epa.gov). Comments and data may also be submitted electronically by following the instructions listed in **SUPPLEMENTARY INFORMATION**. No confidential business information (CBI) should be submitted through electronic mail.

**Technical Memoranda.** The "Summary of Responses to Petitioners' Comments" memo may be obtained

electronically from the EPA's Technology Transfer Network (TTN) (see **SUPPLEMENTARY INFORMATION** for access information.)

**Docket.** A docket, No. A-92-45, containing information considered by the EPA in the development of the standards for the Group IV Polymers and Resins, is available for public inspection and copying between 8:00 a.m. and 4:00 p.m., Monday through Friday at the EPA's, Air and Radiation Docket and Information Center, Waterside Mall, Room M-1500, first floor, 401 M Street SW, Washington, D.C. 20460. The proposed and promulgated regulations, the Basis and Purpose Document for the promulgated rule, Summary of Responses to Petitioners' Comments, (Docket Item VI-B-19), Equipment Leak Analysis for PET Facilities Subject to the Group IV Polymers and Resins NESHAP (Docket Item VI-B-20), and other supporting information are available for inspection and copying. Alternatively, a docket index, as well as individual items contained with the docket, may be obtained by calling (202) 260-7548 or (202) 260-7549. A reasonable fee may be charged for copying. The docket index is also available electronically on the Virtual Air Toxics Website at <http://www.epa.gov/ttn/uatw/pr4/pr4pg.html>.

**FOR FURTHER INFORMATION CONTACT:** Mr. Keith Barnett, US EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711, telephone (919) 541-5605, fax (919) 541-3470, and electronic mail: [barnett.keith@epa.gov](mailto:barnett.keith@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**Regulated Entities**

Regulated categories and entities include:

Category	Examples of regulated entities
Industry .....	Facilities manufacturing polyethylene terephthalate (PET) using a batch dimethyl terephthalate (DMT) process, PET facilities using a continuous DMT process, PET facilities using a batch terephthalic acid (TPA) process, and PET facilities using a continuous TPA process.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the Group IV Polymers and Resins standard. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated, you should carefully examine the applicability criteria in § 63.1310 of the rule. If you have questions regarding the applicability of this action to a

particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

**Electronic Filing**

Electronic comments and data can be sent directly to the EPA at: [a-and-r-docket@epamail.epa.gov](mailto:a-and-r-docket@epamail.epa.gov). Electronic comments and data must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments and data will

also be accepted on diskette in Wordperfect 5.1 or 6.1, or ASCII file formats. All comments and data in electronic form must be identified by the docket number A-92-45. No Confidential Business Information (CBI) should be submitted through electronic mail. Electronic comments may be filed online at many Federal Depository Libraries.

## Electronic Activity

This notice is available through the Technology Transfer Network (TTN) web site at <http://www.epa.gov/ttn/oarp>. The TTN Web site is a collection of related web sites containing information about many areas of air pollution science, technology, regulation, measurement, and prevention. The telephone number to access the OAQPS TTN via modem is (919) 541-5742. The TTN operates 24 hours a day, except on Mondays, when it is inaccessible from 8:00 a.m. to noon, East Coast Time. For further information and general questions regarding the TTN, call the TTN help line (919) 541-5384 or Mr. Hersch Rorex (919) 541-5637. This notice is also available in Docket No. A-92-45 (see ADDRESSES).

The following outline is provided to aid in reading this notice. The information presented in this notice is organized as follows:

- I. Background
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  - B. Public Comments on 1995 Proposed Rule
  - C. 1996 Promulgated Rule
- II. Petitions for Reconsideration
  - A. Emission Estimation
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  - C. Heavy Liquid Components
- III. Reanalysis of Equipment Leak Program
- IV. Results and Conclusion
- V. Solicitation of Comments
- VI. Administrative Requirements
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  - B. Executive Order 12866
  - C. Executive Order 13045
  - D. Regulatory Flexibility
  - E. Unfunded Mandates Reform Act
  - F. Executive Order 12875
  - G. National Technology Transfer and Advancement Act
  - H. Executive Order 13084

### I. Background

#### A. 1995 Proposed Rule

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Group IV Polymers and Resins were proposed in the **Federal Register** (FR) on March 29, 1995 (60 FR 16090). The proposed standards included requirements for the control of emissions from equipment leaks. Under the proposed standards for equipment leaks, both existing and new PET facilities would be required to implement a leak detection and repair (LDAR) program. With a few exceptions, the LDAR program proposed was the same as that specified in the National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks (40 CFR part 63, subpart H; referred to hereafter as the HON) and the National Emission Standards for Organic Hazardous Air Pollutants for

Certain Processes Subject to the Negotiated Regulation for Equipment Leaks (40 CFR part 63, subpart I). Under the proposed standards, work practice requirements to reduce emissions from equipment that is in organic hazardous air pollutants (HAP) service for 300 or more hours per year were specified. The proposed standards defined "in organic HAP service" as being in contact with or containing process fluid that contains a total of 5 percent or more total HAP. The proposed standards applied to valves, pumps, compressors, connectors, pressure relief devices, open-ended valves or lines, sampling connection systems, instrumentation systems, agitators, surge control vessels, bottoms receivers, and closed-vent systems and control devices.

