

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10 of the Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70; and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear materials designated below; to use such materials for the purpose(s) and at the place(s) designated below; to deliver or transfer such materials to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the U.S. Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p style="text-align: center;">Licensee</p> <p>1. Purdue University</p> <p>2. West Lafayette, Indiana 47907</p>	<p>3. License Number: SNM-142</p> <p>4. Expiration Date: September 25, 2023</p> <p>5. Docket No. 70-152</p>
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6. Byproduct Source, and/or Special Nuclear Materials	7. Chemical and/or Physical Form	8. Maximum Amount That Licensee May Possess at Any One Time Under This License
A. Uranium enriched in the U-235 isotope	A. SPERT fuel rods, enriched ≤ 4.8 w/o	A.
B. Uranium enriched in the U-235 isotope	B. Fuel rods, enriched ≤ 1.3 w/o	B.
C. Uranium enriched in the U-235 isotope	C. Solid helices, enriched ≤ 20 w/o	C.
D. Uranium enriched in the U-235 isotope	D. Solid discs, enriched ≤ 3 w/o	D.
E. Uranium enriched in the U-235 isotope	E. Samples, enriched ≤ 20 w/o	E.
F. Plutonium	F. Encapsulated PuBe neutron sources	F.
G. Natural Uranium	G. UO ₂ pellets clad in aluminum	G.
H. Natural Uranium	H. Samples, any form	H.
I. Californium	I. 10 doubly encapsulated sources	I.

Enclosure 3

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number: SNM-142

Docket No. 70-152

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|---|--|----|
| J. Uranium 233
(for storage only) | J. Calibration sources | J. |
| K. Neptunium 237 | K. Calibration sources | K. |
| L. Plutonium 239 | L. Calibration sources | L. |
| M. Curium 244 | M. Calibration sources | M. |
| N. Uranium enriched in the
Isotope U-235 | N. Solid, oxide or nitrate
enriched ≤ 5 w/o in
contaminated equipment | N. |
9. Authorized use: For use in accordance with statements, representations, and conditions specified in the license application dated July 31, 2009, March 15, 2010, February 8, 2011, January 31, 2012, November 8, 2012, December 28, 2012, and May 8, 2013.
10. Authorized place of use: The licensee's existing Purdue University Campus at West Lafayette, Indiana.
11. Notwithstanding Sections 6.0(c) and 9.1 of the application dated March 15, 2010, the licensee is required to have NRC's approval by license amendment before using (e.g., moving) the SPERT fuel rods, fuel rods, californium sources, or natural uranium pellets.
12. Notwithstanding Section 8.5 of the application dated March 15, 2010, refresher training that covers radiation safety procedures shall be conducted on an annual basis (maximum interval 15 months) for all employees and students who use licensed materials.
13. Release of equipment, facilities, or packages to the unrestricted area or to uncontrolled areas onsite shall be in accordance with the attached "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material" dated April 1993.
14. The licensee is exempted from the requirements of 10 CFR 70.24 insofar as such requirements apply to the SNM in any fuel rods in the [REDACTED] that are for storage only.
15. The licensee is exempted from the requirements of 10 CFR 70.24 insofar as such requirements apply to fissionable material in individual unrelated work areas in which the inventory of the material does not exceed 700 g of ^{235}U , 520 g of ^{233}U , 450 g of ^{239}Pu or 450 g of any combination of these three isotopes. One half of such quantities if massive moderators or reflectors made of graphite, heavy water, or beryllium may be present.

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16. As it pertains to License SNM-142, the license shall fully implement and maintain in effect all provisions of the approved 10 CFR 73.67, Physical Security Plan—including changes and amendments made pursuant to 10 CFR 70.32(e) and 10 CFR 70.34. The Approved Physical Security Plan consists of a document containing Safeguards Information entitled, "Security Plan for the Purdue University Reactor, the Fast Breeder Blanket Facility and the Nuclear Fuel Storage Areas."

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: September 25, 2013 By: /RA/ J. Andersen for

Marissa G. Bailey, Director
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards
Washington, DC 20555



