



Department of Energy
Washington, DC 20585

October 2, 2000

U.S. Environmental Protection Agency
Air Docket, Mailcode 6102
401 M Street, S.W.
Washington, D.C. 20460
ATTN: Docket No. A9460

Dear Sir or Madam:

The U.S. Department of Energy (DOE) herein encloses additional important and pertinent information pursuant to the July 12, 2000, public hearing on your proposed rule, "National Emission Standards for Hazardous Air Pollutants (NESHAPs); Standard for Emission of Radionuclides Other Than Radon from Department of Energy Facilities; Standard for Radionuclide Emissions From Federal Facilities Other Than Nuclear Regulatory Commission Licensees and Not Covered by Subpart H" (65 FR 29934).

As we said at the public hearing, DOE supports the Environmental Protection Agency's (EPA) proposed amendments to 40 CFR Part 61, Subpart H including EPA's proposal to make the new American National Standards Institute (ANSI) standard apply only to new or modified facilities. The complete retrofitting and replacement of all existing emission monitoring devices at DOE facilities would not result in any public health or environmental benefit nor would it be cost-effective. Enclosed is operating data, and comparative analyses, to support our position.

In addition to a copy of our testimony presented at the hearing, we are enclosing copies of four sets of data. Three sets are routine operations data from Los Alamos National Laboratory, the Rocky Flats and the Savannah River sites. These data, which compare monitoring results from stacks using the rake system recommended in ANSI 1969 and subsequently the new shrouded probe methodology, show that there is no significant difference in emissions sampling performance between the new standard and the old. Finally, we have enclosed a set of data for a four year period (1994-1997) from our draft NESHAPs report focusing on unplanned or accidental releases across DOE. The resulting doses were in the hundredths of millirems, several orders of magnitude below the standard. Only in the minority of these releases would the stack sampling system have detected the release. The majority of the releases were tritium, noble gases or releases which took place outside the ventilation system. In short, the new ANSI standard will do little to significantly improve monitoring of unplanned or accidental radionuclide releases.

The Department again appreciates the opportunity to comment on the proposed amendment. If you have any questions concerning this information, please contact Gustavo Vázquez of my staff at (202) 586-7629 or gustavo.vazquez@eh.doe.gov.

Sincerely,

Raymond P. Berube
Acting Director
Office of Environmental Policy and Guidance

Enclosures:as stated

DOE Comments and Important Information Pursuant to the July 12, 2000 Public Hearing on EPA's Proposed Amendment to the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 61, Subpart H

Summary

The Department of Energy supports EPA's proposed amendments to 40 CFR Part 61, Subpart H including EPA's proposal to make the upgrade for compliance to the new ANSI standard apply to new and modified facilities, rather than requiring complete retrofitting of all existing DOE ventilation systems. The complete retrofitting and replacement of all existing emission monitoring devices at DOE facilities would not result in any tangible public health or environmental benefit, nor would it be cost effective. As you know the Department of Energy is committed to using the best available science as practical considering the data quality objectives. Not only has the Department actively supported the development of the new ANSI sampling standard, but we have also been upgrading our stacks and vents utilizing the new technology where appropriate and effective. We include here facility operating data as supplemental information related to the two main issues identified at the public hearing: one relating to the potential benefit (or absence thereof) to sampling performance of applying the new standard to existing stacks, and secondly, the suggestion that the new standard provided some benefit in monitoring accidental or off-normal releases.

Stack Sampling Performance During Routine Operations

EPA requested that DOE review the performance of some of the stacks where the Department had voluntarily installed shrouded probe technology and provide a comparison to EPA. For the record, the results of DOE annual releases are provided to EPA and that data are available from a review of the NESHAPs facility reports. However, DOE assembled comparative data from each of three sites that have installed shrouded probes in some of their stacks in order to respond directly to EPA's request. The three sites are Los Alamos National Laboratory (LANL) in New Mexico, Rocky Flats (RF) at Colorado and Savannah River Site (SRS) in South Carolina.

