



PennState

Office of Physical Plant
Environmental Health and Safety
The Pennsylvania State University
Steam Services Building
336 Steam Drive
University Park, PA 16802

December 2, 2024

Stephen Poy
U.S. Nuclear Regulatory Commission (NRC)
Office of Nuclear Material Safety and Safeguards (NMSS)
Division of Fuel Management (DFM)
Fuel Facilities Licensing Branch (FFLB)
Phone: 301-415-7135
Email: stephen.poy@nrc.gov

Subj: Commitments for Transportation of Special Nuclear Materials

License number: SNM-95 Docket 070-00113

Dear Mr. Poy:

This letter is in follow-up to a visit to our site (the Steam Services Building and the University Park campus) from Mr. Alexander Sapountzis on November 19, 2024. Mr. Sapountzis's visit was very helpful and informative, and during this time, Penn State University committed to sending a follow-up letter providing clarification of actions related to the security and transportation of Special Nuclear Materials across the University. Note that this letter serves that purpose, and the commitments in this letter are in addition to those conveyed in the submittals related to our recent license amendment (dated April 19, 2024 and October 21, 2024).

Specifically, Penn State makes the following commitments related to Special Nuclear Material operations under the SNM-95 license, which would encompass transportation of special nuclear materials (SNM) from the Steam Services Building (SSB) to one of the other licensed facilities on campus (either the Academic Projects Building, APB, or the Radiation Science & Engineering Center, RSEC) across public roadways and along a route of approximately 1 mile in length:

1. Before beginning any operations involving Category III SNM at the SSB, Penn State commits to developing a SNM Security Plan that will:
 - Require procedures to be developed providing instruction to staff transporting or storing SNM on steps to take in response to thefts or threats [10 CFR 73.67(g)(3)(i)]
 - Commit to retaining previous versions of these procedures for at least three years after each revision [10 CFR 73.67(g)(3)(i)]

Commented [AS1]: I added Category III to clarify that you will be doing the following for Cat III SNM. There are no requirements for transporting material < Cat III SNM.

December 2, 2024

☐-

- ☐ Commit to conducting a trace investigation for missing, stolen, or unaccounted-for SNM after the estimated arrival time [10 CFR 73.67(g)(3)(iii)(a)]
- ☐ Commit to notifying the United States Nuclear Regulatory Commission Operations Center by phone after discovery of the loss of the shipment and after recovery of or accounting for such lost shipment, in accordance with the provisions of 10 CFR 73.1200 and 73.1205.
 - ☐ ~~Within 1 hour following any event in which there is reason to believe that a person has committed or caused, or attempted to commit or cause, or has made a threat to commit or cause the theft or diversion of a Category III quantity of SNM being transported [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1200(d)(1)(i)]~~
 - ☐ ~~Within 4 hours following the discovery of the loss of a shipment of a Category III quantity of SNM being transported [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1200(f)(1)(ix)]~~
- ☐ ~~Commit to also providing a written report to the United States Nuclear Regulatory Commission Operations Center within 60 days if a telephone notification to the center is made [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1205]~~

Commented [AS2]: I simplified it for you. As long as you commit to 73.1200 and 73.1205, you know which sections apply to your facility for notifying the NRC of an event and then following up with a report later. You can add the details about reporting to the NRC at specific times and when to send in a report in your procedures. We will trust or verify later through NRC inspections of your procedures that you will meet the reporting requirements to the NRC and when to submit a report for an event to the NRC. You may ask yourself why I can not say in my application, I meet 10 CFR 73.67 and call it a day. Well, in this case when you are working through 10 CFR 73.67(f) or (g) and laying out how you will commit to each section of the regulation and it in this case, it points you to 10 CFR 73.1200 or 73.1205, for something related to just reporting, the reviewer may exercise some discretion that you will implement the correct sections of 73.1200 or 73.1205 if this all makes sense.

