



## Materials Inspection Report

<b>1. Licensee/Location Inspected:</b>  The Curators of the University of Missouri 26 Arnold B. Grobman Dr University of Missouri - St. Louis Facilities St. Louis, MO 63121-4400  <b>Report Number(s)</b> 2023001	<b>2. NRC/Regional Office</b>  Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352
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<b>3. Docket Number(s)</b> 030-32694	<b>4. License Number(s)</b> 24-00513-38	<b>5. Date(s) of Inspection</b> May 19, 2023
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**LICENSEE:**  
 The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

1. Based on the inspection findings, no violations were identified.

2. Previous violation(s) closed.

3. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements, and were assessed at Severity Level IV, in accordance with the NRC Enforcement Policy.

A. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy were satisfied.  
 (Non-cited violation(s) was/were discussed involving the following requirement(s))

B. The following violation(s) is/are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.  
 (Violations and Corrective Actions)

### Statement of Corrective Actions

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE AND DATE
LICENSEE'S REPRESENTATIVE		
NRC INSPECTOR	Zahid Sulaiman, Health Physicist	Zahid M. Sulaiman <small>Digitally signed by Zahid M. Sulaiman Date: 2023.05.26 14:24:21 -05'00'</small>
BRANCH CHIEF	Rhex Edwards, Chief, MIB	 <small>Digitally signed by Rhex A. Edwards Date: 2023.06.01 08:25:08 -05'00'</small>



### Materials Inspection Record

<b>1. Licensee Name:</b> The Curators of the University of Missouri		<b>2. Docket Number(s):</b> 030-32694		<b>3. License Number(s)</b> 24-00513-38	
<b>4. Report Number(s):</b> 2023001			<b>5. Date(s) of Inspection:</b> May 19, 2023		
<b>6. Inspector(s):</b> Zahid Sulaiman, Health Physicist		<b>7. Program Code(s):</b> 03620	<b>8. Priority:</b> 5	<b>9. Inspection Guidance Used:</b> 87126	
<b>10. Licensee Contact Name(s):</b> Rachel Henken, PhD, RSO		<b>11. Licensee E-mail Address:</b> Rachel.Henken@umsl.edu		<b>12. Licensee Telephone Number(s):</b> Work: 314-516-6367	
<b>13. Inspection Type:</b> <input checked="" type="checkbox"/> Routine <input checked="" type="checkbox"/> Announced <input type="checkbox"/> Non-Routine <input type="checkbox"/> Unannounced		<b>14. Locations Inspected:</b> <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Field Office <input type="checkbox"/> Temporary Job Site <input type="checkbox"/> Remote		<b>15. Next Inspection Date (MM/DD/YYYY):</b> 05/19/2028 <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Extended <input type="checkbox"/> Reduced <input type="checkbox"/> No change	
<b>16. Location(s) Inspected List:</b> 26 Arnold B. Grobman Dr University of Missouri - St. Louis Facilities St. Louis, MO 63121-4400					
<b>17. Scope and Observations:</b> <p>This was an announced routine inspection of an academic, research and development licensee authorized to use variety of radionuclide for metabolic labeling, used as tracer for isotope uptake studies by microorganism, in-vitro experiments, instrument calibration, and student instruction. The licensee had five authorized users (AUs) who were authorized to use millicurie quantities of licensed materials for non-human research studies. Currently, the licensee possessed carbon-14 (C-14) and tritium (H-3). The research laboratory (R-335) stored both C-14 &amp; H-3, and the lab at the molecular nano building (M-315) stored H-3. There are several other laboratories that are authorized to store or use byproduct materials that do not possess any materials.</p> <p style="text-align: center;"><b>Performance Observations</b></p> <p>The inspection consisted of interviews with select licensee personnel, review of select records, a tour of the research laboratories (S-467, S-402, M-315, R-335, &amp; R-437), package receipt and waste storage facility, and independent measurements. The inspector toured the laboratories to observe the condition, posting, and security of the radioactive materials. The inspector observed that materials were stored in a locked cabinet. The inspector interviewed the RSO and an authorized user (AU) who uses byproduct materials; all demonstrated adequate knowledge of radiation protection principles, licensee procedures, and NRC regulatory requirements. The inspector: (1) had the RSO demonstrate the survey instrument battery check, the use of the instrument, and package check-in procedure; (2) had the RSO demonstrate the inventory tracking system; (3) observed the RSO conduct a physical inventory of licensed material, and all the licensed material was accounted for; and (4) reviewed security of licensed materials and access to the laboratory. The licensee stored waste at the waste storage facility for decay-in-storage and disposed of waste to a licensed broker. The inspector reviewed the radioactive waste disposal manifest, dated 7/13/2022, to an authorized vendor.</p> <p>The inspector reviewed the following records: annual program audits conducted by a consultant, radiation safety training records (initial and annual refresher), spill procedures, package receipt, licensed materials inventory tracking database, records of licensed materials usage, dosimetry program, and waste disposal records with no issues noted.</p>					

**Materials Inspection Record (Continued)**

No violations of NRC requirements were identified as a result of this inspection.

Signature and Date - Branch Chief



Digitally signed by Rhex A. Edwards  
Date: 2023.06.01 08:24:45 -05'00'