



Department of Energy
Washington, DC

August 8, 1997

Air and Radiation Docket and Information Center (6102)
Attn: Docket No. A-97-11
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Sir or Madam:

We have reviewed the May 12, 1997 advanced notice of proposed rulemaking regarding National Emission Standards for Hazardous Air Pollutants (NESHAPs): Source Category List, Research and Development (R&D) Facilities at 62 FR 25877 under 40 CFR 63. DOE comments and recommendations in regard to the notice are enclosed in duplicate.

We appreciate the opportunity to comment on this notice. R&D is a most important part of DOE's mission. R&D investment is essential to energy security, the development of products and processes that have both environmental and energy benefits and to the enhancement of overall U.S. competitiveness. Many of the concerns expressed in our comments are likely to be expressed by other federal agencies with significant R&D activities, such as NASA and DOD. If such is the case, we suggest a meeting of these agencies with EPA staff to discuss this potential rulemaking. If there are any questions concerning our comments, please contact Gustavo Vázquez of my staff at 202/586-7629.

Sincerely,

Raymond F. Pelletier
Director
Office of Environmental Policy & Assistance

Enclosure

UNITED STATES DEPARTMENT OF ENERGY COMMENTS ON
THE ADVANCED NOTICE OF PROPOSED RULEMAKING ON NATIONAL EMISSION
STANDARDS FOR HAZARDOUS AIR POLLUTANTS: SOURCE CATEGORY LIST
(62 FR 25877; May 12, 1997)

1. Separate Subcategory for Research or Laboratory Facilities (62 FR 25878, col. 1)

In the Advanced Notice of Proposed Rulemaking (ANPRM), EPA interprets §112(c)(7) of the Clean Air Act (CAA) as requiring the listing of major research and development (R&D) sources of hazardous air pollutants (HAPs) as a separate subcategory under §112. The Department of Energy (DOE) tentatively agrees with this interpretation based on the statutory language. However, another possible interpretation is that the phrase “as necessary” in §112(c)(7) allows EPA the option of not listing R&D facilities if EPA determines that such a listing is not necessary.

DOE suggests that before proceeding with a rulemaking to list major R&D sources of HAPs, EPA should determine whether there are facilities that are major R&D sources. If no such sources exist, a rulemaking at this time may not be needed.

There is no requirement in §112 that area R&D sources be listed as a category. Moreover, establishment of emission standards for area R&D sources would not be appropriate based on potential adverse effects on human health or the environment [the standard identified in §112(c)(3)]. EPA has previously noted that emissions from R&D facilities “are so low as to yield a gain of trivial or no value compared to the difficulty associated with their measurement” (60 FR 45558; August 31, 1995). EPA has also cited (60 FR 45556-45557; August 31, 1995) the case of a relatively large R&D facility employing 3,000 people in a two million square foot complex that was comprehensively tested for its air emissions. Approximately 40 stacks fed by 600 laboratories involving potentially more than a thousand operations were sampled for a 6 to 8 hour duration over a two day period. Results of subsequent analyses showed that even if this level of operation as tested were maintained day and night for an entire year the predicted actual emissions of all VOC compounds would be less than 12 tons per year (tpy).

2. Sources Required to be Listed (62 FR 25878, col. 2, 3)

EPA notes at the bottom of column 2 that it has no information indicating there are major or area R&D sources that are required to be listed and regulated other than those associated with sources already included in listed source categories. DOE also has no information at present indicating there are major or area R&D sources that are required to be listed other than those associated with sources already included in listed source categories.