#### B. Public Comments on 1995 Proposed Rule

Comments were received on the 1995 proposed rule, including comments on the equipment leak program. A summary of comments and responses to those comments can be found in "Hazardous Air Pollutant Emissions from Process Units in Thermoplastics Manufacturing Industry—Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses," (EPA-453/R-96-001b, May 1996).

Overall, commenters had several objections concerning the proposed provisions as applied to PET affected sources. Commenters stated that emissions and emission reductions were overestimated; that little environmental benefit could be expected as a result of implementing an equipment leak program; that the proposed provisions were not cost effective (largely due to the overestimation of emissions and emission reductions); and that the recordkeeping and reporting requirements were excessive.

In response to these comments, the EPA reevaluated the emission estimates, costs, and cost effectiveness of the proposed equipment leak standards for each PET subcategory. Based on the comments and reanalysis, the EPA made changes to the proposed rule, which are summarized in the following section.

#### C. 1996 Promulgated Rule

On September 12, 1996, the final rule for the Group IV Polymers and Resins source category was published in the **Federal Register** (61 FR 48208). In general, with regard to equipment leaks, subject facilities were required to comply with the HON. A few differences from the HON were included in the final rule. These differences, most of which were in

response to comments received during the public comment period, included:

1. For PET affected sources using a continuous TPA high viscosity process with multiple end finishers, the final rule does not require an equipment leak program.

2. The final rule exempts from the equipment leak standards any PET Thermoplastic Product Production Unit (TPPU) in which all of the components are either in vacuum service or in heavy liquid service (or some combination of vacuum service and heavy liquid service).

3. Indications of liquids dripping from bleed ports on pumps and agitators at facilities producing polystyrene resins are excluded from the definition of a leak.

4. A submittal of an Initial Notification is not required.

5. 150 days (rather than 90 days) are allowed to submit the Notification of Compliance Status.

6. PET facilities are not required to provide a list of identification numbers for components in heavy liquid service, pressure relief devices in liquid service, and instrumentation systems.

7. The final rule clarifies that, for the components identified above under Item 6, leaks are to be determined exclusively through the use of visual, audible, olfactory, or any other detection methods, but that Method 21 is not to be used.

8. Bottoms receivers and surge control vessels are not regulated under the equipment leak provisions, but instead are regulated as storage vessels.

### II. Petitions for Reconsideration

Following promulgation of this rule, the EPA received two petitions for reconsideration regarding the LDAR provision of the rule.<sup>1</sup> The petitioners also supplied additional data to the EPA in support of their petitions. The EPA held meetings with both sets of petitioners to discuss their petitions.

The two primary concerns expressed by these petitioners were:

1. Light liquid LDAR program is more costly than estimated, is not cost effective, and thus should not be required.

2. No substantive cost effectiveness analysis was performed on the heavy liquid LDAR program, which was added between proposal and promulgation; thus, EPA failed to meet its obligation under section 112(d)(2) of the Clean Air Act.

The petitioners requested that the EPA redo its analysis and believes that

<sup>1</sup> The EPA also received petitions regarding other sections of the rule and is responding to these separately.

such reanalysis would result in action to delete the equipment leak provisions from the Group IV Polymers and Resins rule.

A summary of the reanalysis conducted in the response to the petitions is presented below in Section III, Reanalysis of Equipment Leak Program. The following paragraphs summarize the major comments made by the petitioners and the EPA's response to those comments. For more comments and responses, please see the "Summary of Responses to Petitioners' Comments" memo in Docket A-92-45.

#### A. Emission Estimation

*Comment:* Two petitioners claim that the EPA's average SOCM I emission factors significantly overestimate equipment leak emissions and that baseline emissions would be more accurately predicted using the average emission factors identified in the 1993 Protocol document for components located at ethylene oxide/butadiene (EO/BD) process units (Protocol for Equipment Leak Emission Estimates, EPA-453/R-93-026, June 1993, page B-53).

*Response:* This comment is essentially identical to comments presented during the public comment period on the proposed rule. However, these petitioners provide for the first time equipment leak rate data compiled from several of their non-PET facilities that they believe are representative of leak rates at their PET facilities. The petitioners then calculate average leak rates based on these leak frequencies and compare them to several average leak rates reported in the 1993 Protocol document, including those based on the EO/BD data, on the EPA 24-unit study, and the combined EO/BD and EPA 24-unit study data (which makes up the SOCM I data set). A comparison of the average leak rates appears to show that the petitioners' non-PET facilities are emitting at a rate lower than the average SOCM I factors.

When developing the rule, the EPA provided each company, including the petitioners, with the opportunity to comment on the estimated emissions from equipment leaks, which were based on the average SOCM I emission factors. Most of the companies disagreed with the estimates, either stating they were too high or providing their own estimates. Two companies found no reason to dispute the EPA estimate. Two petitioners responded by providing emission estimates and detailed component counts for some of their facilities. However, for two of their facilities they used EPA SOCM I emission factors to estimate their

equipment leak emissions. A third petitioner, in contrast, provided no comments on the procedure for calculating uncontrolled emissions from equipment leaks and stated the information on the component counts and their stream composition was unavailable at that time.

