



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 6, 2024

Mr. Jerry Newhouse, Director
Reed Research Reactor
Reed College
3203 Southeast Woodstock Boulevard
Portland, OR 97202-8199

SUBJECT: REED COLLEGE – U.S. NUCLEAR REGULATORY COMMISSION SAFETY
INSPECTION REPORT NO. 050002886/2024201

Dear Mr. Newhouse:

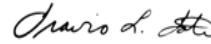
From March 25-27, 2024, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Reed Research Reactor facility. The enclosed report documents the inspection results, which were discussed on March 27, 2024, with you and members of your staff.

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 of your license. The inspectors reviewed selected procedures and records, observed various activities, and interviewed personnel. Based on the results of this inspection, no findings of significance were identified. No response to this letter is required.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390, "Public inspections, exemptions, requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC website at <https://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions concerning this inspection, please contact Juan Arellano at (301) 415-0477, or by email to Juan.Arellano@nrc.gov.

Sincerely,



Signed by Tate, Travis
on 05/06/24

Travis L. Tate, Chief
Non-Power Production and Utilization
Facility Oversight Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Docket No. 50-288
License No. R-112

Enclosure:
As stated

cc w/enclosure: GovDelivery Subscribers

SUBJECT: REED COLLEGE – U.S. NUCLEAR REGULATORY COMMISSION SAFETY
INSPECTION REPORT NO. 05000288/2024201 DATED: MAY 6, 2024

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DATE	04/16/2024	04/25/2024	05/06/2024

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U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Docket No.: 50-288

License No.: R-112

Report No.: 05000288/2024201

Licensee: Reed College

Facility: Reed Research Reactor

Location: Portland, Oregon

Dates: March 25 - 27, 2024

Inspectors: Juan Arellano
Necota Staples

Approved by: Travis L Tate, Chief
Non-Power Production and Utilization
Facility Oversight Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Enclosure

EXECUTIVE SUMMARY

Reed College
Research Reactor
Inspection Report No. 05000288/2024201

The primary focus of this routine announced inspection was the onsite review of selected aspects of the Reed College (the licensee) Class II research reactor facility program, including: (1) procedures; (2) health physics (HP); (3) design changes; (4) committees, audits and reviews; and (5) transportation activities. The U.S. Nuclear Regulatory Commission (NRC) staff determined that the licensee's program was acceptably directed toward the protection of public health and safety, and in compliance with NRC requirements.

Procedures

- The inspectors determined that procedures were controlled, maintained current, implemented, and followed in compliance with technical specifications (TS) requirements.

Health Physics

- The inspectors determined that the licensee's HP program was conducted in accordance with TS, procedural, and regulatory requirements.

Design Changes

- The inspectors determined that the design changes were conducted in accordance with TS and regulatory requirements.

Committees, Audits and Reviews

- The inspectors determined that the licensee's oversight programs were conducted in accordance with TS and procedural requirements.

Transportation

- The inspectors determined that no transportation activities took place since the last inspection.

REPORT DETAILS

Summary of Facility Status

The Reed College Class II 250 kilowatt TRIGA Mark-I research reactor is operated in support of education, research, reactor operator training, and periodic equipment surveillances. During the inspection, the reactor was not operated.

1. Procedures

a. Inspection Scope (Inspection Procedure (IP) 69001, Section 02.03)

The inspectors reviewed the following to ensure that the requirements of TS 6.4 were met:

- standard operating procedure (SOP) 1, "Reactor Operation," dated October 10, 2023
- SOP 35, "Fuel and Core," dated January 9, 2024
- SOP 12, "Lazy Susan," dated October 10, 2023
- SOP 61, "Procedure Writing and Use," dated January 11, 2024
- SOP 61B, "Document Locations," dated January 11, 2024
- SOP 42, "Hand & Shoe Monitor," dated January 11, 2024
- SOP 30, "Primary Cooling System and Reactor Pool," dated January 11, 2024
- SOP 32, "Ventilation," dated January 11, 2024
- SOP 34, "Control Rods," dated January 9, 2024
- SOP 20, "Startup Checklist," October 10, 2023

b. Observations and Findings

The inspectors observed that the licensee maintained written procedures covering the areas specified in TS 6.4. The inspectors observed the performance of a biweekly checklist and a startup checklist with the respective procedure in hand. The inspectors found that the procedures in use by the licensee were current, reviewed and approved as required by TS 6.4, able to be implemented as intended, and adhered to by reactor personnel.

c. Conclusion

The inspectors determined that procedures were controlled, maintained current, implemented, and followed in compliance with TS requirements.

