

1. LICENSEE/LOCATION INSPECTED: Hope College Physics Department 27 Grave Place Holland, Michigan 49423 REPORT NO.: 2022-001		2. NRC/REGIONAL OFFICE Region III U.S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, Illinois 60532	
3. DOCKET NUMBER 030-29444	4. LICENSE NUMBER 21-13583-01		5. DATE OF INSPECTION July 7, 2022

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 violations closed.

☐ 3. The violations, specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy to exercise discretion, were satisfied.

☐ Non-Cited Violation was/were discussed involving the following requirement(s) and Corrective Action(s):

☐ 4. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

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	Date
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Jason Dykert, Health Physicist	 Digitally signed by Jason C. Dykert Date: 2022.07.11 11:58:33 -04'00'	
BRANCH CHIEF	Michael Kunowski, Chief, MIB	 Digitally signed by Michael A. Kunowski Date: 2022.07.12 10:24:55 -05'00'	



Materials Inspection Record

1. Licensee Name: Hope College Physics Department		2. Docket Number(s): 030-29444		3. License Number(s) 21-13583-01	
4. Report Number(s): 2022-001			5. Date(s) of Inspection: July 7, 2022		
6. Inspector(s): Jason Dykert		7. Program Code(s): 22110		8. Priority: 3	9. Inspection Guidance Used: 87126
10. Licensee Contact Name(s): David Daugherty, RSO		11. Licensee E-mail Address: daugherty@hope.edu		12. Licensee Telephone Number(s): 616-395-7519	
13. Inspection Type: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Non-Routine <input type="checkbox"/> Initial <input type="checkbox"/> Unannounced		14. Locations Inspected: <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Field Office <input type="checkbox"/> Temporary Job Site <input type="checkbox"/> Remote		15. Next Inspection Date (MM/DD/YYYY): 07/07/2025 <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Extended <input type="checkbox"/> Reduced <input type="checkbox"/> No change	

16. Scope and Observations:

This was an announced routine inspection of Hope College Physics Department's academic research and development license. The licensee had one chemistry laboratory where one authorized user occasionally handled unsealed tritium for uptake studies. The licensee also had an ion beam particle accelerator that used a mixed isotope calibration source for its germanium detector and for other calibrations and experiments, as well as various generally licensed or exempt check sources and a neutron howitzer. The RSO and physics department head supervised access to the materials storage room where all sources were kept in secure storage, except for the tritium lab and a check source under vacuum.

The inspector observed a demonstration of a physical inventory and a leak test of the howitzer in the materials storage room, and a demonstration of isotopic analysis with the ion beam and germanium detector for a natural uranium sample. The lab and storage room were properly secured, labeled and adequate calibrated survey instrumentation was available for use. Dosimetry was utilized by all staff who worked around the labs or with materials, records did not indicate any unusual doses. Physical inventories and leak tests of sealed sources were conducted at regular six month intervals, survey instruments calibrated annually, and materials were signed out of the storage room when used. Materials authorized by License Condition 6.D had been returned to an authorized recipient many years ago; transfer records were reviewed with no issues noted. Independent surveys performed indicated that area postings and area survey records were adequate.

The chemistry lab had appropriate security and postings, utilization logs, ordering records, and disposal records for the unsealed tritium use; the records were reviewed with no issues noted. The RSO performed wipe tests with a liquid scintillation counter in the lab. Radiation Safety Committee meetings helped facilitate annual reviews of the radiation protection program.

The inspector requested a Task 8 package and the licensee's reporting to NMMSS was reviewed. The licensee's inventory was as reported.

No violations of significance were identified as a result of this inspection.