



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

May 17, 2022

EA-22-001

Ms. Carolyn Brandt, Director  
Research Integrity & Compliance  
University of Wyoming  
1000 East University Avenue  
Laramie, WY 82071

SUBJECT: UNIVERSITY OF WYOMING - NOTICE OF VIOLATION; NRC INSPECTION  
REPORT 030-01176/2021-001

Dear Ms. Brandt:

This letter refers to the inspection conducted on November 17, 2021, at your facility in Laramie, Wyoming. The inspection continued with in-office review through February 9, 2022. The purpose of the inspection was to examine activities conducted under your license as they relate to public health and safety and to confirm compliance with the U.S. Nuclear Regulatory Commission (NRC) rules and regulations and with the conditions of your license. A final exit briefing was conducted by videoconference with you and your staff on March 1, 2022. Details of the inspection and three apparent violations were provided to you in the subject inspection report, dated March 7, 2022, Agencywide Documents Access and Management System (ADAMS) Accession No. ML22062A769.

In the letter transmitting the inspection report, we provided you with the opportunity to address the apparent violations by either attending a predecisional enforcement conference, requesting an alternative dispute resolution mediation session, or providing a written response before we made our final enforcement decision. In a letter dated April 4, 2022 (ADAMS Accession No. ML22109A160), you provided a response to the apparent violations.

Based on the information developed during the inspection and the information you provided in your written response to the inspection report dated March 7, 2022, the NRC has determined that three violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding them are described in detail in the subject inspection report. The violations involved: (A) the failure to establish adequate administrative controls to assure safe operations involving licensed materials; (B) the possession and use of byproduct material in excess of the NRC-authorized possession limits; and (C) improper labeling of a container with byproduct material.

The NRC considers violations A and B to be significant violations because they involve programmatic failures associated with administrative controls and possession limits for byproduct material. Therefore, these two violations have been categorized collectively in

accordance with the NRC Enforcement Policy as a Severity Level III problem. The Enforcement Policy can be found on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

The NRC considers Violation C to be of low safety significance and thus has categorized it in accordance with the NRC Enforcement Policy as a Severity Level IV violation. This violation is being formally cited as Severity Level IV rather than as a non-cited violation because it was identified by the NRC during an inspection.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$8,000 is considered for a Severity Level III problem.

Because your facility has not been the subject of an escalated enforcement action within the last two routine inspections, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section 2.3.4 of the NRC Enforcement Policy. The NRC has determined that *Corrective Action* credit is warranted based on the prompt and comprehensive corrective actions documented in your letter dated April 4, 2022, and NRC Inspection Report 030-01176/2021-001.

Therefore, to encourage prompt and comprehensive correction of violations and in recognition of the absence of previous escalated enforcement action, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty. In addition, issuance of this Severity Level III problem constitutes escalated enforcement action that may subject you to increased inspection effort.

The NRC has concluded that information regarding: (1) the reason for the violations; (2) the corrective actions that have been taken and the results achieved; and (3) the date when full compliance was achieved is already adequately addressed on the docket in your letter dated April 4, 2022, and NRC Inspection Report 030-01176/2021-001. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," a copy of this letter, the enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's ADAMS, accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its website at <http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions>.

If you have any questions concerning this matter, please contact Dr. Lizette Roldán-Otero of my staff, at 817-200-1455.

Sincerely,



Signed by Morris, Scott  
on 05/17/22

Scott A. Morris  
Regional Administrator

Docket No. 030-01176  
License No. 49-09955-10

Enclosure:  
Notice of Violation

cc w/Enclosure:  
Dillon Conner, Radiological Program Manager  
Wyoming Office of Homeland Security  
5500 Bishop Blvd.  
Cheyenne, WY 82002

Brandi O'Brien, Program Manager  
Wyoming Dept. of Environmental Quality  
Land Quality Division  
200 West 17th Street, Suite 10  
Cheyenne, WY 82002

SUBJECT: UNIVERSITY OF WYOMING - NOTICE OF VIOLATION; NRC INSPECTION REPORT 030-01176/2021-001 - DATED MAY 17, 2022

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## NOTICE OF VIOLATION

University of Wyoming  
Laramie, Wyoming

Docket No. 030-01176  
License No. 49-09955-10  
EA-22-001

During an NRC inspection conducted on November 17, 2021, with continued in-office review through February 9, 2022, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. 10 CFR 33.13(c)(3) requires, in part, that the licensee establish administrative controls and provisions relating to organization and management, procedures, record keeping, material control, and accounting and management review that are necessary to assure safe operations, including the establishment of administrative procedures to assure: (i) control of procurement and use of byproduct material; (ii) completion of safety evaluations of proposed uses of byproduct material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and (iii) review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with 10 CFR 33.13(c)(3)(ii) prior to use of the byproduct material.

Contrary to the above, on November 17, 2021, the licensee failed to establish appropriate administrative controls and provisions relating to organization and management, procedures, record keeping, material control and accounting, and management review that are necessary to assure safe operations. The licensee's administrative procedures failed to assure: (i) control of procurement and use of byproduct material; (ii) completion of safety evaluations of proposed uses of byproduct material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and (iii) review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with 10 CFR 33.13(c)(3)(ii) prior to use of the byproduct material, as evidenced by the following six examples:

- (1) When one authorized user (AU) left the University of Wyoming (UW), their radioactive material was left in place on the UW main campus and their permit was transferred to another individual. The permit transfer was made by the radiation safety officer (RSO) without a safety evaluation, review of the training and experience of the new individual, or review and approval of the permitting action by the radiation safety committee (RSC). The RSO issued a new permit for the individual without specifying the form of licensed material authorized, the permit expiration date, or the location of use/storage of the licensed material.
- (2) Multiple permits that were approved by the RSC failed to specify the authorized use(s) of the approved licensed materials. For example, one permit stated that the AU was authorized to receive, possess, and use americium-241 (Am-241) sealed sources but failed to specify that the Am-241 authorization was limited to the possession and use of a specific manufacturer and model of portable nuclear gauging device. The permit also failed to specify that the licensed material could be used at temporary job sites in NRC jurisdiction.

