

**SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

<b>1. LICENSEE/LOCATION INSPECTED:</b> Purdue University Radiological and Environmental Management 550 Stadium Mall Dr. West Lafayette, Indiana 47907 REPORT NUMBER(S) 2017001	<b>2. NRC/REGIONAL OFFICE</b> Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352
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<b>3. DOCKET NUMBER(S)</b> 030-00696	<b>4. LICENSE NUMBER(S)</b> 13-02812-04	<b>5. DATE(S) OF INSPECTION</b> November 13-16, 2017
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**LICENSEE:**  
 The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

1. Based on the inspection findings, no violations were identified.

2. Previous violation(s) closed.

3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.

\_\_\_\_\_ Non-cited violation(s) were discussed involving the following requirement(s):

\_\_\_\_\_

4. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.  
 (Violations and Corrective Actions)

**Statement of Corrective Actions**

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Geoffrey M. Warren / Jason Draper	<i>[Signature]</i>	11/16/17
BRANCH CHIEF	Aaron T. McCraw	<i>[Signature]</i>	12/5/17

**Docket File Information****SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION**

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3. DOCKET NUMBER(S)  030-00696	4. LICENSE NUMBER(S)  13-02812-04	5. DATE(S) OF INSPECTION  November 13-16, 2017	
6. INSPECTION PROCEDURES USED  87126	7. INSPECTION FOCUS AREAS  03.01 - 03.07		

**SUPPLEMENTAL INSPECTION INFORMATION**

1. PROGRAM CODE(S)  04618	2. PRIORITY  3	3. LICENSEE CONTACT  James Schweitzer, RSO	4. TELEPHONE NUMBER  (765) 494-2350
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- Main Office Inspection      Next Inspection Date: 11/13/2020
- Field Office Inspection    3601 Sagamore Pkwy, Lafayette IN
- Temporary Job Site Inspection

**PROGRAM SCOPE**

This was a routine, unannounced inspection of the licensee. Purdue University, a public university with enrollment of approximately 40,000 students, maintained a Type A non-medical broad-scope program. The radiation safety department was staffed with a full-time Radiation Safety Officer (RSO), two health physicists, three health physics technicians, and clerical staff. Approximately 190 individuals were authorized as primary investigators, of whom around 30 percent actively used licensed materials. Licensed material was used for research and development including animal studies by over 300 materials users in 200 authorized labs. The majority of the licensee's studies involved tritium and phosphorus-32, with a wide variety of other isotopes. At the main campus, the licensee operated a veterinary hospital, using technetium-99m for imaging horses and iodine-131 for treating cats with hyperthyroidism. The University possessed numerous sealed sources including self-shielded irradiators and calibration sources. Human research using a sealed cadmium-109 source was limited to the main campus, though the licensee had plans for using it at IU Medical Center. Gauge use was limited to use of a roofing gauge on campus, though the licensee possessed two additional gauges in storage. The polonium-210:beryllium source was used occasionally at temporary job sites. The majority of licensed materials were used at the main campus. Other active facilities included (1) the Fort Wayne campus, (2) the Calumet campus, (3) the Equine Specialty Hospital in Shelbyville, (4) ASREC in West Lafayette, and (5) the Sagamore Parkway facility in Lafayette. Other facilities listed on the license were inactive at the time of the inspection.

Performance Observations: The inspectors observed licensee staff perform a laboratory survey and audit and toured a variety of facilities, including several research laboratories. Licensee staff demonstrated and described ordering and delivery of licensed materials, laboratory and veterinary use of licensed materials, use of irradiators, testing and calibration of survey instruments, pickup and disposal of waste materials, use of the incinerator, tracking and transport of licensed materials, inventory and leak test procedures, and program oversight through radiation safety committee meetings. Interviews with licensee personnel indicated adequate knowledge of radiation safety concepts and procedures. Review of dosimetry information indicated no exposures of regulatory concern. The inspector performed independent and confirmatory radiation measurements which indicated results consistent with licensee survey records and postings.

No violations were identified during this inspection.