



Interoffice Communication

Environment, Safety, Health & Assurance

G40 TASF

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To: Shawn Nelson
Topical Appraisal File 2012

Cc: ESH&A

From: Dan Kayser

Subject: Scope: Topical Appraisal Report 2012, Annual Radionuclide Air Emissions Report

The scope of the Annual Radionuclide Air Emissions Report topical appraisal is to review past reports for accuracy and verify that the reports are meeting regulatory and DOE requirements.

TOPICAL APPRAISAL REPORT

Annual Radionuclide Air Emissions Report

April 30, 2012

Dan Kayser,
Environmental Specialist

1.0 Scope:

The scope of the Radioactive NESHAPS Report topical appraisal (TP) is to review the Laboratory's current and past reports to validate the following:

1. Compliance to 40 CFR Part 61 Subpart H
2. Compliance emissions testing 40 CFR 61.13
3. Compliance with design, equipment, work practice, or operational standards is described in 40 CFR 61.12 (a,b).

2.0 Dates:

This review was conducted March-April, 2012.

3.0 Methodology:

The methodology used to conduct the topical appraisal included the following: Review of 40 CFR Part 61 Subpart H, *National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities*.

3.1 References:

The following references were consulted for informational purposes and / or to ensure that the current program was in compliance:

- 40 CFR Part 61 Subpart H
- 40 CFR Part 61 Appendix E to Part 61
- EPA & DOE MOU

3.2 Program Documentation:

U.S. Department of Energy, Air emissions Annual Report

3.3 Training:

At this time there is no specific training required to complete the Annual Report. However, if DOE O 458.1, *Radiation Protection of the Public and the Environment*, is incorporated into the Laboratory's contract and/or the Laboratory isn't granted an exemption there will most likely be added cost for training and sampling equipment, if required. I would recommend that the Environmental Specialist and/or the Radiation Safety Officer at some point attend the Annual NESHAP Meeting on Radiological Air Emissions which is typically in conjunction with the Annual Health Physics Conference.

3.4 Personnel Interviewed:

Mike McGuigan, Radiation Safety Officer
Gustavo Vazquez, Environmental Engineer, HS-22

4.0 Assessment Results & Discussion

The provisions of 40 CFR Part 61 subpart H apply to operations at any facility owned by the Department of Energy that emits any radionuclide other than radon-222 and radon-220 into the air. Emissions of radionuclides to the ambient air shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. Continuous monitoring is required for emission points that may exceed 1% (0.1 mrem/yr) of the dose limit (10 mrem/yr) for a member of the public.

At this time Ames Laboratory has no registered radionuclide emission points or radionuclide emissions to the ambient air. However, the Laboratory files a Radioactive NESHAPS report (see attachments) declaring that the Laboratory does not have any activities that would cause a member of the public to receive an effective dose equivalent of 10 mrem/yr. This report is conveyed to the appropriate agencies via the Annual Site Environmental Report which is due out by June 30th for the previous year. The Radioactive NESHAPS report is also emailed to the Office of Environmental Policy and Assistance per their request. The report is also available to the public through the Annual Site Environmental Report which is posted on the Laboratory's webpage.

4.1 Strengths:

Continuous monitoring is not required at Ames Laboratory as it does not have any registered radionuclide emission points (stacks) or emissions that may exceed 1% (0.1 mrem/yr) of the dose limit (10 mrem/yr) for a member of the public. Therefore no continuous monitoring is conducted.

4.2 Noteworthy Practices: NA

4.3 Findings:

Level 1 Findings: None

Level 2 Findings: None

Level 3 Findings:

It appears the Laboratory should change the wording of the Lab's Radionuclide NESHAPS report to specifically address the reporting elements under 40 CFR Part 61.94 and reference Table 1 of 40 CFR Part 61 Appendix E, Possession Quantities for Radionuclides as a way to document that the Laboratory is in compliance with the regulation. Utilizing the Table 1 quantities is allowable by the Memorandum of Understanding between the EPA and DOE (see attachment).

5.0 Overall Conclusions:

The Laboratory does not have radionuclide emissions points. Radioactive materials used at the Laboratory are in standard solutions, sealed sources or materials that are used in micro curie quantities that are contained by engineering controls.

The Laboratory's Radioactive NESHAP report will be updated for calendar year 2012 reporting (see attachments) as a result of this topical appraisal to directly address the elements in 40 CFR Part 61 and utilize the memorandum of understanding between the EPA and DOE.

If DOE O 458.1, *Radiation Protection of the Public and the Environment*, is incorporated into the Laboratory's contract there will most likely be added cost for training and sampling equipment, if required. I would recommend that the Environmental Specialist and/or the Radiation Safety Officer at some point attend the Annual NESHAP Meeting on Radiological Air Emissions which is typically in conjunction with the Annual Health Physics Conference.

6.0 Attachments:

- Memorandum of Understanding between the EPA and DOE
- Annual NESHAP Report 2011
- Annual NESHAP Report 2012 (Draft)