

INSPECTION RECORD

Region III
License No. 24-00513-32

Inspection Report No. 030-02278/2011-002
Docket No. 030-02278

Licensee (Name and Address):
The Curators of the University of Missouri
311 Jesse Hall
Columbia, Missouri 65211

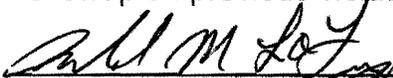
Licensee Contact: Jack Crawford – RSO **Telephone No.** 573-882-0931

Date of This Decommissioning Inspection: August 25-16, 2011

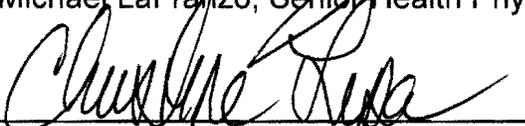
Type of Inspection: Initial Announced Unannounced
 Routine Special

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
- Violation(s), regional letter issued
- Followup on previous violations

Inspector 
Michael LaFranzo, Senior Health Physicist

Date 9/13/11

Approved 
Christine A. Lipa, Chief, MCID

Date 9-16-11

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

1. AMENDMENTS AND PROGRAM CHANGES:

In a letter dated February 17, 2011, the licensee requested an Alternate Decommissioning Schedule for the decommissioning of Pickard Hall.

2. DECOMMISSIONING INSPECTION AND HISTORY:

On January 26 and 27, 2010, the U.S. Nuclear Regulatory Commission (NRC) conducted a reactive inspection at the University of Missouri, Columbia, Missouri Campus. The purpose of this inspection was to assess the University's actions to address radiological contamination identified in two Academic Halls, Pickard Hall and Schweitzer Hall. During the inspection, the NRC determined that radiological contamination was located in Pickard Hall and decommissioning was required for that building pursuant to 10 CFR 30.36. No cited violations of NRC requirements were identified during the inspection (IR 030-02278/10-01(DNMS)).

On June 23, 2011, representatives of the U.S. Nuclear Regulatory Commission (NRC) held a public meeting in Columbia, Missouri regarding the University of Missouri, Columbia's license amendment request for an alternative schedule for decommissioning of Pickard Hall. The Public Meeting Summary can be found at NRC public web site (Accession Number: ML11194A073). Prior to the public meeting, representatives of NRC also performed a non-inspection related site tour of Pickard Hall.

3. INCIDENT/EVENT HISTORY:

No incidents or events were noted since the last decommissioning inspection.

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Ms. Jackie Jones, Vice Chancellor of Administrative Services
Maureen Kotlas, Director of Environmental Health and Safety
Silvia Jurisson, Chairperson, Radiation Safety Committee
Jack Crawford, Radiation Safety Officer

On August 25-26, 2011, NRC performed a decommissioning inspection of Pickard Hall relating to radiological surveys thereof to support the licensee's Alternative Decommissioning Schedule. During the inspection, the licensee had two health physicists accompany the inspector during the inspection. The licensee has not used radioactive material in this building since the 1930s. The licensee believes and has documentation to support that the radiological contamination is Radium-226.

2. SCOPE OF INSPECTION:

The inspection focused on NRC independent radiological surveys to support the licensee's request for an Alternate Work Schedule. The Alternate Work Schedule concerning the decommissioning rule requests NRC approval to delay work such that the licensee would not start decommissioning activities of Pickard Hall immediately and that further evaluation of a decommissioning plan and schedule would occur in 2014.

NRC also performed interviews of licensee staff and reviewed records associated with radiological surveys of Pickard Hall.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

The inspector performed independent radiological surveys with a NaI (2x2) detector. The inspector visited all major rooms and areas and performed selected independent surveys of the ceiling, walls and floor. The inspector verified radiological contamination where the licensee had indicated such contamination would be located. The inspector also identified several areas where the licensee either did or did not identify radiological contamination that were not posted nor were security measures in place. The NRC has cited the licensee for failure to make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 related to security and posting of areas that possess licensed material (see section 4 for details). The locations identified were in McLorn Gallery (room 205), wall of the storage room on the second floor (room 213). Research Laboratory 17, the Lecture Hall (room 106), outside of Staff Office 9 in the corridor, above the 9 foot level of Offices 111

and 112 and the Julius Carlebach Gallery (room 206). Background radiation levels were between 10 Kilocounts per minute (KCPM) and 15 KCPM. The NRC did not identify any removable contamination but radiation levels with the radiation detector ranged from 30KCPM to 60 KCPM on contact. In Offices 111 and 112, the inspector's survey instrument did not exceed 9 feet above the floor and it is anticipated radiation levels on the ceiling of the room (ceiling is approximately 15 feet) could be much higher.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

During the decommissioning inspection, the inspector was performing independent radiological surveys of areas within Pickard Hall. During radiological surveys, the inspector identified numerous areas that possessed elevated radiation levels but the licensee had not performed adequate surveys, in accordance with 10 CFR 20.1501, to determine if such areas required security measures to be implemented in accordance with 10 CFR 20.1801 or whether those areas required posting in accordance with 10 CFR 20.1902(e). The specific citation and locations where elevated radiation levels were located are below:

Title 10 Code of Federal Regulations (CFR) 20.1501 requires that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present.

Contrary to the above, as of August 25, 2011, the licensee did not make surveys to assure compliance with:

- A. 10 CFR 20.1801, which requires the securing from unauthorized removal or access to licensed material that are stored in controlled or unrestricted areas. Specifically, elevated radiation levels were identified in McLorn Gallery (room 205), wall of the storage room on the second floor (room 213). Research Laboratory 17, the Lecture Hall (room 106), outside of Staff Office 9 in the corridor, above the 9 foot level of Offices 111 and 112 and the Julius Carlebach Gallery (room 206) and the licensee did not make surveys to determine the quantity of licensed material which could affect the determination of security of those areas.
- B. 10 CFR 20.1902(e), which requires posting of areas or room in which licensed material is used or stored. Specifically, elevated radiation levels were identified in McLorn Gallery (room 205), wall of the storage room on the second floor (room 213). Research Laboratory 17, the Lecture Hall (room

106), outside of Staff Office 9 in the corridor, above the 9 foot level of Offices 111 and 112 and the Julius Carlebach Gallery (room 206) and the licensee did not make surveys to determine the quantity of licensed material which could affect the whether posting in those areas are required.

The licensee verbally committed to re-evaluate those areas and determine if additional regulatory measures are required. The Notice of Violation requires a response from the licensee which will provide additional details of the additional evaluations or surveys to ensure compliance with NRC regulations.

5. **PARITIAL LIST OF PERSONNEL CONTACTED:**

- #* Maureen Kotlas, Director of Environmental Health and Safety
- #* Silvia Jurisson, Chairperson, Radiation Safety Committee
- #* Jack Crawford, Radiation Safety Officer

Use the following identification symbols:

- # Individuals present at entrance meeting – August 25, 2011
- * Individuals present at exit meeting – August 26, 2011

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