

Docket File Information
SAFETY INSPECTION REPORT
AND COMPLIANCE INSPECTION

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| 1. LICENSEE Earlham College | | 2. NRC/REGIONAL OFFICE Region III 2443 Warrenville Road Lisle, IL 60532 | |
| REPORT 2006-001 | | | |
| 3. DOCKET NUMBER(S) 030-00699 | 4. LICENSE NUMBER(S) 13-05737-01 | 5. DATE(S) OF INSPECTION September 20, 2006 | |
| 6. INSPECTION PROCEDURES 87126 | 7. INSPECTION FOCUS AREAS 03.01-03.07 | | |

SUPPLEMENTAL INSPECTION INFORMATION

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| 1. PROGRAM 3620 | 2. PRIORITY E5 | 3. LICENSEE CONTACT John Howell, RSO | 4. TELEPHONE NUMBER 760-983-1691 |
|---------------------------|--------------------------|--|--|

Main Office Inspection Next Inspection Date: **September 2011**

Field _____

Temporary Job Site _____

PROGRAM SCOPE

This is a small, private academic program with an enrollment of approximately 1200 students. One Pu/Be neutron howitzer is used approximately twice yearly for student instruction in neutron activation studies. In addition, one cesium-137 sealed source is used involving student instruction in Compton scatter. The howitzer unit is locked and housed in a dedicated, locked storage room along with other licensed material as authorized by the current license. One generally licensed Varian gas chromatograph containing 15 mCi of nickel-63 is also possessed and used. Two gas chromatographs are currently in storage and not used.

Performance Observations

The licensee's storage area was observed locked and posted in the authorized location on campus. Interviews conducted with the RSO revealed the use of licensed material by student's is under his supervision.

Licensed material was observed adequately secured during the review and was not readily accessible to members of the general public. Available survey instrumentation was properly calibrated and operable during the review.

Independent measurements taken at the surface of the howitzer revealed a maximum reading of 1.5 mr/hr. Measurements taken outside the storage room indicated about 0.04mr/hr. Personal dosimetry is not required for this program.

NRC FORM 891M PART 1
(10-2006)
10 CFR 2.201
U.S. NUCLEAR REGULATORY COMMISSION
SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

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| 1. LICENSEE/LOCATION INSPECTED: Earlham College 601 National Road West Richmond, IN 47374 | 2. NRC REGIONAL OFFICE U.S. Nuclear Regulatory Commission Region III 601 Warrenville Road Lisle, Illinois 60532-4351 |
| REPORT 2006-001 | |

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| 3. DOCKET NUMBER(S) 030-00899 | 4. LICENSEE NUMBER(S) 13-05737-01 | 5. DATE(S) OF INSPECTION September 20, 2006 |
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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-1800, 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)

Condition No. 15, A, of License Number 13-05737-01 requires, in part, that sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by NRC under 10 CFR 32.210. The registration requires the source be leak tested at three year intervals.

Contrary to the above, as of September 20, 2006, a Varian Gas Chromatograph CP 3600 Model No. 02-001972-00, containing 15 millicuries of nickel-63, had not been leak tested since January 16, 2002, a period greater than three years.

The licensee took prompt corrective action and immediately contacted the manufacturer on September 21, 2006, to obtain a leak test kit. The RSO performed the leak test on September 28, 2006, which indicated no contamination. The RSO will perform the leak tests at required future intervals.

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 | JOHN A. HOWELL | <i>John A. Howell</i> | 10/13/06 |
| NRC INSPECTOR | S. J. Muley | <i>S. J. Muley</i> | 10/6/06 |