In responding to the petitioners' comments, the EPA performed the equipment leak reanalysis using revised emission factors for the petitioners' facilities based on the equipment leak frequency rates presented by the petitioners. In addition to the petitioners, only one other company submitted data from which facility-specific leak frequencies could be derived. The EPA used these data to calculate facility-specific emission factors for the reanalysis for that facility. The leak frequency rates and the resulting facility-specific emission factors were not extended to analyses of other companies' facilities for several reasons: (1) The other companies either have not questioned the EPA emission estimates or have concurred with them, (2) the equipment leak programs to control emissions employed by the petitioners at their facilities may not represent programs practiced by other companies, and (3) several companies stated that they do not have any equipment leak programs.

It is important to note that the EPA is using the petitioners' leak frequency rates for analysis purposes only in responding to the petitioners' comments, and is not accepting them as valid. The level of detail associated with the leak frequency rates and inconsistencies in the presentation of the data (as discussed in the following paragraph) make it impossible to verify the accuracy of the leak rate data. In addition, there is no certainty that these leak frequency rates are applicable to the petitioners' PET facilities, because the monitoring and repair program in place for the submitted data at the time of the reported initial measurements may not reflect the uncontrolled leak frequency from the PET facility.

Two petitioners submitted information on the equipment leak frequencies for a number of non-PET facilities. Upon request, they also provided data to support those reported leak frequencies. In reviewing the supporting data, there appear to be a number of inconsistencies, some of which would affect the estimated leak frequency. For example, in the information submitted by one petitioner these inconsistencies include: (1) The number of leaking components reported in the summarization table do not match the monitoring results in the audit

report; (2) start dates do not match between the summarization table and the audit report; (3) total number of components in the summarization table do not always match the number tested in the audit report; and (4) it is unclear what "net" readings refer to and it is possible that this is an incorrect accounting of leakers. In another petitioner's data, concerns are: (1) the data sheets do not match the numbers in the screening results table; and (2) it is unclear what "adjusted" readings, which are presented for many of the process units and their leaking components, refer to and it is possible that this is an incorrect accounting of leakers. Notwithstanding these technical uncertainties, the EPA has used the petitioners' leak frequency rates in the reanalysis.

*Comment:* Two petitioners state that one reason their baseline emissions are so much lower than predicted by the SOCM I emission factors is that since the 1970s a greater emphasis has been placed on repairing leaking equipment identified through sensory means, and that this is part of the normal practice at their facilities.

*Response:* This comment is essentially identical to one submitted by one of the petitioners in response to the proposed rule. While these two petitioners state that they currently have in place a program that repairs leaks through coordination with their maintenance staff, they do not provide any information documenting the effectiveness of a sensory program relative to a monitoring program for components in gas/vapor or light liquid service. But whatever their effectiveness, the EPA has used their data in the reanalysis.

*Comment:* One petitioner claims that the EPA had information that industry-run LDAR programs were practiced in PET facilities and that by ignoring these programs the EPA over-estimated the number of leaking components.

*Response:* In response to an EPA request to identify equipment leak programs prior to the 1995 proposal, most PET companies (including the petitioners for all of their facilities) indicated that they did not have an equipment leak program or did not respond. Two companies stated that they repair leaks on a visual-detection basis. None of the companies provided any data to quantify the impact on emissions as a result of these visual-detection programs. In addition, none of the companies described such programs in any detail. Therefore, prior to the public comment period, there was insufficient information for the EPA either to describe these visual-based

equipment leak programs or to quantify their effectiveness. During the public comment period, the EPA received additional statements (but no data or descriptions) from several commenters (including the petitioners) that there were industry-run LDAR programs. In fact, one of the petitioners stated during the public comment period that the MACT floor determination was flawed because the proposed equipment leak standards only require what PET TPA facilities are currently doing for components in heavy liquid service. Notwithstanding such statements, industry did not provide the EPA with information or data to describe the programs or to quantify the emission reduction associated with industry-run LDAR programs. In the absence of such information or data, the EPA could not incorporate these programs in its estimate of baseline emissions.

*Comment:* One petitioner states that the EPA did not use emission estimates provided by the industry, that the EPA assumed all vapor components to be methanol, and that the EPA failed to revise the emission factor for vapor ethylene glycol, resulting in an overestimation of emissions from these components.

*Response:* The petitioner correctly states that the EPA did not use emission estimates provided by the industry for equipment leaks. As the EPA explained in supporting technical documentation:

Emissions data provided by industry for equipment leaks were not used. Instead, emissions were estimated by determining the equipment component counts at each facility (e.g. valves in gas service, pumps in light liquid service) and applying the appropriate emission factors for each component category. Emission factors reported in the EPA's protocol document for equipment leaks were used. This approach to estimating emissions for equipment leaks was taken to provide a consistent baseline for estimating the impacts of various leak detection and repair (LDAR) programs in use for various subcategories and to compensate for the fact that equipment leaks data provided by industry was not complete. For the several facilities that provided specific and clear information, the estimate of emissions was adjusted to account for low organic HAP concentrations and reduced hours of operations.

