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January 5, 2022

**Subject:** Reply to Request for Additional Information for Renewal Application for  
SNM-2013

Docket No. 70-7019  
License No. SNM-2013

Ms. Tobin:

Below you will find Oregon State University's response to your Request for Additional Information letter of October 29, 2021.

**RAI 1:**

The ENDF/B-V continuous energy cross sectional library was used for the criticality calculations. In consulting with faculty at OSU's Nuclear Engineering school, this was determined the best library for these calculations

**RAI 2 (a) and (b):**

The Radiation Center Laboratory-Specific Chemical Hygiene and Safety Plan (LCHSP) includes requirements for procuring, storage and disposal of chemicals, storage requirements for flammable and combustible material, fire safety equipment, and chemical spill and containment procedures. The LCHSP complies with Oregon Administrative Rule 437-002-0360 Toxic and Hazardous Substances, and the OSU Chemical Hygiene Plan.

Procedures are applied to establish safe conduct of activities with chemicals, fire hazards, radioactive materials and radiation sources. These procedures satisfy various requirements, including federal USNRC and state licenses for radioactive materials, OSU's Chemical Hygiene Plan, and fire codes. OSU Environmental Health and Safety's Fire & Life Safety staff are charged with reviewing OSU facilities for fire hazards, and the Chemical and Lab Safety Staff conduct routine evaluation of all Radiation Center facilities for chemical hazards.

**RAI 3 (a):**

Room F106 is a low occupancy, controlled access room for which rate-of-rise heat detectors provide adequate monitoring and warning for personnel safety. In addition, fuel load is minimized, and combustible material is monitored (see RAI 2).

**RAI 3 (b):**

Sprinkler systems were not required by local building codes when rooms D104 and F106 were constructed. The Radiation Center building is not sprinklered. In addition to the fire detection and alert systems in place, spaces within the Radiation Center are monitored for fire hazards (see RAI 2).

**RAI 4 (a):**

The Radiation Center Senior Health Physicist monitors the movement and accumulation of combustible material into and out of room F106.

**RAI 4 (b):**

Routine checks of accumulation of combustible material are performed and documented (see RAI 2).

**RAI 5 (1):**

A license amendment request will be submitted to amend Section 4.1 of the OSTR Physical Security Plan to include Room F106 as a temporary CAA during the time when a fuel element is located in Room F106.

**RAI 5 (2):**

The fuel elements will always be under positive control by an authorized individual. At no time will the fuel elements be in F106 without an authorized individual present in the room. The authorized individual will control access and maintain vigilance within F106 to prevent unauthorized penetrations or activities. If such activities are observed or otherwise discovered, they would report the issue to the Physical Security Officer immediately.

**RAI 5 (3):**

For situations that involve unauthorized penetrations or activities in Room F106 when the fuel elements are used, the authorized individual will immediately notify the Physical Security Officer who will initiate the appropriate actions described in the OSTR Physical Security Plan. Response to unauthorized penetrations or activities in Room F106 are described by Section 9.4 of the OSTR Physical Security Plan.

**RAI 5 (4):**

For situations that involve threats or theft of material, the authorized individual will immediately notify the Physical Security Officer who will initiate the appropriate actions described in the OSTR Physical Security Plan. Response to theft of SNM is described in Section 9.3 of the OSTR Physical Security Plan

**RAI 6, 7 and 8:**

Internal procedures (e.g. *OSTROP #20 "SNM Control and Accounting Procedures"*) are designed to specify the written control and accountability procedures which are deemed sufficient to enable Oregon State University to account for the special nuclear material in its possession under this license. These procedure are specifically intended to achieve compliance with the requirements of 10 CFR 74.11, 74.13, 74.15, and 74.19.

**RAI 9:**

The OSU Radiation Use Authorization authorizing the work under the license limits possession to less than 10kg of LEU-Mo alloy fuel elements, enriched to 19.75% of U-235 (a 10CFR70.4 Category III quantity of SNM). These fuel elements are not and will not be irradiated at this facility. This is the only work which will be authorized under this license.

Please contact me if you have any questions regarding this communication,

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