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May 24, 2007

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Re: Reply to a Notice of Violation
Docket No. 030-02278/07-001 (DNMS)
License No. 24-00513.32

Dear Sir/Madam:

This letter is in response to the NRC inspection conducted at the University of Missouri from March 12 – March 14, 2007, in which four violations were cited in your letter of April 26, 2007. Per your instructions, our responses are outlined below following a brief description of the violation.

- 1. As of March 29, 2007, the licensee failed to keep a list contained in a single document of all areas designated and formerly designated as restricted areas per 10 CFR 30.35.**

Reason for violation

As noted in the inspection report, the University maintains the subject records; however, due to our misunderstanding of the requirements, we did not maintain a single list.

Corrective steps

During the inspection, the NRC inspectors gave clear guidance on expectations for compliance with this regulation. In addition, the inspectors identified some inconsistencies between different lists maintained by the University. Therefore, our strategy for corrective action is to use our current electronic database, which contains all currently restricted areas and a significant number of former restricted areas, and add in all formerly restricted areas that are not currently a part of this database. Immediately following the March inspection, University staff began conducting a thorough review of the following historical records to identify formerly restricted areas that are not currently a part of the electronic database:

- Authorized user file records for byproduct material use under license 24-00513-32
- Previous submissions to the NRC listing locations of use
- Previous licenses issued under the AEC/NRC
- Additional archival records

Review of records is a significant task. We have identified approximately 39 cubic feet of records dating back almost 50 years that need to be reviewed in detail by staff.

Concurrently, our radiation safety staff is working to create a report that queries the database for all current and former restricted areas so that a single comprehensive document can be printed. This document will be re-generated every two years.

The corrective steps that will be taken to avoid further violations

This list of current and former restricted areas in a single document will be reviewed and updated bi-annually as required by 10CFR30.35(g)(3).

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The Radiation Safety Officer and the University's Radiation Safety consultant each conduct annual audits of the University's Radiation Safety Program. Each of these audits will be modified to include this decommissioning issue.

The date when full compliance will be achieved

We anticipate that modification of our report generating capability to enable printing a single list of all locations will be completed by August 1, 2007.

We anticipate that staff review of our records and updating of the electronic database will be complete by April 1, 2008.

Inclusion of decommissioning as part of the Radiation Safety Officer and University Radiation Safety consultant annual programs audits will commence with the next audit by each.

2.A. The licensee did not make surveys to assure compliance with 10CFR20.1402 following the cessation of licensed activities in two buildings.

Reason for violation

In both instances the failure to perform surveys to assure compliance with 10CFR20.1402 as required by 10 CFR20.1501 stems primarily from the University's failure to understand that a time limit existed for the evaluation of residual contamination following the cessation of activities involving licensed material. In neither case did the University consider the buildings as being released for unrestricted use. It was the University's incorrect belief that as a broad scope licensee we did not need to evaluate separate buildings or land areas for unrestricted release until license termination or a permanent change in the use of the facility occurred. While it was expected that these properties would be made ready for sale eventually, the University did not anticipate initiating decommissioning surveys until that decision was formally made.

Corrective steps

The University will ensure that these former restricted areas are surveyed in such a manner as to assure compliance with 10CFR20.1402 as required by 10 CFR20.1501. During the course of the NRC inspection, the University became aware that the Radiation Safety staff's understanding of authorized activities at the Environmental Trace Substance Laboratory and Building 121, was incomplete. As a result, the University initiated a historical site assessment (HSA) of this site immediately following the conclusion of the NRC onsite inspection. This HSA must be completed before the University can correct the violation.

The corrective steps that will be taken to avoid further violations

As noted in the inspection report, the University has an internal operating procedure, RSIP-S-03-F2, "Close Out Survey Checklist." The University will modify this operating procedure to address decommissioning requirements to assure compliance with 10CFR20.1402 when conditions exist as outlined in 10CFR30.36(d).

The date when full compliance will be achieved

The University anticipates full completion of the historical site assessment (HSA), by September 1, 2007. Subsequent to the completion of the HSA, the University expects to make or cause to be made, scoping surveys and a final status survey design by September 1, 2008.

Internal operating procedure, RSIP-S-03-F2, "Close Out Survey Checklist," will be updated to assure compliance with 10CFR20.1402 when conditions exist as outlined in 10CFR30.36(d) will be completed by August 1, 2007.

2.B. The licensee failed to perform reasonable and necessary surveys to demonstrate compliance with the NRC's requirements for monitoring intakes of licensed materials by occupationally exposed workers.

Reason for violation

The closeout surveys of the MURR storage barn on the Sinclair Farm East property indicated several areas of fixed contamination. It is in-house procedure to decontaminate to background levels when possible or remove the contaminated item for disposal as radioactive waste. University staff conducting this decontamination were radiation safety staff each with at least seven years experience with the University. Because this contamination situation was unusual compared to the more typical decontamination needs found in research laboratories, University staff did not recognize that a more formal assessment for potential airborne contaminants and real time air sampling should be performed.

Corrective steps

The potential radionuclides involved have been determined and we have begun to prepare dose assessments to evaluate any gross body burden received during the decontamination work. Based on information collected to date, we have no reason to believe there was a significant exposure to either individual.

The corrective steps that will be taken to avoid further violations

The University's radiation safety office has implemented a new draft "Radiation Work Permit" program as a structured and procedurally based program to evaluate future radiological exposures of non-routine activities. This Radiation Work Permit requires the radiation safety staff to perform a safety engineering review prior to engaging in activities that have not already been covered under another approved program under our license. This program was implemented prior to the completion of the on-site inspection by the NRC staff.

The date when full compliance will be achieved

We expect to complete the dose assessments of those involved by August 1, 2007.

3. The licensee failed to limit activities to those authorized by the University of Missouri's NRC license.

Reason for violation

As described in the previous section, the closeout surveys of the MURR storage barn on the Sinclair Farm East property indicated several areas of fixed contamination. It is in-house procedure to decontaminate to background levels when possible or remove the contaminated item for disposal as radioactive waste. In this case the decontamination technique of jackhammering was selected without realizing that it was not authorized on the license.

Corrective steps

University radiation safety staff have been instructed that aggressive decontamination techniques are not permitted under the University's current broad scope license.

The corrective steps that will be taken to avoid further violations

The University's radiation safety staff will amend both the "close out survey" and decommissioning internal operating procedures to include text outlining acceptable decontamination techniques. If the University finds more aggressive decontamination

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techniques are necessary, we will proceed with the necessary license amendments and update our procedures at that time.

The date when full compliance will be achieved

The University anticipates that its internal operating procedures will be updated by August 1, 2007.

Conclusion

We appreciate that the NRC inspectors acknowledged the many good steps the University has taken to provide a strong radiation safety program. The discussions the inspectors had with University staff during and subsequent to the March inspection were very helpful to us in understanding our obligations with respect to decommissioning. The University is using this inspection as an opportunity not just to respond to the immediate concerns of the inspectors, but also to conduct a thorough review of records to ensure comprehensive compliance for all University operations. Should you require additional information, please contact Jack Crawford, the University's Radiation Safety Officer.

Sincerely,



Jacquelyn K. Jones
Vice Chancellor for Administrative Services

cc: Jack Crawford, Radiation Safety Officer
James Cameron, Chief, Decommissioning Branch, NRC Region III
Regional Administrator, NRC Region III