2. Penn State's procedures for receipt of a package containing Category III SNM at SSB will require staff to:

- ☐ Check and evaluate the package for container integrity and any seals [10 CFR 73.67(g)(1)(iv)]

3. Penn State's procedures for receipt of a package containing more than 1 gram or more of SNM below Category III quantities or Category III SNM quantities at SSB will require staff to:

- ☐ To notify the shipper of receipt of the material, complete ~~Complete~~ and submit a computer-readable format Nuclear Material Transaction Report and Material Balance report per 10 CFR 74.15 [10 CFR 73.67(g)(2)(ii) and 10 CFR 74.15(a)]

Commented [AS3]: To clarify, 10 CFR 73.67(g)(2)(ii) is for Cat III SNM and reporting under 10 CFR 74.15. In Material Control and Accounting world, if you receive => 1 g or more of SNM you need to report it per 10 CFR 74.15 regardless if its less than Cat III SNM values. So, I updated the language to reflect the case if you receive SNM that is less than a Cat III quantity say around 1 g or if you receive a Cat III quantity you still need to report the transaction under 10 CFR 74.15. 1 g of SNM is not a Cat III quantity. I hope this makes sense...

4. Penn State's procedures for transport of a package containing Category III SNM from SSB to APB or the RSEC will require staff to:

- ☐ Check the integrity of the containers and seals prior to shipment [10 CFR 73.67(g)(1)(iv)]
- ☐ Contact the receiver (someone at the intended laboratory) using direct, two-way communication before initiating transport and:
 - Establish an estimated time of arrival and transport mode [10 CFR 73.67(g)(1)(i)]
 - Confirm the receiver's readiness to receive the package based on the information established above [10 CFR 73.67(g)(1)(ii)]

Commented [AS4]: I clarified that PSU will submit a transaction report under 10 CFR 74.15. This will satisfy the reviewer and if an inspector checks to see your commitment to filling out a transaction under 10 CFR 74.15 for cases involving less than a Cat III SNM quantity (1 g or more) and Cat III SNM quantities.

December 2, 2024

- Transport the material in a tamper-indicating sealed container [10 CFR 73.67(g)(1)(iii)]
- 5. Penn State's procedures for delivery of a package containing Category III SNM to an intended laboratory at APB or the RSEC will require staff to:
 - Ensure that the receiver (intended laboratory) immediately notifies the shipper (PSU EHS) that the package has been received [10 CFR 73.67(g)(3)(ii)]. Note that this is expected to take place as part of in-person communications at the time of delivery since deliveries of SNM materials will be made by PSU full-time staff.
 - Confirm the integrity of the container and seals [10 CFR 73.67(g)(2)(i)]
- 6. Penn State's procedures for responding to stolen, lost, or unaccounted for SNM during transit between the SSB and a receiving laboratory at either APB or the RSEC, will require staff to:
 - Conduct a trace investigation for missing, stolen, or unaccounted-for SNM after the estimated arrival time [10 CFR 73.67(g)(3)(iii)(a)]
 - Notifying the United States Nuclear Regulatory Commission Operations Center by phone after discovery of the loss of the shipment and after recovery of or accounting for such lost shipment, in accordance with the provisions of 10 CFR 73.1200 and 73.1205 [10 CFR 73.67(g)(3)(iii)(b)]:
 - ~~Within 1 hour following any event in which there is reason to believe that a person has committed or caused, or attempted to commit or cause, or has made a threat to commit or cause the theft or diversion of a Category III quantity of SNM being transported [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1200(d)(1)(i)]~~
 - ~~Within 4 hours following the discovery of the loss of a shipment of a Category III quantity of SNM being transported [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1200(f)(1)(ix)]~~
 - ~~Commit to also providing a written report to the United States Nuclear Regulatory Commission Operations Center within 60 days if SNM is identified as missing or stolen [10 CFR 73.67(g)(3)(iii)(b) and 10 CFR 73.1205]~~

Commented [A55]: FYI: 73.67(g)(1)(iii) does not say to transport in tamper-indicating sealed container. However, the premise in 10 CFR 73.67(g)(1) is that you will transfer the Cat III SNM in a tamper indicating sealed container. You may want to delete your reference.

If there are any questions or comments on these commitments, please don't hesitate to contact me using the information below.

Sincerely,

Aaron Wilmot, MS, PE (nuclear, PA), CHP
Manager, Radiation Protection Office & Radiation Safety Officer

Radiation Protection Office
Penn State University
301 Steam Services Building
University Park, PA 16802
Phone: (814) 863-3976

December 2, 2024