

RADIOLOGICAL AND ENVIRONMENTAL MANAGEMENT

November 14, 2019 (Amended January 15, 2020 in bold)

Materials Licensing Branch U.S. Nuclear Regulatory Commission, Region III 2443 Warrenville Road Suite 210 Lisle, Illinois 60532-4352

Dear Sir/Madam:

Purdue University (Broad Scope License No. 13-02812-04) is providing Item 1 as an informational item to the NRC to add an additional radioactive material laboratory classification. Item 2 is an amendment request to possess additional amounts of a transuranic radionuclide.

<u>Item 1.</u>

Rationale and Basis

In section 9.3 of the Broad Scope License Application submitted in October 2015, PU indicated that laboratories would be classified from Class A (highest) to Class D (lowest). The frequency of radiological contamination surveys by PU radiation safety staff for Class A labs are weekly, Class B labs are monthly, Class C labs are quarterly, and Class D labs are annually.

However, PU has recognized the need for the inclusion of another lab classification, Class AN (As Needed). This classification would only be given to those laboratories that meet any of the following conditions:

- Only use generally licensed or NRC exempt sources that are used as intended by the manufacturer
- Infrequent use of short-lived ($T_{1/2} < 4$ days) radioisotopes for research or treatment and the following procedures are implemented:
 - Caution signs and postings as required in 10 CFR 20, Subpart J when radioactive material is
 present
 - Contamination surveys after usage and before returning room to non-radioactive material usage
- Infrequent or one-time use of sealed sources
 - o Sources leak tested as required in 10 CFR 31.5
 - o No source storage
 - o Continuously supervised by approved and trained radiation workers
 - o Usage < 4 hours

Purdue University decided to add this classification because these locations do not warrant routine radiological contamination surveys because they are either not required or unnecessary since no radiological hazard would be present. Records of the locations where general license devices are used will be maintained for three years from the last use.

Item 2.

Purdue University plans to possess additional amounts of Np-237 for the study of organometallic chemistry of Neptunium complexes. This material may be used or stored at facilities located on the campus of **Purdue University, 550 Stadium Mall Drive, West Lafayette, IN and at 3601 Sagamore Parkway** North, Lafayette, IN. The research has been primarily using uranium and the researcher is expanding the project to include Np-237. Any dispersible material will be used in a HEPA filtered fume hood or glove box to ensure that personnel exposure and facility protection is maintained. The material will not be used in animals or field applications.

The Radiation Safety Committee will review proposed work and may establish requirements for this research including but not limited to: additional survey requirements, additional training, or bioassays.

Material	Chemical and/or Physical Form	Maximum Possession Amount
Np-237	Any	1 mCi (37 MBq)

If you should have any question regarding this request please contact me at 765-494-2350. Thank you for your prompt attention to this matter.

Sincerely,

me_

James F. Schweitzer Radiation Safety Officer

Song, Taehoon

From: Sent: To: Cc: Subject: Attachments: Tran, Frank Thursday, January 16, 2020 4:29 PM Song, Taehoon; Pavon, Sandy Tomczak, Tammy FW: ATTN : Mail Control 617083 (Purdue University) DOC011620-01162020170143.pdf

Dear IM Center,

Please add the attachment to ADAMS for 617083

Thank you. -Frank

From: Schweitzer, Jim F <jfschweitzer@purdue.edu> Sent: Thursday, January 16, 2020 3:12 PM To: Tran, Frank <Frank.Tran@nrc.gov> Subject: [External_Sender] ATTN : Mail Control 617083 (Purdue University)

Frank

Attached is the response regarding our amendment request. Please let me know if there is additional information I can provide.

Regards

Jim

James F. Schweitzer, Director Radiological and Environmental Management Purdue University 550 Stadium Mall Drive West Lafayette, IN 47907 765.494.2350 Fax: 765.494.7403 <u>ifschwei@purdue.edu</u>

From: Tran, Frank <<u>Frank.Tran@nrc.gov</u>>
Sent: Friday, January 10, 2020 7:38 PM
To: Schweitzer, Jim F <<u>ifschweitzer@purdue.edu</u>>
Subject: Request additional information for NRC License No. 13-02812-04

Dear Dr. Schweitzer:

We have reviewed the letter dated November 14, 2019 requesting a license amendment for NRC License No. 13-02812-04. We will need the following.

- 1) The licensee will maintain records of the locations where general license devices have been used under this license, for three years from the last use.
- 2) Provide the address(es) where Np-237 will be used (see License Condition 10 for reference).
- 3) If Np-237 will be used in animal or field applications, please specify.

Please provide a response for the above in writing with signature and date by January 27, 2020. You could email your response as a pdf (Attn: Mail Control No. 617083) to <u>frank.tran@nrc.gov</u> or fax to 630-515-1078.

If you have any questions, please contact me at 630-829-9623 or reply to this email.

Sincerely,

Frank Tran

Health Physicist/License Reviewer NRC Region III/Division of Nuclear Materials Safety Phone: 630-829-9623 Fax: 630-515-1078 Email: <u>Frank.Tran@nrc.gov</u>

