



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
475 ALLENDALE ROAD – SUITE 102
KING OF PRUSSIA, PA 19406-1415

January 21, 2025

EA-24-068

Farley Davis, Manager, Environmental
Engineering and Occupational Health
National Aeronautics and Space Administration (NASA)
Marshall Space Flight Center (MSFC)
AS10
Huntsville, AL 35812

**SUBJECT: NOTICE OF VIOLATION - NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION (NASA) GEORGE C. MARSHALL SPACE FLIGHT CENTER
(MSFC); NRC INSPECTION REPORT NO. 030-03575/2024001**

Dear Farley Davis:

This letter refers to the reactive inspection conducted on March 12 – 13, 2024, at the National Aeronautics and Space Administration (NASA), George C. Marshall Space Flight Center (MSFC) in Huntsville, Alabama with continued in-office review through September 10, 2024. The purpose of the inspection was to review the circumstances and radiological impact associated with radioactive sources that were found to be leaking, which had the potential for the spread of contamination and elevated internal exposures, and the circumstances associated with non-radiation workers being granted unescorted access to a controlled radioactive materials area. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions in your license.

Based on the results of the inspection, the NRC staff identified one apparent violation (AV) of NRC requirements involving non-radiation workers being granted access to a laboratory where tritium sources were present in an unsecured fume hood. Title 10 of the Code of Federal Regulations (10 CFR) Part 20.1801 requires that licensees secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. NRC staff discussed this AV with David Thaxton, Manager Occupational Safety & Health and Anthony Williams, Radiation Safety Officer (RSO), during a telephonic exit meeting on September 10, 2024, and described the AV in NRC Inspection Report No. 030-03575/2024001 that was issued on September 18, 2024 ([ML24215A397](#))¹.

In the letter transmitting the inspection report, we informed you that the AV was being considered for escalated enforcement action and provided you with the opportunity to address

¹ Designation in parentheses refers to an Agency-wide Documents Access and Management System (ADAMS) accession number. Documents referenced in this letter are publicly available using the accession number in ADAMS.

the AV by either attending a pre-decisional enforcement conference or by providing a written response before we made our final enforcement decision. In a letter dated October 10, 2024 ([ML24292A102](#)), you provided a written response that described the actions taken and planned by NASA to address the AV, as described below.

Based on the information identified during the inspection and the information that you provided in your October 10, 2024, letter, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. As described above, the violation involved a group of non-radiation workers having keycard access to the tritium laboratory at the NASA MSFC when tritium sources were unsecured in the laboratory. The NRC considered the violation to be significant because the unsecured tritium sources could have been inadvertently handled by unauthorized and untrained individuals. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III (SL III).

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$9,000 is considered for a SL III violation. Because your facility has not been the subject of escalated enforcement actions within the last two 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 Enforcement Policy. The NRC staff determined that credit for corrective action is warranted. Namely, the RSO mandated that all licensed radioactive material (RAM) located in MSFC be secured in locked storage when not in use and that personnel who require access to the tritium laboratory and silicone production room for activities other than tritium research be trained as radiation workers. In addition, all tritium research operations have ceased at MSFC and the RSO is now the first-level approver to ensure that all individuals requesting access to rooms that store and use RAM have the appropriate radiation safety training and credentials prior to granting access.

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 SL III violation constitutes escalated enforcement action that may subject you to increased inspection effort.

The NRC has concluded that information regarding: (1) the reason for the violation; (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 NRC Inspection Report No. 030-03575/20240011 and in your letter dated October 10, 2024. 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," a copy of this letter, its enclosure, and your response, should you choose to provide one, will be made available electronically for Public inspection in the NRC Public Document Room and in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards 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, 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 withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (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). The NRC also includes significant enforcement actions on its Web site at <http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>.

If you have any questions concerning this matter, please contact Monica Ford of my staff at 610-337-5214 or Monica.Ford@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Lorson', with a stylized flourish at the end.

Raymond K. Lorson
Regional Administrator

Docket No. 03003575
License No. 01-06571-10

Enclosure: Notice of Violation

SUBJECT: NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
GEORGE C. MARSHALL SPACE FLIGHT CENTER (MSFC) - NRC
INSPECTION REPORT NO. 030-03575/2024001 DATED JANUARY 21, 2025

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X SUNSI Review		X Non-Sensitive (Safety) Sensitive (Security Addendum)		X Publicly Available (Safety) Non-Publicly Available (Security Addendum)				
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DATE	11/13/24	11/15/24	11/21/24	11/25/24	12/26/24	12/30/24	01/21/25	

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NOTICE OF VIOLATION

National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Huntsville, Alabama

Docket No.: 03003575
License No.: 01-06571-10
EA-24-068

During an NRC reactive inspection conducted on March 12-13, 2024, with continued in-office review through September 10, 2024, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 20.1801 states that the licensee shall secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas.

Contrary to the above, from December 2022 through February 2024, NASA did not secure from unauthorized removal or access licensed materials that were stored in a controlled or unrestricted area. Specifically, the licensee stored tritium sources inside a fume hood in an unsecured manner within a locked tritium laboratory. However, unauthorized personnel had keycard access to the laboratory and routinely worked in the room while the sources were unsecured.

This is a Severity Level III violation (Enforcement Policy 6.7.c.10(a))

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in NRC Inspection Report No. 030-03575/20240011 and in your letter dated October 10, 2024. Therefore, you are not required to respond to this Notice of Violation (Notice). However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, (EA-24-068)," 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, Region I, 475 Allendale Rd., Suite 102, King of Prussia, PA 19406 within 30 days of the date of the letter transmitting this Notice.

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, United States 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 Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 21st day of January, 2025