The supporting technical documentation lays out the procedures for the design and costing of condensers to control styrene and methanol emissions from polystyrene and PET process vents. These systems are not applied to equipment leak emissions. At proposal and promulgation, the EPA

assumed all vapor service components at PET DMT facilities were in methanol service, and applied a recovery credit to these components based on the value of methanol. The EPA did not make any assumptions at proposal and promulgation as to what compound was contacting the gas/vapor service components at PET TPA facilities. The EPA did use the same emission factors to estimate emissions from gas/vapor service components at both DMT and TPA facilities.

Based on comments received during the public comment period, the EPA responded by revising the emission factors for components in heavy liquid service. No data have been provided to indicate that it is inappropriate to use the emission factor for components in vapor service where the contact compound is ethylene glycol in the vapor phase.

Based on the available data, the EPA believes the approach used by the Agency to estimate emissions is reasonable.

*Comment:* One petitioner claims that the EPA has stated that LDAR programs for heavy liquid components have no measurable effect on heavy liquid component emissions. The petitioner then states that they must use zero for heavy liquid component emission reductions.

*Response:* The EPA believes that there will be an emissions reduction for heavy liquid components as a result of the Group IV Polymers and Resins NESHAP, and that the petitioner misinterpreted the information. The requirements of the rule for heavy liquid components specify that if an operator sees, smells, or hears a leak, they are required to tag the component and complete repairs within 15 days. The current industry practice is to identify leaks through the same methods as specified in the rule, but they have no specific time limit for repairs. The EPA believes it is reasonable to conclude that imposing specific time limits for repairs will result in repairs being completed in a more timely fashion, thereby reducing emissions.

The comments provided by this petitioner indicate that they do not currently keep records on repairs of heavy liquid components. Therefore, it is not possible based on currently available data to determine the average repair times under current industry practice. If data were available, then it would be possible to quantify an emissions reduction.

In the case of open-ended lines and sampling connections in heavy liquid service, the emission reductions have been quantified. The equipment leak

program requires all open-ended lines regardless of type of service to be capped, etc., and all sampling connections to be controlled to a "zero HAP emissions" level.

*Comment:* One petitioner states that the number of gas/vapor components at continuous TPA facilities is very small (11 at the petitioner's facility) and, therefore, the benefits derived from a LDAR program for these components are negligible.

*Response:* The EPA agrees that the emission reduction benefit may vary depending on the number of components subject to a LDAR program and that the amount of emission reduction will vary from facility to facility. However, in determining the benefits to be derived from an equipment leak program, the EPA looks at all of the facilities in the category or subcategory and all of the components from which emission reduction may be achieved. This type of approach has been consistently applied in the MACT program (i.e., impacts and cost effectiveness has been determined across a category or subcategory, not on an individual facility basis). Based on this analysis, the EPA has determined that the amount of emission reduction and the cost to achieve that emission reduction is reasonable.

#### B. Cost Estimation

*Comment:* Two petitioners claim that the EPA has underestimated the costs of implementing an equipment leak program based on Method 21 screening. Specifically, the petitioners claim that the EPA did not reflect fixed costs or costs associated with including heavy liquid components in the equipment leak program and that the EPA underestimated the costs associated with performing Method 21 monitoring.

*Response:* The EPA acknowledges that specific cost elements were left out of the costing performed at proposal and promulgation. Revised costing was conducted and includes additional elements. Responses to specific cost items identified by these two petitioners are found in Tables 2 and 3 to the "Summary of Responses to Petitioners' Comments" memo.

*Comment:* Two petitioners claim that the cost analysis contains fundamental technical errors that result in the EPA's grossly underestimating the cost of compliance with the LDAR program for PET facilities.

*Response:* These two petitioners identify a number of errors that did occur in the regulatory cost analysis. These errors are corrected in the revised costing. Table 4 in the "Summary of Responses to Petitioners' Comments"

memo presents each item claimed by the petitioners as to being in error or insufficiently explained and EPA's response to these items.

*Comment:* According to two petitioners two significant errors occur in the EPA's cost effectiveness analysis. First, they assert that a valve monitoring frequency of 12 times per year could be required to maintain a leak frequency of 1 percent, versus the 4 times a year used in EPA's analysis. Second, they state that the EPA used an incorrect value for the leak frequency used to calculate repair costs. The petitioners claim that, by themselves, these errors underestimate the costs of the equipment leak program based on Method 21 screening by 100%.

*Response:* The EPA believes that the petitioners misstated the requirements of the rule. The comment implies that a facility must maintain a leak frequency of one percent. This is incorrect. A facility is not required to maintain a specified leak frequency for valves. The rule states that the required monitoring frequency varies from annual to monthly depending on the actual leak frequency found when monitoring is performed. Also, in order for a facility to be allowed to monitor on a quarterly basis, they must have a measured leak frequency of less than 2 percent, not the 1 percent value stated in the comment. The leak frequency is calculated as a rolling average of the last two consecutive monitoring periods.

The value quoted by the petitioners to support their contention that monthly monitoring of valves would be required, 2.42 percent, was taken from information developed only for the purpose of estimating emissions from equipment leak programs currently in place. It does not reflect the percentage of valves we anticipate will leak when this rule is in place.

