



February 25, 2016

**To:**  
Mr. Mark R. Shaffer  
U.S. Nuclear Regulatory Commission, Region IV  
1600 East Lamar Boulevard  
Arlington, TX 76011-4511

**From:**  
Nicholas B. Childs, Ph.D.  
Radiation Safety Officer  
Office of Research Compliance  
Montana State University

**Subject:**  
Response to Apparent Violations in NRC Inspection Report 030-00871/2014-001; EA-15-165

Dear Mr. Shaffer,

This letter is in response to the MSU Choice Letter dated 22 February, 2016 which identified five apparent violations. Here, MSU provides a written response to these apparent violations with our reasons for the apparent violations, corrective actions made and dates in which full compliance was achieved. In regards to the first four apparent violations listed in section 3.3 of the MSU Choice letter:

- **3.3.1 10 CFR 20.1802** requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.
- **3.3.2 Condition 14 A.** of NRC license No. 25-00326-06, Amendment No. 61, states that sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- **3.3.3 License Condition 25** of NRC license No. 25-00326-06, Amendment No. 61, states, in part, that the licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sources and/or devices received and possessed under the license.
- **3.3.4 10 CFR 30.9(a)** states, in part, that information provided to the Commission by a licensee or information required by license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

**(1) Reason for these apparent violations**

- a. The former RSO did not follow procedures when performing physical inventories, leak tests and maintaining accurate records.

**Office of Research  
Compliance**  
CFT5 Suite 229  
P.O. Box 173085  
Bozeman, MT 59717

Tel 406-994-6757  
Fax 406-994-4790  
Email [ORC@montana.edu](mailto:ORC@montana.edu)

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- b. Licensee failed to train all of the authorized users on material accountability and security of devices that contained licensed material
- c. The former RSO intentionally created false leak test records and failed to inform management that sources were missing.
- d. The former management structure lacked accountability and oversight from the former Safety Manager

**(2) Corrective steps that have been taken and the results achieved.**

- a. **Removal of previous RSO** – The former RSO was terminated for cause on 18 August 2014. The new RSO is part of a revitalized Radiation Safety Program, including compliance oversight and a restructured Radiation Safety Committee (RSC). Both the RSC and the compliance oversight were instituted so that the new RSO has the necessary support and oversight to ensure that MSU's radiation safety program meets the compliance requirements for MSU's NRC license.
- b. **Restructuring of Management Structure** – The radiation safety program continues to have active oversight and is held accountable by the Director of Research Compliance.
- c. **Training** – 114 MSU radiation safety and security training certificates have been issued since October 2014. Attendees included all active principle investigators and authorized users as well as local law enforcement agencies.
- d. **Inventory Reports** – Inventory status and location reports are being submitted to the Radiation Safety Committee at 6 month intervals. The Director of Research Compliance is a member of the committee which provides management oversight for the radiation safety program.
- e. **Leak Test Report** – Leak test reports are being submitted to the Radiation Safety Committee at 6 month intervals. The Director of Research Compliance is a member of the committee which provides management oversight for the radiation safety program.
- f. **Removal of Unwanted and Unused Sealed Sources** – On July 1<sup>st</sup>, 2015 42 sealed sources were removed from campus through a waste broker and utilization of the government sponsored SCATR program. On November 17<sup>th</sup>, 2015 the ownership of 20 nuclear gauge sealed sources was relinquished to Qal-Tek. Currently only 10 sealed sources are designated as *in use* with 2 being designated as *in storage*.
- g. **Campus Awareness** – Between November and December 2014 the current RSO personally met with all principle investigators working with radioactive materials as well as each of the department heads that have personnel working with radioactive materials. General radiation safety was discussed in addition to our efforts to locate our missing Ni-63 source.
- h. **Increased Security Measures** – All GCs containing Ni-63 sources have been physically secured to prevent unauthorized relocation.

**(3) Corrective steps that will be taken.**

- a. **Continuation of Established Procedures** – The continuation of the procedures listed above allows for the maintenance of a radiation safety program with a high level of oversight and accountability.

**(4) Date when full compliance will be achieved.**

- a. **January 15, 2015** – On this date, full program compliance was achieved with the completion of a full physical inventory of all radiation sources with accurate inventory records, including required leak tests as documented in MSU's NRC license.

In regards to the last apparent violations listed in section 3.3 of the MSU Choice letter:

**3.3.5 10 CFR 71.5(a)** requires, in part, that each licensee who transports licensed material outside of the site of usage shall comply with the applicable DOT regulations in 49 CFR Parts 107, 171 through 180, and 390 through 397. Title 49 CFR 172.704(c) requires, in part, that a hazmat employee receive initial hazmat training.

- (1) Reason for the apparent violation
  - a. **Street Designation** – MSU's radiation research team was unaware as to the designation of S. 11<sup>th</sup> and S. 19<sup>th</sup> street as public highways
- (2) Corrective steps that have been taken and the results achieved
  - a. **Training** - Having established the designation of these streets and the regulations that apply to them, training will be provided to any personnel who transports licensed materials. As of the date of this letter, only the current RSO is approved to transport licensed material.
- (3) Corrective steps that will be taken
  - a. **Training** - Future transporters of licensed material will receive appropriate DOT HAZMAT training before being allowed to transport these materials outside of the site of usage.
- (4) Date when full compliance will be achieved.
  - a. **November 14, 2014** – On this date the current RSO was trained, tested and thus successfully completed HAZMAT training from the Dade Muller academy which satisfies the regulatory requirements listed in this violation.

Please contact me directly with any questions, comments or requests for additional response and corrective actions.

Sincerely,



Dr. Nicholas Childs  
Radiation Safety Officer  
Montana State University  
[nchilds@physics.montana.edu](mailto:nchilds@physics.montana.edu)  
406-994-7317  
EPS Building Rm 247