

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-123/85002(DRP)

Docket No. 50-123

License No. R-79

Licensee: University of Missouri-Rolla

Facility Name: Rolla Research Reactor

Inspection Conducted: May 20-21, 1985

Inspectors: *K. R. Ridgway*
K. R. Ridgway

6/10/85
Date

E. R. Schweibinz

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Approved By: E. R. Schweibinz, Chief
Technical Support Staff

6-10-85
Date

Inspection Summary

Inspection on May 20-21, 1985 (Report No. 50-123/85002(DRP))

Areas Inspected: Routine, unannounced inspection of records, logs, and organization; review and audit functions; requalification training; procedures; surveillance and maintenance; fuel handling activities; emergency planning; and followup action relative to previous open inspection items. This inspection involved a total of 30 inspector-hours by two NRC inspectors.

Results: No items of noncompliance were identified in the areas inspected.

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DETAILS

1. Persons Contacted

- * A. Bolon, Director, UMR Reactor Facility
- * M. Straka, Reactor Manager
- * C. Barton, Electronics Technician-Senior Reactor Operator
- J. Williams, Laboratory Mechanic

* Indicates those present at the exit interview.

2. General

This inspection, which began at 8:20 A.M. on May 20, 1985, was conducted to examine the research reactor program at the University of Missouri-Rolla Reactor Facility. The facility was toured shortly after arrival. The general housekeeping of the facility was found to be satisfactory.

Amendment No.7 to Facility License No. R-79, issued January 14, 1985, is a complete renewal of the license with an expiration date of November 20, 1989. On December 14, 1984, the licensee had requested a ten year extension of the license period from November 20, 1989 to November 20, 1999 and this was approved by License Amendment No. 8, issued April 6, 1985. The Technical Specifications (TS) have been entirely revised.

3. Organization, Logs, and Records

The facility organization was reviewed and verified to be consistent with the Technical Specifications and/or Safety Analysis Report (SAR). The minimum staffing requirements were verified to be present during reactor operation, and fuel handling or refueling operations.

The reactor logs and records were reviewed to verify that:

- a. Records were available for inspection.
- b. Required entries were made.
- c. Significant problems or incidents were documented.
- d. The facility was being maintained properly.

Dr. Peter Magrath has replaced Dr. J. Olson as President of the University and the University is seeking a replacement for Chancellor J. Marchello. One licensed Senior Operator and one Operator have left since the last inspection (Inspection Report 50-123/84001). This leaves the facility with three Senior Operators and one Operator in training.

No items of noncompliance or deviations were identified.

4. Reviews and Audits

The licensee's review and audit program records were examined by the inspector to verify that:

- a. Reviews of facility changes, operating and maintenance procedures, design changes, and unreviewed experiments had been conducted by a safety review committee as required by Technical Specifications or SAR.
- b. That the review committee and/or subcommittees were composed of qualified members and that quorum requirements and frequency of meetings had been met.
- c. Required safety audits had been conducted in accordance with Technical Specification requirements and that any identified problems were resolved.

A review of the Radiation Safety Committee meeting minutes indicated the committee has met all the requirements.

The licensee has established a cooperative audit interchange with the Columbia Research Reactor; personnel from Columbia audit Rolla and conversely, Rolla audits Columbia. This interchange appears to have improved the exchange of ideas, improved the administration and records of both safety programs as well as enhancing the knowledge and experience of the individual participants. Licensed operators from the Columbia Reactor had audited the facility on January 10, 1984, June 18, 1984, and February 11, 1985. Several minor deficiencies were reported and several recommendations included in the audit report were under consideration.

No items of noncompliance were identified.

5. Requalification Training

The inspector reviewed procedures, logs, and training records; and interviewed personnel to verify that the requalification training program was being carried out in conformance with the facility's approved plan and NRC regulations. A requalification examination had been conducted on August 28, 1984, with a followup examination on September 21, 1984.

The inspectors noted that a senior operator (SO) had made the performance evaluation on the two other SO's; however, he was neither the Reactor Supervisor nor the Training Coordinator as specified in the approved Requalification Training Program of March 11, 1981. The program needs to be updated to cover this and bring position titles into agreement with the new license. This will be carried as an open inspection item, 50-123/85002-01.

No items of noncompliance were identified.

