

ENCLOSURE 6

INSPECTION RECORD

Region III Inspection Report No. 03008302/2013001 License No. 13-00267-04
Docket No. 030-08302

Licensee Manchester College
604 E. College Avenue
North Manchester, IN 46962

Location (Authorized Site) Being Inspected
Department of Physics
Room 138A
Manchester Science Center
North Manchester, IN 46962

Licensee Contact: Dr. Christer Watson Telephone No.: (260) 982-6021

Priority: 5 Program Code: 03620

Date of Last Inspection: December 19, 2007 Date of This Inspection: February 25, 2013

Type of Inspection: ☐ Initial ☐ Announced ☒ Unannounced
☒ Routine ☐ Special

Next Inspection Date: February 25, 2018 ☒ Normal ☐ Reduced

Justification for reducing the routine inspection interval:

Summary of Findings and Actions:

- ☐ No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- ☐ Non-cited violations (NCVs)
- ☐ Violation(s), Form 591 issued
- ☒ **Violations**, regional letter issued from the RIII Office
- ☐ Followup on previous violations

Inspector(s): Claire Wellinghoff, Health Physicist Date: March 19, 2013
/RA by Ken Lambert acting for/
(Signature)

Inspector(s) Ken Lambert, Senior Health Physicist Date: March 19, 2013
/RA/
(Signature)

Approved: Tamara E. Bloomer, Chief, MIB Date: March 20, 2013
/RA by Robert G. Gattone, Jr. acting for/
(Signature)

PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES:

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
Amendment # 8 (corrected copy)	2/25/2011	Change of total possession limit

2. INSPECTION AND ENFORCEMENT HISTORY:

None – There were no violations identified during the last two inspections.

3. INCIDENT/EVENT HISTORY:

None – Since the last inspection there have been no incidents, events reported to the NRC.

PART II – INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

The licensee is a small university with an overall enrollment of 1,200 students and the radiation program is composed of the Radiation Safety Officer (RSO) and Assistant RSO. They have one neutron howitzer containing 5 Ci of Am-241, which is used about once a year to activate metals for a modern physics laboratory. The last time the generator was used for this purpose, was in the spring semester of 2011. The neutron howitzer is stored, and authorized for use in a locked room of the Physics Department building on campus.

2. SCOPE OF INSPECTION:

A review of select records since the previous inspection included: (1) leak tests; (2) survey meter use and calibration; and (3) inventory. The inspectors also discussed security of the Am-241 sealed source with the licensee, who indicated that the source is used and stored in a single room, which is kept locked. The RSO and assistant RSO only have keys to this room.

Inspection Procedure(s) Used: 87126

Focus Areas Evaluated: 3.01-3.07

3. INDEPENDENT AND CONFIRMATORY MEASURES:

Independent measurements taken on the surface of the neutron howitzer indicated five millirem per hour with measurements indistinguishable from background levels at one meter from the surface. The inspector survey measurements were taken with a Canberra UltraRadiac survey meter, serial number 13000515, last calibrated on June 17, 2012.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

Condition 15 of License No. 13-00267-04, Amendment 8, requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the application dated, April 29, 2003. Item No. 10, of the application states, in part, that survey meters shall be calibrated once every twelve months by the Indiana Department of Civil Defense, NRC License Number 13-13408-02, or by persons specifically licensed by the Nuclear Regulatory Commission or an Agreement State to perform such services. During the inspection the inspector identified that the licensee had three Geiger Meter survey meters that were most recently calibrated in May 2007. The failure of the licensee to calibrate its survey meters every twelve months is a violation of Condition 15 of License No 13-00267-04.

Condition 12.A of License No. 13-00267-04, Amendment 8, requires that sealed sources be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210. During the inspection, the inspector identified that the licensee last leak tested its Americium-241 sealed source on August 22, 2008. The licensee's failure to perform leak testing of its Americium-241 sealed source every six months is a violation of Condition 12.A of License No. 13-00267-04.

As corrective actions, the licensee has committed to: (1) calibrating survey meters; (2) developing leak testing procedures; and (3) conducting leak testing. Additionally, the licensee committed to not use the device until the survey meters have been calibrated and the leak test has been performed for the sealed source.

5. PERSONNEL CONTACTED:

(Identify licensee personnel contacted during the inspection, including those individuals contacted by telephone.)

Use the following identification symbols:

Individual(s) present at entrance meeting

* Individual(s) present at exit meeting

#* Dr. Christer Watson

#* Dr. Dwight Beery, RSO