Finally, these petitioners estimated the initial leak frequency for valves in their facilities under their current practices to be 3.02 and 1.48 percent, respectively, using a leak definition of 500 ppmv. The EPA believes it is reasonable to assume based on these current leak frequencies that once the LDAR program is implemented the leak frequencies the facilities can expect to measure will be well below 2 percent.

The EPA agrees that the wrong subsequent leak frequencies were used to calculate repair costs and has revised them in the new cost analysis. The effect of this single change increases costs minimally.

*Comment:* Two petitioners claim that the EPA failed to conduct a cost analysis for heavy liquid components. The petitioners state that no cost estimates

are included for LDAR monitoring, maintenance, repair, or administrative costs. The petitioners also state that, in assuming these costs are zero (or impose no additional costs) without performing any type of analysis, the EPA has failed to meet its obligation under section 112(d)(2) of the CAA. According to the petitioners, the costs associated with a heavy liquid LDAR program are significant, and do not result in cost effective emission reduction.

*Response:* The EPA agrees that the costing conducted at proposal and promulgation did not include costs for the implementation of the heavy liquid portion of the rule for valves, pumps, and connectors. In the new analysis, costing for these heavy liquid components is now explicitly included. Please refer to the "Equipment Leak Analysis for PET Facilities Subject to the Group IV Polymers and Resins NESHAP" memo in the docket.

Also, specific cost items identified by the petitioners are addressed in Table 3 in the "Summary of Responses to Petitioners' Comments" memo.

*Comment:* One petitioner states that emissions reductions at its facility would be approximately 0.29 Mg per year at a cost of approximately \$26,000 per Mg of emission reduction and that this cost figure (\$26,000 per Mg) is "many times the amount found by EPA to be unacceptably costly."

*Response:* The EPA has re-estimated emission reductions and costs for this petitioner's facility as well as for all of the other facilities. The EPA used the information provided by the petitioner in estimating the components that would be affected by the equipment leak program and for which emission reductions could be quantified. The EPA also reanalyzed costs at this facility.

Based on this reanalysis, the cost effectiveness value of the LDAR program for this facility estimated by the EPA is much lower than that estimated by the petitioner. More details on the differences in the EPA and petitioner analyses may be found in the memo "Summary of Responses to Petitioners' Comments" in Docket A-92-45.

### C. Heavy Liquid Components

*Comment:* Two petitioners claim that the EPA promulgated LDAR requirements for heavy liquid service components that are different from the proposed rule without providing affected parties the opportunity to provide input. These two petitioners also claim that the EPA has violated the legal requirements for rulemaking by making a change that "is not a logical

outgrowth of the proposed rules." Thus, EPA must provide opportunity for public comment on this "new substantive" requirement for components in heavy liquid service.

*Response:* It is not necessary to address this comment because the new analysis (as presented in the "Equipment Leak Analysis for PET Facilities Subject to the Group IV Polymers and Resins NESHAP" memo) and this **Federal Register** notice provide public notice and opportunity for comment. The EPA also notes that one of these petitioners, in its comments on the 1995 proposed rule, specifically suggested that the EPA allow the use of a leak detection and repair approach that would utilize visual inspection of process lines, and later informed the EPA that visual inspection would be acceptable to them.

*Comment:* Two petitioners asked the EPA to consider two alternative programs for heavy liquid components—a "minimal" program and a "more conservative" program—and determine which would be sufficient to meet the requirements for heavy liquid components.

*Response:* Although not required to do so, the EPA reviewed the two programs and has determined that the minimal program as laid out by the petitioners is sufficient to meet the requirements set forth in the rule for components in heavy liquid service. (See Table 3 in the "Summary of Responses to Petitioners' Comments" memo for more details.)

*Comment:* One petitioner states the major cost for the LDAR program will be ensuring compliance with recordkeeping and repair scheduling requirements for heavy liquid ethylene glycol components. The petitioner also states that they already maintain all of the equipment components listed in the standard, but do not keep records or track repair deadlines. According to the petitioner, one employee on a full-time basis will be required to ensure compliance with recordkeeping and scheduling to log and track monitoring and perform repairs. They claim that a current employee cannot be used, during periods of maintenance turn around or upsets, because he would not be available to perform the regulatory requirements. They also assume one full-time employee would be required because of the number of heavy liquid components at the facility (close to 80,000). Furthermore, maintenance employees would have to be trained on procedures for complying with the MACT equipment leak program, which requires that repairs be documented and

components tagged for tracking purposes.

*Response:* As noted earlier, the EPA agrees that a number of cost components associated with the heavy liquid portion of the equipment leak program were left out of the costing done at proposal and promulgation. The EPA has addressed the petitioner's concerns in the revised costing and believes that the costs associated with the heavy liquid component program have been adequately addressed.

*Comment:* One petitioner claims that the EPA has stated that the MACT equipment leak program will have no measurable effect on emissions from heavy liquid components, but has insisted that the petitioner implement a heavy liquid program that will cost more than the gas/vapor portion of the program. They noted a compliance cost of \$2.50 per heavy liquid component for initial identification in the spreadsheet used for costing at proposal, but the EPA assumed no components in heavy liquid service, and a pre-existing LDAR program in place. Therefore, no costs incur as a result of the rule. This petitioner states that they have over 80,000 components in heavy liquid service. Using a compliance cost of \$2.50 per component results in an annual cost of \$200,000 for their facility, which is more than the estimated cost for the Method 21 monitoring program, and no emission reduction is obtained for this cost.