LANL has installed shrouded probe technology at seven (7) of their stacks; however, three of the seven stacks have undergone major ventilation or filtration changes and, therefore, a before-and-after comparison would not be useful. Comparative data, before and after the shrouded probe, for the other four stacks which did not undergo major changes is included as Exhibit 1. The four (4) stacks that were compared are: TA-48-1, ES-54; TA-48-1, ES-60; TA-50-37, ES-1; TA-50-69, ES-3. Basically, by comparing the results of weekly gross alpha and gross beta data for both pre- and post-shrouded probe stacks, we identified no difference between six (75%) of the results at the 95% confidence interval. The remaining data were slightly different, but it should be noted that the pre-shrouded probe data were higher than the post-shrouded probe data. That is, the data do not indicate that sampling to the ANSI 1969 standard underestimated emissions from these stacks. For the LANL stacks we can conclude, based on a quantitative analysis, that the sampling performance results under the existing standard

are not very different from the new, shrouded probe standard.

RF has installed shrouded probes in thirteen of its stacks. Stack 776-205, although counted as one, now vents and samples flow from three stacks total. Sampling data for Am-241 and Pu-239 from 1992-1997 was done with a multi-probe rake per ANSI 13.1-1969. 1998-1999 data is from a newly installed single shrouded probe per ANSI 13.1-1999 (See Exhibit 2). Based on a qualitative analysis, we conclude that there is no significant difference between the sampling performance of the rake and the single probe.

SRS has installed single point (shrouded probe) sampling systems in at least forty-one sources. Four to six months of emission data both before and after the installation of the single point probes are provided as Exhibit 3. A shrouded probe was installed on these sources as part of operational upgrades. Both alpha and beta activity per unit volume is plotted before and after installation of the shrouded probe. The amount of data was not the same for all sources. Based on these forty one sources, during routine operations, we find no noticeable difference in the data pre- and post-single probe. We conclude, therefore, that both sampling methods provide representative samples. In any case, this emphasizes that the installation of the shrouded probe will provide no additional protection for public health and for the environment.

Monitoring Off-Normal Releases

At the public hearing on July 12, 2000 it was suggested by parties opposing the amendment as proposed that the new ANSI standard should be implemented because of its improved performance under off-normal conditions. Effluent monitoring systems are, first of all, not intended to measure emissions during upset conditions; effluent monitoring systems are typically either shut down or by-passed when accidental releases occur. DOE recognizes, however, that there may be some limited potential performance improvements, particularly for large particles. However, this is of limited practical value and the potential benefits are not commensurate with the cost associated with the upgrade. Such releases are historically small and, in most cases, the dose assessments from such releases will not be improved by the implementation of the new standard.

To support this position we reviewed the historical data on off-normal releases. DOE's practice is to evaluate and discuss off-normal releases as supplemental information in our site specific annual reports, which have been provided to EPA over the past decade. We also summarize off-normal releases in the DOE annual NESHAPs summary report which we also provide to EPA. EPA has copies of the published annual summaries through calendar 1993. We herein include as Exhibit 4 DOE-wide "Unplanned releases to the Atmosphere" section for calendar years (CY) 1994 through 1997. These data indicate that there were 66 events that contributed to off-normal or unplanned releases from 1991 through 1997. Over half of them clearly involved releases for which the new ANSI standard would provide no benefit. These events involved tritium, noble gases or diffuse or unmonitored sources. Some of the 32 remaining events may fall into a similar category, but due to insufficient time, we were unable to follow-up and confirm this. In

any case, potential doses for all the events were very low, ranging from a high of a few hundredths of a mrem to several orders of magnitude below that.

Exhibit 1-Comparative Data from LANL

Exhibit 2-Comparative Data from Rocky Flats

Exhibit 3-Comparative Data from SRS

Exhibit 4-DOE-Wide Unplanned Release Data