

**REQUEST FOR ADDITIONAL INFORMATION  
RENEWAL OF SPECIAL NUCLEAR MATERIALS LICENSE 2017**

**Fire Safety RAIs**

The fire safety requests for additional information (RAIs) are issued to determine whether the application provides commitments for adequate protection against fires and explosions that could affect the safety of licensed materials, and thus present an increased radiological or chemical risk.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Paragraph 70.22(a)(6), applications need to include a description of technical qualifications, including training and experience of the applicant and members of his staff, to engage the proposed activities.

In accordance with 10 CFR 70.22(a)(7), applications need to include a description of equipment and facilities to protect health, and minimize danger to life or property.

In accordance with 10 CFR 70.22(a)(8), applications need to include a description of proposed procedures to protect health and minimize danger to life or property.

Additional guidance is available in Chapter 7 of NUREG-1520, Revision 2, "Standard Review Plan for Fuel Cycle Facilities License Applications," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15176A258).

**Fire Safety RAI-1**

The safety evaluation report for the Sensor Concepts and Applications, Inc. (SCA) original license (ADAMS Accession No. ML113540074) mentioned there is a fire protection program with adequate level of fire protection at the facility to protect public health and safety. However, details regarding the fire protection program are not provided in this license renewal application.

(1) Confirm whether the fire protection program, described in the previous license application, applies to special nuclear material storage in SCA's warehouse facility and SNM usage in test operations in which SNM is not locked in the fireproof safe and not stored in the alarmed Area B of the SCA's warehouse facility. If applied, describe fire protection on SNM storage in SCA's warehouse facility and SNM usage in test operations, in this application.

(2) Since there is a request of materials and quantities beyond the level of the current license, discuss whether there are any hazardous chemicals or processes which may contribute to the fire hazards not only for SNM storage in SCA's warehouse facility, but also for SNM usage in test operations.

This information is requested to assess compliance with 10 CFR 70.22(a)(8).

### **Fire Safety RAI-2**

The applicant describes, in License Renewal Application (LRA) Section 7.III, "Emergency Procedures," that emergency lighting, fire extinguishers and smoke alarm system are in the facility (Area B of the SCA's warehouse facility) and checked annually.

- (A) Are there ventilation system, sprinklers and fire dampers installed in the SCA's warehouse facility? If installed, provide descriptions on these fire-safety features.
- (B) Are there fire ratings for doors, walls, and other fire barriers in the SCA warehouse facility?
- (C) Provide justification on whether these fire-safety features, underlined in (A) and (B) above, are adequate or not required at the SCA's warehouse facility to protect public health and safety.

This information is requested to assess compliance with 10 CFR 70.22(a)(7).

### **Fire Safety RAI-3**

The application states, in LRA Section 7.III, "Emergency Procedures," that placement of combustible materials into the storage area is strictly controlled/inventoried but generally prohibited.

- Provide the criteria and specific conditions to allow placement of combustible materials into the storage area of the SCA warehouse facility.
- Provide the control and inventory procedures for placement of combustible materials into the storage area of the SCA warehouse facility to prevent fire incidents.

This information is requested to assess compliance with 10 CFR 70.22(a)(8).

### **Fire Safety RAI-4**

The applicant describes the training requirements in LRA Section 7.IV, "Training Program" and states that the training requirements may be modified for specific function and specific need.

Confirm whether this training program applies to fire protection. If the training program applies to fire protection, provide training information that could include, but is not limited to frequency, emergency drill, evacuation test/exercise, refresher training, and interface with local police dispatch, fire brigade, and emergency system.

This information is requested to assess compliance with 10 CFR 70.22(a)(6).

### **Chemical Safety RAIs**

In accordance with 10 CFR 70.22(a)(8), applications need to include a description of "proposed procedures to protect health and minimize danger to life or property".

#### **Chemical RAI-1**

Clarify if SCA has procedures for reviewing licensed material storage operations and sensor tests that would be conducted under SNM-2017 to determine if they involve chemical hazards that are under the U.S. Nuclear Regulatory Commission's regulatory jurisdiction and could

impact health or present danger to life or property. If such reviews are conducted, SCA should discuss whether the results are examined by an independent authority such as the Radiation Safety Committee.

A useful response would be the addition of information to Section 7 of the application (Safety Procedures to Protect Health and Minimize Danger to Life or Property) which state that:

- (1) SCA reviews each planned SNM detection test and SNM storage operation to identify and assess radiological, chemical and fire hazards associated with the planned test and identify any appropriate controls for managing the identified hazards,
- (2) The assessment and identified controls are reviewed and approved by the SCA Radiation Safety Committee, and
- (3) The identified controls for the specific SNM detection test and storage operation are incorporated into the procedures and training for the personnel conducting the specific test and storage activities.

### **Material Control and Accounting (MC&A) RAI 1:**

Applicable Requirements:

10 CFR 74.13(a) requires each licensee possessing special nuclear material (SNM) in a quantity totaling 1 gram or more of contained uranium-235, uranium-233, or plutonium to complete and submit, in computer-readable format Material Balance Reports concerning SNM that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. The Physical Inventory Listing Report must be submitted with each Material Balance Report.

10 CFR 74.15(a) requires each licensee who transfers or receives SNM in a quantity of 1 gram or more of contained uranium-235, uranium-233, or plutonium to complete, in computer-readable format, a Nuclear Material Transaction Report. In addition, each licensee who adjusts the inventory in any manner, other than for transfers and receipts, shall submit a Nuclear Material Transaction Report, in computer-readable format, to coincide with the submission of the Material Balance Report. Each licensee who transfers SNM shall submit a Nuclear Material Transaction Report no later than the close of business the next working day. Each licensee who receives SNM shall submit a Nuclear Material Transaction Report within 10 days after the material is received.

NRC Request.

Provide a description of the MC&A activities that are performed or the measures in place to show how the requirements of 10 CFR 74.13(a) and 10 CFR 74.15(a) are met. Clarify which Material Balance Reports, Physical Inventory Listing Reports, or Nuclear Material Transaction Reports will need to be completed as required by 10 CFR 74.13(a) and 10 CFR 74.15(a).