*Response:* The EPA agrees that a one-time, initial cost to identify components affected by the rule should be attributed to the heavy liquid portion of the rule as it affects valves, pumps, and connectors in heavy liquid service. In the revised costing, the EPA is using other petitioners' suggested cost of \$1.13 per heavy liquid component (see Table 3 in the "Summary of Responses to Petitioners' Comments" memo). This cost covers identifying all equipment in heavy liquid service, including redoing or developing P&ID drawings at least to the extent that equipment in heavy liquid service with greater than 5% HAP would be differentiated. Although the rule does not require redoing or developing P&ID drawings, the EPA is using the petitioners' estimate to provide a conservative estimate of this cost item. Based on the component counts provided by the petitioner for this facility, the estimated one-time cost for this facility is \$86,000 (76,047 components x \$1.13 per component). This is equivalent to an annualized cost of approximately \$12,000 per year, which is approximately 35% of the estimated annualized cost for the rest of the equipment leak program (before

emission reduction credits) at the petitioner's facility.

The EPA disagrees that there will be no emissions reduction for heavy liquid components as a result of the Group IV Polymers and Resins NESHAP. The current programs have no specific time limit for repairs. The program in the rule has specific time limits for repairs. The EPA believes it is reasonable to conclude that repairs will be accomplished in a more timely fashion, thereby reducing emissions. However, it is not possible to quantify the reduction based on currently available information because the petitioners do not keep records and track repair times in their current programs. If these data were available, then an emissions reduction could be estimated.

Based on this reanalysis, which is based on costs suggested by the petitioners, the EPA concludes that the costs of the heavy liquid component program implementation will not be more expensive than the gas vapor portion of the program, and that there will be an emissions reduction that occurs as a result of the heavy liquid component requirements in the LDAR program.

### III. Reanalysis of Equipment Leak Program

The petitioners claimed that a number of errors exist in the analyses conducted by the EPA to support the proposed and promulgated rule. The EPA carefully reviewed each claimed error and where found to be accurate, the EPA has corrected the errors identified by the petitioners in the reanalysis. The EPA also carefully evaluated and considered all of the comments and data provided by the petitioners. Many of the comments were found to have merit and, in such instances, the EPA incorporated the comment or data or portions thereof directly into the reanalysis. The major changes made to the analysis as a result of the petitioners' comments and data are as follows:

1. Corrected several errors identified by the petitioners including:
  - The estimate of the number of leakers at a facility that must be repaired after each periodic monitoring with a LDAR program in place is based on the number of components and the subsequent leak frequency for the components. The subsequent leak frequency is that leak frequency experienced immediately prior to LDAR monitoring. In the previous analyses, the EPA used the average leak frequencies to determine the number of components repaired instead of the subsequent leak frequencies. In the

reanalysis, the subsequent leak frequencies have been used.

- The cost estimate for the annual monitoring of components is based, in part, on the number of times per year the components are monitored. Under the HON LDAR program, connectors are to be monitored once per year. In the costing spreadsheets used for DMT-based facilities at promulgation, the monitoring frequency was incorrectly set at zero (0). In the reanalysis, the correct monitoring frequency of once per year (1) has been used.

- Part of the costs of an equipment leak program are contained in a "miscellaneous" category. The costing algorithms used for the PET facilities originated with the HON equipment leak costs. In the HON costing, the miscellaneous costs associated with pumps is calculated using a factor of 0.8. In the PET costing algorithms used at promulgation, a miscellaneous cost factor for pumps of 0.4 was used. In the reanalysis, the correct miscellaneous cost factor of 0.8 has been used.

- Part of the equipment leak costing program is an estimate of the costs to cap open-ended lines. This cost is estimated by multiplying the number of open-ended lines by the cost for a cap for each line. For several facilities, the equation for calculating this cost was missing in the costing spreadsheets used at promulgation. This error has been corrected in the reanalysis.

2. For the petitioners' facilities and for one other, revised emission factors were used based on the leak frequency data provided by these companies. The revised emission factors result in lower emission and emission reduction estimates than would be estimated using the average SOCM emission factors for the same components.

3. The costing spreadsheets used at promulgation did not estimate costs for valves, pumps, and connectors in heavy liquid service. The costing spreadsheets used in the reanalysis include several cost items for these heavy liquid components including: (1) A location and identification cost, (2) tagging cost, (3) planning and training cost, and (4) data entry cost.

4. At proposal and promulgation, recordkeeping and reporting costs were reported in Part A to the Supporting Statement and were not included in the costing spreadsheets. Under the reanalysis, recordkeeping and reporting costs are included in the costing spreadsheets. The estimated costs used were based on data supplied by two petitioners for facilities with 500 or more components subject to Method 21 monitoring. A lower estimate was used

for facilities with fewer than 500 components subject to Method 21.