2. Health Physics

a. Inspection Scope (IP 69001, Section 02.07)

The inspectors reviewed the following to ensure the licensee's HP program adheres to the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection against Radiation," and TS 3.5 and 4.5:

- “Reed Research Reactor Annual Report July 1, 2022 – June 30, 2023”
- “Reed Research Reactor Annual Report July 1, 2021 – June 30, 2022”
- Radiation Safety Officer certification certificates
- “Reed College Radioactive Materials Policy and Procedures Manual,” dated July 2023
- personnel radiation dosimetry reports
- environmental radiation dosimetry reports
- “Annual Radiation Safety Program Report July 1, 2021- June 30, 2022”
- “Annual Radiation Safety Program Report July 1, 2022- June 30, 2023”
- form 50B, “Large Source Wipes Form,” performed 2022 - present
- form 23B, “EHS Form 2: Radiation Survey Report,” performed 2023 - present
- SOP 23, “Biweekly Checklist,” dated April 22, 2022
- SOP 50, “Health Physics,” dated October 10, 2023
- SOP 52, “Environmental Sampling,” dated July 2022, 2015
- form 40D, “APM Calibration Form,” performed 2022 - present
- SOP 40, “Air Monitors,” dated July 29, 2019
- form 40B, “CAM Calibration Form,” performed 2023 - present
- form 40C, “GSM Calibration Form,” performed 2022 - present
- select form 41A, “RAM Calibration Form,” performed 2022 - present
- select survey instrument calibration records performed 2022 - present
- effluent release Excel sheet
- form 24A, “Bimonthly Checklist Form,” performed from 2022 - present
- select Form 52B, “Environmental Sampling Checklist,” performed 2022 - present
- reactor pool water radioactivity analysis performed 2022 - present
- “RAM Handling Test - Questions and Answers”
- radioactive material handling test results dated March 22, 2024
- select certifications of authorized user training
- form 40E, “DAC-hour Log,” performed 2023 - present

b. Observations and Findings

The inspectors found that practices regarding the use of dosimetry, radiation monitoring equipment, placement of radiological postings, posting of notices, use of protective clothing, and the handling and storing of radioactive material or contaminated equipment was in accordance with regulations and the licensee’s radiation protection program. The inspectors observed the performance of biweekly surveys and swipes. The inspectors also observed a channel test of the area radiation monitor and the portal monitor, and a channel check of the continuous air monitors. The inspectors found that the licensee met the regulatory requirements concerning radiological effluent releases and radiation survey, sampling, and monitoring. The inspectors also found that training was conducted for radiation workers and as low as reasonably achievable principles were implemented as required by licensee procedures.

c. Conclusion

The inspectors determined that the licensee’s HP program was conducted in accordance with TS, procedural, and regulatory requirements.

3. Design Changes

a. Inspection Scope (IP 69001, Section 02.08)

The inspectors reviewed the following to ensure that modifications to the facility were made in accordance with the requirements of 10 CFR 50.59, "Changes, tests and experiments," and TS:

- "Reed Research Reactor Annual Report July 1, 2022 – June 30, 2023"
- "Reed Research Reactor Annual Report July 1, 2021 – June 30, 2022"
- 50.59 screening evaluations from 2022 – present
- Reactor Operations Committee meeting minutes from April 2022 - present
- select biweekly checklist performed from 2022 – present
- 50.59 screen logs

b. Observations and Findings

The inspectors found that no 10 CFR 50.59 evaluations were performed since the last inspection. The inspectors found that the licensee has performed 10 CFR 50.59 screenings with information required by procedures. The inspectors found that there was a process for design changes to be reviewed and approved as required by TS.

c. Conclusion

The inspectors determined that design changes were conducted in accordance with TS and regulatory requirements.

4. Committees, Audits and Reviews

a. Inspection Scope (IP 69001, Section 02.09)

The inspectors reviewed the following to ensure that committees, audits, and reviews were conducted as required by the licensee's procedures and TS 6.2:

- Reactor Operations Committee meeting minutes from April 2022 - present
- safety review and audit records from 2022 - present
- "Reed Research Reactor Annual Report July 1, 2022 – June 30, 2023"
- "Reed Research Reactor Annual Report July 1, 2021 – June 30, 2022"

b. Observations and Findings

The inspectors found that the licensee's reactor oversight committee met and provided reviews and audits as required by the TS. The inspectors also found that problems identified from the licensee's required reviews and audits were resolved in accordance with the licensee's procedures and TS.

c. Conclusion

The inspectors determined that the licensee's oversight programs were conducted in accordance with TS and procedural requirements.

5. Transportation Activities

a. Inspection Scope (IP 86740)

The inspectors reviewed the following to ensure the licensee's program for transporting radioactive materials met NRC and Department of Transportation requirements:

- SOP 84, "Shipping Radioactive Materials," dated March 22, 2019
- SOP 54, "Radioactive Materials Handling and Disposal," dated September 19, 2018
- shipping certification certificates

b. Observations and Findings

The inspectors found that the licensee made no radioactive shipments since the last inspection. The inspectors found that the licensee has a program and procedures in place for shipping radioactive materials.

c. Conclusion

The inspectors determined that the program for shipping radioactive materials satisfied regulatory requirements.

6. Exit Interview

The inspection scope and results were summarized on March 27, 2024, with members of licensee management and staff. The inspectors described the areas inspected and discussed the inspection results.

PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel

J. Newhouse	Reactor Director
T. Ellis	Reactor Operations Manager
A. Sams	Radiation Safety Officer and Campus Environmental Director

INSPECTION PROCEDURES USED

IP 69001	Class II Non-Power Reactors
IP 86740	Inspection of Transportation Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None