Enclosure

- (3) One permit, which expired in July 2014, was for an AU with a portable nuclear gauging device containing an Am-241 sealed source. The AU left UW in 2018 and the licensed material was moved to storage in the regulated materials management center under the control of the RSO. Although the licensee's permit list indicated that the permit status was inactive, the AU was still listed in the licensee's sealed source inventory as an active user for the specific portable nuclear gauging device. Although the portable nuclear gauging device had been transferred to the RSO, the transfer was not reviewed or approved by the RSC and the RSO's permit was not amended to include authorization for the transferred material.
  - (4) One permit authorized the possession and use of lead-205, uranium-233, uranium-234, and uranium-235. In 2009, an AU requested that radium-226 be added to the permit. The RSC failed to update the permit to authorize the possession and use of radium-226. Although not authorized on the permit, the AU, who is the chairman of the RSC, possessed, used, and stored radium-226. The RSO also failed to record the AU's possession of radium-226 in the licensee's inventory, which is necessary to establish compliance with the maximum possession limits of the NRC license.
  - (5) The RSO's permit failed to specify the authorized use(s) of licensed materials, which included storage and instrument calibration. The permit contained three listings for Am-241, but only one listing provided a maximum activity in millicuries. The other two entries provided numerical values but no unit of activity to establish the maximum activity authorized. One of the authorized use locations on the permit was Wyoming Hall 202, but the AU had moved out of that location in February 2020 and no longer possessed or used licensed materials at that location. The RSO's permit authorized the possession of quantities of licensed materials in excess of that authorized in the NRC license. For example, the RSO's permit authorized the possession of 1.4 curies of cesium-137, whereas the NRC license only authorized the possession of 1.0 curie; the permit authorized the possession of 1.0 millicuries of plutonium-239, whereas the NRC license only authorized the possession of 10 microcuries; and the permit authorized the possession of 10 millicuries of thorium-230, whereas the NRC license only authorized the possession of 10 microcuries.
  - (6) The licensee did not develop, implement, or maintain written operating and emergency procedures for the use of its J.L. Shepherd & Associates Model 28-6 instrument calibrator, which was routinely used by the RSO to perform calibration of radiation survey instruments possessed and used by the licensee.
- B. 10 CFR 30.3(a) requires, in part, that no person shall own or possess byproduct material except as authorized in a specific license issued in accordance with the regulations in 10 CFR Chapter I.

License Conditions 6.B. to 9.B. of NRC license 49-09955-10, Amendment 48, dated January 14, 2020, authorized the possession and use of byproduct material with atomic numbers 84 through 96, in any chemical and/or physical form, 10 microcuries per radionuclide and 1 millicurie total, for research and development as defined in 10 CFR 30.4 and 10 CFR 70.4, including teaching and training of students; calibration and checking of the licensee's instruments.

License Conditions 6.D. through G. to 9.D. through G. of NRC license No. 49-09955-10, Amendment 48, dated January 14, 2020, authorized the possession and use of americium 241/beryllium, sealed sources, to be used in specified portable nuclear gauging devices.

Contrary to the above, on November 17, 2021, the licensee owned and possessed byproduct material that was not authorized in a specific license issued in accordance with the regulations in 10 CFR Chapter I. Specifically, the licensee possessed an approximately 18.4 millicurie Am-241 metal source, which was not authorized to be possessed under 6.B. to 9.B., or 6.D. through G. to 9.D. through G., of NRC license No. 49-09955-10, Amendment 48, dated January 14, 2020.

This is a Severity Level III Problem (Enforcement Policy Section 6.3.c).

- C. 10 CFR 20.1904(a) requires, in part, that the licensee shall ensure that each container of licensed material bears a durable, clearly visible label that must provide sufficient information (such as the radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment) to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures.

Contrary to the above, on November 17, 2021, the licensee failed to ensure that each container of licensed material bore a durable, clearly visible label that provided sufficient information (such as the radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment) to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures. Specifically, a container holding an approximately 18.4 millicurie Am-241 metal source did not have durable, clearly visible label that provided sufficient information (such as an estimate of the quantity of radioactivity, the date for which the activity is estimated, and radiation levels) to permit individuals handling or using the container, or working in the vicinity of the container, to take precautions to avoid or minimize exposures.

This is a Severity Level IV violation (Enforcement Policy Section 6.3.d).

The NRC has concluded that information regarding: (1) the reason for the violations; (2) the corrective actions that have been taken and the results achieved; and (3) the date when full compliance was achieved is already adequately addressed on the docket in your letter dated April 4, 2022, and NRC Inspection Report 030-01176/2021-001. However, if the description therein does not accurately reflect your position or your corrective actions, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 within 30 days of the date of the letter transmitting this Notice of Violation. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-22-001," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 1600 East Lamar Blvd., Arlington, Texas 76011-4511, and email it to [R4Enforcement@nrc.gov](mailto:R4Enforcement@nrc.gov).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

In accordance with 10 CFR 19.11, you are required to post this Notice within 2 working days of receipt.

Dated this 17<sup>th</sup> day of May 2022