5. At proposal and promulgation, no costs were estimated for the use of a database system (computer, software) to record and track the information required by the equipment leak program. In the reanalysis, facilities with 500 or more components subject to Method 21 monitoring were assumed to purchase a computer and the software necessary to record and track the information required by the equipment leak program. For facilities with fewer than 500 components, the reanalysis assumes a facility will use log sheets and have assigned costs for such data logging.

In addition, the EPA has made several changes to the analysis that are not identified by the petitioners or are a variation on the comments provided by the petitioners. These include:

1. A recovery credit for ethylene glycol was incorporated for PET facilities using the terephthalic acid process. Previously, only a credit was included for methanol, which is a primary HAP emitted from facilities using the dimethyl terephthalate process in producing PET.

2. Database systems costs, trip charges, administration and reports,

planning and training, and trips by subcontractors were shared amongst multiple subcategories at the same facility. The number of pumps, valves, and connectors in gas/vapor and light liquid service were used to ratio these costs.

3. No costs were determined attributable to the actual repair of leaking heavy liquid components because these would normally be repaired already by the facility when found leaking.

4. Facilities with fewer than 500 components subject to Method 21 monitoring were judged to use in-house personnel to conduct the equipment leak program, while those with more than 500 components subject to Method 21 monitoring were judged to use subcontractor personnel to conduct the equipment leak program.

5. An algorithm was used to determine whether it was less expensive for a facility to purchase or rent a monitoring instrument. The EPA found that it is less expensive for the facilities in this category to rent a monitoring instrument. This is consistent with the petitioners' costs in which they indicate the rental of an instrument when using a subcontractor to conduct the equipment leak program.

Finally, in conducting the reanalysis, the EPA continued to evaluate the equipment leak program on a subcategory basis rather than a facility-wide basis. Some costs were shared (as noted above) across a facility, but the cost effectiveness of the equipment leak program was evaluated on a subcategory basis.

**IV. Results and Conclusion**

The following table compares the cost effectiveness estimates for the four PET subcategories at proposal and promulgation and as a result of the reanalysis. As can be seen in the table, the cost effectiveness value of the equipment leak program has increased for all four PET subcategories from the analysis conducted in support of the promulgation package. For DMT facilities, the cost effectiveness value increased between 3 and 4 times. For TPA continuous facilities, the cost effectiveness value increased less than 10 percent, while the cost effectiveness value for TPA batch facilities doubled. The primary reason for the smaller increase in cost effectiveness values for the TPA facilities is due to the recovery credit offsetting the increased cost due to the explicit incorporation of costs for heavy liquid components.

SUMMARY OF COST EFFECTIVENESS VALUES OF EQUIPMENT LEAK PROGRAM FOR GROUP IV RESINS  
[\$/Mg of Emission Reduction]

Process subcategory	Petition reanalysis	Promulgation	Proposal
DMT-Batch .....	2,350	687	1,057
DMT-Continuous .....	1,400	357	803
TPA-Continuous .....	1,800	1,630	1,203
TPA-Batch .....	1,600	806	2,430

Based on the results of the new analysis, the EPA still judges the equipment leak program as promulgated to be cost effective for PET facilities. Therefore, the EPA has determined that there is no need to remove the equipment leak standards from the promulgated rule for Group IV Polymers and Resins and no need to modify any provisions within the equipment leak program of 40 CFR part 63, subpart H.

**V. Solicitation of Comments**

The EPA solicits comments from interested persons on any aspect of the revised cost analysis for equipment leak programs at PET facilities and the EPA's proposed decision to retain without modification the equipment leak provisions of the rule for PET facilities. The EPA is specifically requesting factual information that may support either the approach taken in the revised

equipment leak analysis or an alternate approach. In order to receive proper consideration, documentation or data should be provided.

**VI. Administrative Requirements**

*A. Paperwork Reduction Act*

For the Group IV Polymers and Resins NESHAP, the information collection requirements were submitted to the Office of Management and Budget (OMB) under the Paperwork Reduction Act. The OMB approved the information collection requirements and assigned OMB control number 2060-0351. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. The

EPA has amended 40 CFR 9.1, to indicate the information collection requirements contained in the Group IV Polymers and Resins NESHAP.

Today's action has no impact on the information collection burden estimates made previously. Therefore, the ICR has not been revised.

*B. Executive Order 12866—Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is "significant" and therefore subject to review by OMB on the basis of the requirements of the Executive Order in addition to its normal review requirements. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

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

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

Today's action does not fall within any of the four categories described above. Instead, it proposes to deny a request to change an existing rule. The proposed action does not add any additional control requirements. Therefore, this is not a "significant regulatory action" within the meaning of Executive Order 12866 and was not required to be reviewed by OMB.

#### *C. Executive Order 13045—Protection of Children From Environmental Health Risks and Safety Risks*

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

The EPA interprets E.O. 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This proposed action is not subject to the Executive Order 13045 because it is not an economically significant regulatory action as defined in E.O. 12866, and it is based on technology performance and not on health or safety risks.

#### *D. Regulatory Flexibility*

The Regulatory Flexibility Act generally requires an agency to conduct

a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. Today's action will not impact any facilities defined as small entities under the Regulatory Flexibility Act. Therefore, I certify this action will not have a significant economic impact on a substantial number of small entities.