3. Guidance on Potential to Emit (62 FR 25878, col. 2)

EPA notes that the term “major source” is defined in §112(a)(1) of the CAA as any stationary source . . . that emits or has the potential to emit (PTE) 10 tpy or more of any HAP or 25 tpy or more of any combination of HAPs. If EPA elects to establish a separate subcategory for R&D facilities, DOE requests that EPA issue guidance on what constitutes “potential to emit” for an R&D facility and how PTE should be estimated. This guidance should be based on the PTE definition in 40 CFR 63.2, but tailored to provide specific information on how PTE should be estimated for R&D facilities. As EPA notes at p. 25878 of the ANPRM, emissions from R&D facilities are highly variable because of frequent changes in the activities conducted. These activities are typically conducted on a batch rather than a continuous basis. This variability

makes the PTE calculation very difficult. The high variability in emissions strongly suggests that PTE for an R&D facility should not be “the maximum capacity of a stationary source to emit a pollutant under its physical and operational design” (40 CFR 63.2). Application of the PTE definition at 40 CFR 63.2 to R&D facilities would be contrary to the Congressional intent manifest in §112(c)(7) of the CAA and its legislative history^(a) and as expressed in the April 3, 1990 Congressional Record.^(b)

EPA discussed the PTE issue for R&D facilities in the August 31, 1995 *Federal Register*. EPA stated, for example, that “In light of the previously mentioned difficulty of performing emission calculations, and the data gathered by EPA to date, which indicates that even large R&D facilities tend to have very low emissions, EPA considered it of little benefit to require R&D facilities to go through extensive efforts to calculate PTE” (60 FR 45558).

DOE suggests that the PTE calculation for R&D facilities be based, in part, on the procurement records at the particular facility. If aggregate purchases of hazardous chemicals that can potentially be emitted as HAPs are below the 10/25 tpy statutory limits, a particular source should not be considered a major source and should not be subject to MACT standards. DOE suggests that the procurement records reflect average annual purchases of hazardous chemicals over a three-year rolling period. R&D laboratories operated for DOE generally maintain this type of procurement data and DOE would be willing to share the information with EPA.

4. Guidance on “*De Minimis*” (62 FR 25878, col. 1)

The ANPRM cites the definition of “research or laboratory facility” from §112(c)(7) of the CAA. DOE suggests that EPA elaborate on and provide guidance on the interpretation of the term “*de minimis*” in regard to the manufacture of products for commercial sale. This interpretation will be potentially significant to DOE since DOE provides radionuclides and other substances in small quantities to others for research or medical use, often for a fee.

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- (a) The House Committee on Energy and Commerce stated that it included the language in §112(c)(7) “because of its concern that research and laboratory facilities should not arbitrarily be included in regulations that cover the manufacturing operations.” House of Representatives Report 101-490 Part 1, p. 327, May 17, 1990.
- (b) Senator Harkin, for example, made the following statement at 136 Cong. Rec. S3748-01: “R&D facilities typically have a large number of process vents, and low and very changeable emissions. It would not be unusual for such a facility to have over 300 vents, all of which would have to be controlled and permitted, as the bill is now written. This may be a virtually impossible task since it would require that the operator anticipate what chemicals may be emitted over the course of the permit period and in what amounts. Implementing the controls may be equally difficult. For example, a chemist may use a gallon of hydrochloric acid one day to cause a reaction in a process and the next day use half a gallon on a VOC to purify the product of the reaction. The mandated control technology for the hydrochloric acid could be a scrubber while the control of the VOC might be a condenser or a carbon ventsorb. It is simply not feasible to change the controls as the research progresses. These unique characteristics must be taken into account if the EPA sets any standards for R&D facilities.”

5. Methods of Listing R&D Facilities (62 FR 25878, col. 3)

The ANPRM suggests two possible approaches for categorizing R&D facilities for listing purposes. The first approach is one category covering all R&D facilities. The second approach is several categories reflecting the significant differences in HAP emissions among R&D facilities. DOE favors the second approach because it would be more equitable for sources and more protective of the public and the environment given the wide HAP emission differences among R&D facilities. The statutory requirement that EPA set emission standards within two years of listing a category (Section 112 (c) (5)) makes it essential that the decision to list be based on a comprehensive understanding of the sources included in the category, or subcategory including their emissions and available control methods.

6. Consistency with 40 CFR Part 70

EPA's July 10, 1995 "White Paper for Streamlined Development of Part 70 Permit Applications" includes section 9 covering "Research and Development Activities." DOE suggests that the guidance in this White Paper be updated as appropriate to reflect any decisions made by EPA as a result of this ANPRM.