6. Procedures

The inspector reviewed the licensee's procedures to determine if procedures were issued, reviewed, changed or updated, and approved in accordance with Technical Specifications and SAR requirements. This review also verified:

- a. That procedure content was adequate to safely operate, refuel and maintain the facility.
- b. That responsibilities were clearly defined.
- c. That required checklists and forms were used.

The inspector determined that the required procedures were available and were being used.

A significant effort has been made to update the procedure system on a word processor. The health physics procedures have been updated but not yet put into the standard format, see Inspection Report No. 50-123/85001. All procedures that were made following a previous startup event (Inspection Report No. 50-123/84001) were reviewed and found to be acceptable.

The inspector noted that since the new TS have been issued at least one procedure reference to the TS was incorrect and that some surveillance procedures did not include the new limits or references. The licensee had made up a new equipment discrepancy form but had not developed a procedure to implement it. The procedure system does not yet include a procedure for handling facility modifications and several modifications have been proposed. These procedure omissions were brought to the attention of the licensee.

No items of noncompliance were identified.

7. Surveillance

The inspector reviewed procedures, surveillance test schedules, and test records and discussed the surveillance program with responsible personnel to verify:

- a. That when necessary, procedures were available and adequate to perform tests.
- b. That tests were completed within the required time schedule.
- c. Test records were available.

The new TS contain several new surveillance requirements such as; annual thermal power calculation, rod drop timing after work on rods or magnets or inspection of rods, and operability checks of equipment after maintenance

or replacement. The licensee has developed a procedure for the thermal power calculation. The inspector discussed other procedure modifications that might help prevent overlooking required surveillances and testing.

The licensee's surveillance program appeared to be satisfactory.

No items of noncompliance were identified.

8. Experiments

The inspector verified by reviewing experiment records and other reactor logs that:

- a. Experiments were conducted using approved procedures and under approved reactor conditions.
- b. New experiments or changes in experiments were properly reviewed and approved.
- c. The experiments did not involve an unreviewed safety question, i.e., 10 CFR 50.59 requirements regarding experiments were met.
- d. Experiments involving potential hazards or reactivity changes were identified in procedures.
- e. Reactivity limits were not or could not have been exceeded during an experiment. The inspector reviewed the one experiment approved since the last inspection.

No items of noncompliance were identified.

9. Emergency Planning

The inspectors reviewed records and interviewed personnel to determine that the approved emergency plan was being carried out by verifying:

- a. That procedures were in place and required records were being kept.
- b. That required drills were conducted and evaluated.
- c. That required training was conducted.

The licensee's Emergency Plan was approved by the Division of Licensing on August 27, 1984, and had been implemented by the licensee on December 20, 1984. One drill had been conducted on the same date. The inspectors verified that the emergency kit located in the Physics Building was controlled and contained the required equipment including calibrated radiation detection instruments.

No items of noncompliance were identified.

10. Followup on Previous Open Inspection Items

- a. (Closed) Open Item (50-123/81001-03) Updating procedures to new license application. See Paragraph 6.
- b. (Closed) Open Item (50-123/81001-04) Semiannual Surveillance Procedure Out of Date. The procedure Semiannual Calibration of Log N and Period Channel B001-0164C (SOP 813) had been revised on February 2, 1984 to include the reconnection of the CIC signal cable after completing the calibration. SOP 800, Semiannual Checklist, had been updated on March 26, 1985 to include changes in instrumentation.
- c. (Closed) Open Item (50-123/83002-03) Radiation Protection Procedures Need Updating. The licensee had revised these procedures on May 9, 1984, and further additional revisions had been completed and reformatting was essentially complete.

11. Review of Periodic and Special Reports

The inspectors reviewed the following reports for timeliness of submittal and adequacy of information submitted:

- a. Progress Report Nuclear Reactor Facility for 1983-1984.
- b. Progress Report Nuclear Reactor Facility for 1984-1985.

No items of noncompliance were identified.

12. Exit Interview

The inspectors met with the licensee representatives (listed in paragraph 1) at the conclusion of the inspection on May 21, 1985, and summarized the scope and findings of the inspection. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any documents or processes as proprietary.

The licensee acknowledged the following remarks by the inspectors at the meeting.

- a. The need for a review of procedures to assure that references and limits of the new TS are correct (Paragraph 6).
- b. The new requirements of TS in the areas of procedures, surveillance, and verification of operability of equipment following surveillance or maintenance (Paragraph 7).
- c. The need for a facility change procedure and checklist.