

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

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| 1. LICENSEE/LOCATION INSPECTED: <i>Purdue University Dept of Rad + Environ. Management West Lafayette, IN</i> REPORT NUMBER(S) <i>08-01</i> | 2. NRC/REGIONAL OFFICE U.S. Nuclear Regulatory Commission Region III 2443 Warrenville Road Suite 210 Lisle, Illinois 60532-4351 |
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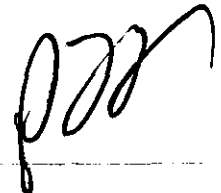
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| 3. DOCKET NUMBER(S) <i>040-02681</i> | 4. LICENSEE NUMBER(S) <i>SUD-296</i> | 5. DATE(S) OF INSPECTION <i>5/15/08</i> |
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LICENSEE:
 The inspection was an examination of the activities conducted 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, NUREG-1600, to exercise discretion, were satisfied.

Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(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. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
 (Violations and Corrective Actions)



Licensee's Statement of Corrective Actions for Item 4, above.

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 | <i>Ken Lambert</i> | <i>Ken Lambert</i> | <i>5/15/08</i> |

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| 1. LICENSEE Purdue University REPORT NUMBER(S) 08-01 | | 2. NRC/REGIONAL OFFICE Region III 2443 Warrenville Road, Suite 210 Lisle, IL 60532 | |
| 3. DOCKET NUMBER(S) 040-02681 | 4. LICENSE NUMBER(S) SUD-296 | 5. DATE(S) OF INSPECTION May 15, 2008 | |
| 6. INSPECTION PROCEDURES USED 87126 | 7. INSPECTION FOCUS AREAS 03.01 – 03.07 | | |

SUPPLEMENTAL INSPECTION INFORMATION

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| 1. PROGRAM CODE(S) 11300 | 2. PRIORITY 5 | 3. LICENSEE CONTACT James Schweitzer, RS) | 4. TELEPHONE NUMBER 765/494-2350 |
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| <input checked="" type="checkbox"/> Main Office Inspection | Next Inspection Date: <u>May 2013</u> |
| <input type="checkbox"/> Field Office | |
| <input type="checkbox"/> Temporary Job Site Inspection | |

PROGRAM SCOPE

The licensee utilizes a graphite pile sub-critical assembly containing approximately natural uranium metal slugs for student instruction on neutron decay, effects of control rods, preparation of short lived isotopes for instruction in radiochemical techniques and research activities. The licensee also possesses natural thorium for research purposes and depleted uranium for use as a reflector for a neutron generator research project. The radioactive material is used at various locations on the Purdue University Campus and other Purdue facilities in West Lafayette, Indiana.

Performance observations

Authorized users are responsible for loading the slugs into the sub-critical assembly and, according to Purdue staff, authorized users are present when students are using the assembly. The inspector toured the licensee's use and storage areas and randomly verified the current inventory in the assembly, and in other storage and use areas. The inspector verified that radioactive material was used only at the locations authorized on the license.

Appropriate security measures were observed. All areas were appropriately secured from unauthorized access. Radioactive materials storage areas were secured. Slugs not in the sub-critical assembly were stored in locked cabinets with tamper-proof numbered seals attached to the door.

Dosimetry is provided to authorized users and students. Whole body dosimetry results for 2008 to date indicated all doses were less than 100 millirems. If dosimetry results indicate a dose greater than 100 mrem, the individual is sent a letter inquiring on their activities during the time the badge was assigned to them.

All users received radiation safety training. Surveys, of the radiation use and storage areas, are performed annually in accordance with Purdue University's survey program.

Independent surveys identified 0.6 to 2 mr/hr on contact with the sub-critical assembly housing. Cabinet storage area dose rate measurements ranged from 2 to 5 mr/hr, 12 inches from the cabinets.

No violations were identified.