#### *E. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local and tribal governments, in the aggregate, or to the private sector of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objects of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that today's action does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local,

and tribal governments, in the aggregate, or the private sector in any one year. This action does not impose any enforceable duties on State, local, or tribal governments, i.e., they own or operate no sources subject to the Group IV Polymers and Resins NESHAP and therefore are not required to purchase control systems to meet the requirements of this NESHAP. Regarding the private sector, today's action will affect only 23 existing facilities nationwide. The EPA projects that annual economic effects will be far less than \$100 million. Thus, today's action is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act (UMRA).

We also have determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This rule does not impose any enforceable duties on small governments, i.e., they own or operate no sources subject to this rule and therefore are not required to purchase control systems to meet the requirements of this rule.

#### *F. Executive Order 12875: Enhancing the Intergovernmental Partnership*

Under Executive Order 12875, the EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or the EPA consults with those governments. If the EPA complies by consulting, Executive Order 12875 requires the EPA to provide to the Office of Management and Budget a description of the extent of the EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires the EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates."

Today's action does not create a mandate on State, local or tribal governments. This action does not impose any enforceable duties on State, local or tribal governments, because they do not own or operate any sources subject to the Group IV Polymers and Resins NESHAP and therefore are not required to purchase control systems to

meet the requirements of this NESHAP. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to today's action.

*G. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (the NTTAA), Public Law 104-113, section 12(d) (15 U.S.C. 272 note), directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices, etc.) that are developed or adopted by voluntary consensus standard bodies. The NTTAA requires the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The Group IV Polymers and Resins NESHAP includes technical standards. Therefore, the EPA searched for applicable voluntary consensus standards by searching the National Standards System Network (NSSN) database. The NSSN is an automated service provided by the American National Standards Institute for identifying available national and international standards.

The EPA searched for methods potentially equivalent to the methods required by the Group IV Polymers and Resins NESHAP, all of which are methods previously promulgated by the EPA. The NESHAP includes methods that measure: (1) Determination of excess air correction factor (%O<sub>2</sub>) (EPA Method 3B); (2) sampling site location (EPA Method 1 or 1A); (3) volumetric flow rate (EPA Methods 2, 2A, 2C, or 2D); (4) gas analysis (EPA Method 3); (5) stack gas moisture (EPA Method 4); (6) concentration of organic HAP (EPA Method 18 or 25A); and (7) organic compound equipment leaks (EPA Method 21). These EPA methods are found in appendix A to part 60.

No potentially equivalent methods for the methods in the rule were found in the NSSN database search. Therefore, the EPA proposed to use the methods listed above. The EPA welcomes comment on this aspect of the rule and specifically invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in the Group IV Polymers and Resins NESHAP. Methods submitted for evaluation should be accompanied with

a basis for the recommendation, including method validation data and the procedure used to validate the candidate method (if a method other than Method 301, 40 CFR part 63, appendix A was used).

*H. Executive Order 13084—Consultation and Coordination with Indian Tribal Governments*

Under Executive Order 13084, the EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or the EPA consults with those governments. If the EPA complies by consulting, Executive Order 13084 requires the EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of the EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires the EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's action does not significantly or uniquely affect the communities of Indian tribal governments. This action imposes no enforceable duties on these entities. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to today's action.

**List of Subjects in 40 CFR Part 63**

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

Dated: May 28, 1999.

**Carol M. Browner,**

*Administrator.*

[FR Doc. 99-14351 Filed 6-7-99; 8:45 am]

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 141**

[FRL-6354-8]

**Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems; Correction**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule; correction.

**SUMMARY:** This document corrects the proposed rule published in the **Federal Register** on April 30, 1999, at 64 FR 23398 regarding Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems. This correction indicates the proper paragraph references in the proposal at § 141.40(a)(4) and (5).

**DATES:** The proposed rule being corrected today is open to public comment until June 14, 1999.

**ADDRESSES:** Send written comments to the Comment Clerk, docket number W-98-02, U.S. Environmental Protection Agency, Water Docket (MC 4101), 401 M Street, SW, Washington, DC 20460. Please submit an original and three copies of your comments and enclosures (including references). Commenters who want EPA to acknowledge receipt of their comments should enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted.

Comments may also be submitted electronically to [ow-docket@epamail.epa.gov](mailto:ow-docket@epamail.epa.gov). Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Electronic comments must be identified by the docket number W-98-02. Comments and data will also be accepted on disks in WordPerfect in 5.1 format or ASCII file format. Electronic comments on the proposal being corrected today may be filed online at many Federal Depository Libraries.

The full record for the proposal has been established under docket number W-98-02 and includes supporting documentation as well as printed, paper versions of electronic comments. The full record is available for inspection from 9 a.m. to 4 p.m. Monday through Friday, excluding legal holidays at the Water Docket, East Tower Basement, USEPA, 401 M Street, SW, Washington DC. For access to docket materials, please call (202) 260-3027 between 9 a.m. and 3:30 p.m. Eastern Time, Monday through Friday, to schedule an appointment.

**FOR FURTHER INFORMATION CONTACT:** Charles Job, Standards and Risk