

**REQUEST FOR ADDITIONAL INFORMATION**  
**Pennsylvania State University**  
**Docket No. 70-113, License No. SNM-95**  
**License Amendment of October 13, 2011**

1. Discuss the following aspects of the ventilation system that will be used during the handling of the special nuclear material (SNM) solution, including, but not limited to the following:
  - 1.1. Operating parameters (e.g., volumetric flow rate).
  - 1.2. How the parameters are verified.
  - 1.3. Frequency that the parameters are verified.
  - 1.4. Applicable action limits.
  - 1.5. Corrective actions if the action limits are exceeded.

See Regulatory Guide 8.24, Section 1.12 for the general types of information being requested.

The information is needed to verify compliance with Title 10 of the *Code of Federal Regulations* (10 CFR), Parts 20.1701 and 70.22(a) (7).

2. Discuss the following aspects of the effluent hoods that will be used during the handling of the SNM solution, including, but not limited to the following:
  - 2.1. Operating parameters (e.g., flow rate at the face of hoods).
  - 2.2. How the parameters are verified.
  - 2.3. Frequency that the parameters are verified.
  - 2.4. Applicable action limits.
  - 2.5. Corrective actions if the action limits are exceeded.

See Regulatory Guide 8.24, Section 1.12 for the general types of information being requested.

The information is needed to verify compliance with 10 CFR 20.1701 and 70.22(a)(7).

3. Discuss the operational parameters of the glove boxes that will be used during the handling of the SNM solution, including, but not limited to the following:
  - 3.1. Operating parameters.
  - 3.2. How the parameters are verified.
  - 3.3. Frequency that the parameters are verified.
  - 3.4. Applicable action limits.
  - 3.5. Corrective actions if the action limits are exceeded.

See Regulatory Guide 8.24, Section 1.12 for the general types of information being requested.

The information is needed to verify compliance with 10 CFR Part 20.1701 and 70.22(a)(7).

4. Describe the controls that will be in place to ensure the materials are securely stored when not in use; and supervised during research.

The information is needed to verify compliance with 10 CFR Parts 20.1801 and 20.1802.

5. Provide the evaluations for airborne effluent releases cited in the amendment request that demonstrate effluents will not exceed the constraint on air emissions found in 10 CFR 20.1101(d)—and which justify no effluent monitoring nor treatment.

The information is needed to verify compliance with 10 CFR Parts 20.1101(d) and 20.1302.

6. The application states that all work will be performed over bench paper. The liquid samples consist of the radionuclides in 0.1 to 0.5 M nitric acid. Clarify that the absorbent paper is chemically compatible with the acidic solution.

The information is needed to verify compliance with 10 CFR Part 70.22(a)(7), requiring proposed procedures to protect health and minimize danger to life or property.

7. The application states that the material will be handled according to approved procedures. Discuss how the existing procedures for handling other radionuclides bound handling plutonium (high recoil energy upon decay causes plutonium to readily disperse).

The information is needed to verify compliance with 10 CFR Part 70.22(a)(7), requiring proposed procedures to protect health and minimize danger to life or property.