

APPENDIX A

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-131/89-01

Operating License: R-57

Docket: 50-131

Licensee: Omaha Veterans Administration
Medical Center (OVAMC)
4101 Woolworth Avenue
Omaha, Nebraska 68105

Facility Name: OVAMC TRIGA Research Reactor

Inspection At: OVAMC Site, Omaha, Nebraska

Inspection Conducted: October 16-18, 1989

Inspector:

Lorenz Wilborn
L. Wilborn, Radiation Specialist, Facilities
Radiological Protection Section

11/8/89
Date

Approved:

B. Murray
B. Murray, Chief, Facilities Radiological
Protection Section

11/9/89
Date

Inspection Summary

Inspection Conducted October 16-18, 1989 (Report 50-131/89-01)

Areas Inspected: Routine, unannounced inspection of the licensee's program including: reactor operations, radiological controls, emergency plans, security/safeguards, audits/reviews, and procedures.

Results: The inspector determined that the licensee's overall performance had been adequate. No significant problems were identified in the areas inspected. The reactor program is a small program with the reactor supervisor responsible for most activities associated with operating the facility. The hospital director provides the necessary oversight and support to ensure that reactor activities are performed in a proper manner. No significant program or facility changes have occurred since the previous inspection.

Within the areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

CVAMC

- *R. L. Turcotte, Hospital Director
- *A. J. Blotzky, Reactor Supervisor, Senior Reactor Operator
- J. P. Claassen, Senior Reactor Operator Trainee

The NRC inspector also interviewed several other licensee employees including operations, security, and administrative personnel.

*Denotes those present during the exit interview on October 14, 1989.

2. Followup on Previously Identified Inspection Findings (92701)

(Closed) Violation (131/8701-01): Failure to Conduct Operator Requalification Program - This violation was identified in NRC Inspection Report 50-131/87-01 and involved the failure to conduct an operator requalification program which, as a minimum, meets the requirements of Appendix A of 10 CFR Part 55. The licensee had completed the operator lecture series and placed a record in the training requalification file. The manipulation of reactor controls had been completed and documented. On-the-job training had been completed to demonstrate understanding and operation of all apparatus and knowledge of operating procedures. Facility design, procedures, and facility changes had been reviewed as they occurred. Abnormal and emergency procedures had been reviewed on a quarterly basis and documented. The monthly checklist for documenting observation and evaluation of the performance of the senior reactor operator was documented monthly. A written requalification examination had been prepared.

(Closed) Violation (131/8701-02): Failure to Measure the pH of the Primary Coolant Water at the Required Frequency - This violation was identified in NRC Inspection Report 50-131/87-01 and involved the failure to measure the pH of the primary coolant water at least once every 2 weeks as required by Section 4.4 of the Technical Specifications (TS). The licensee had revised the standard operating procedure to reflect that the pH will be measured weekly and an entry will be made in the reactor log. The inspector noted weekly entries of pH measurements in the reactor log.

3. Organization

The inspector reviewed the licensee's organization to determine agreement with TS 6.2, 6.3, and 6.4. The facility organization was reviewed and verified to be consistent with the TS. The minimum staffing requirements were verified to be present during reactor operation, fuel handling, and refueling operations.

During this inspection period, the licensee had terminated one senior reactor operator (SRO), and added a SRO trainee to the staff who is acquiring the experience and training necessary to become a SRO. The licensee had scheduled this individual for the NRC license examination during December 1989.

No violations or deviations were identified.

4. Reactor Operations

a. Facility Status

The inspector reviewed the facility including design changes to determine compliance with TS 5.1, 5.2, 5.3, 5.5, and 5.7. An active program continues to exist concerning operation of the reactor. The reactor is mainly used to support research work performed by other departments at the hospital and the University of Nebraska. Additionally, the reactor is used for training Fort Calhoun power reactor operators. The reactor functions as a neutron source for neutron activation analysis of biological samples and for hot atom chemistry research. When in use, the reactor operates at a steady-state power level of 17.5 kW. The reactor operated 1003 hours in 1987, 1262 hours in 1988, and 656 hours in 1989 for the period ending October 16, 1989.

No violations or deviations were identified.

b. Operation Logs and Records

The inspector reviewed the operation logs and records and verified that they contained the required entries, including significant problems and maintenance activities that may affect reactor safety, which indicated the facility was being properly maintained in accordance with the TS and the administrative procedures that govern the activities. The inspector also verified that records were available for inspection.

No violations or deviations were identified.

c. Surveillances

The inspector reviewed the surveillance results to determine agreement with License Condition 2.C and TS 2.1, 3.1, 3.3.1, 3.3.2, 3.8, 4.0, 4.2.1, 4.2.2, and 4.4. The inspector discussed the surveillance program with responsible personnel and reviewed surveillance test records and test schedules, and determined that surveillances had been completed within the required time schedule. The inspector noted that procedures were available to support the surveillances and that test records were completed and available.

No violations or deviations were identified.

d. Experiments

The inspector reviewed the experiment program to determine compliance with TS 3.6, 3.7, 4.2.5, and 6.8. The inspector reviewed experiment records and determined that proposed experiments were properly reviewed, prepared, conducted, and documented. The licensee's administrative controls with respect to experiments, experimental procedures, and apparatus were sufficient to ensure compliance with TS experiment limitations. The inspector found that no new experiments were proposed/performed since the previous inspection.

No violations or deviations were identified.

e. Fuel Handling

The inspector reviewed fuel handling activities to determine agreement with TS 4.3. The inspector reviewed the licensee's facility fuel handling program and noted that the only fuel handling during the period of this inspection was for quarterly fuel element inspections (four elements each quarter). The inspector determined that those fuel handling activities were performed in accordance with the licensee's approved procedures and the TS.

No violations or deviations were identified.

f. Requalification Training

The inspector reviewed the licensee's operator requalification activities to determine agreement with the NRC-approved program dated May 10, 1979. The inspector reviewed training records of the current SRO and the SRO who terminated employment with the licensee about October 1988, and determined that the licensee's reactor operator requalification training program was being conducted in accordance with the approved reactor operator requalification program.

The inspector interviewed the SRO trainee and noted the trainee was scheduled for the NRC SRO examination in December 1989.

No violations or deviations were identified.

5. Radiological Controls

The inspector reviewed the licensee's program to determine agreement with License Conditions 1.I, and 2.B.3; 10 CFR Parts 19 and 20; and TS 3.4, 3.5, 4.2.3, 4.2.4, 5.4, and 5.6. The inspector reviewed records, interviewed personnel, made observations, and conducted independent surveys and determined that radiological controls were being conducted in accordance with NRC requirements.

The areas inspected included:

- (1) Records of exposure;
- (2) Posting and labeling of restricted areas and radioactive materials;
- (3) Control of irradiated sources;
- (4) Calibration of radiation detection instruments;
- (5) Radiation and contamination surveys;
- (6) Records of gaseous effluents; and
- (7) Radiation protection training.

No violations or deviations were identified.

6. Radwaste Management

The inspector reviewed radwaste activities to determine compliance with 10 CFR 20, Appendix B, and 10 CFR 20.301 and 20.303. The inspector reviewed the licensee's records for solid waste and liquid and airborne effluents to verify compliance with the TS for releases to the environs beyond the control of the licensee. The inspector determined that there had been no solid waste or liquid effluents released to the environs beyond the control of the licensee. The inspector noted that the airborne effluents from the reactor consisted primarily of Argon-41. In accordance with the TS annual reporting requirements, the licensee reported the Argon-41 equivalent releases for periods January 1 through December 31, 1987, and January 1 through December 31, 1988, as less than 0.1 curies each. The inspector also noted that radioactive wastes can be collected and disposed of under the OVAMC byproduct material license, if necessary.

No violations or deviations were identified.

7. Transportation

The inspector reviewed radioactive materials transportation activities to determine compliance with 10 CFR 71. There had been no shipments during the period covered by this inspection.

No violations or deviations were identified.

8. Emergency Planning

The inspector reviewed the licensee's emergency program to determine compliance with the emergency plan dated October 3, 1984. The inspector reviewed the licensee's emergency plan and discussed the requirements in the plan with licensee personnel. The inspector determined that the requirements such as procedures, training, biennial area alert exercises (conducted during the period of this inspection on May 31, 1988), emergency equipment, and testing of alarms, had been conducted. Changes to the emergency plan had been reviewed by the Reactor Safeguards Committee (RSC) who determined that the changes did not constitute an unresolved safety question or decrease the effectiveness of the plan.

No violations or deviations were identified.

9. Physical Security/Safeguards

a. Security

The inspector reviewed the licensee's physical security program to determine compliance with the physical security plan (PSP) dated May 10, 1979. The inspector reviewed the implementation of the licensee's PSP through discussions with appropriate facility personnel, visual examination, and review of records. The inspector noted that the PSP had been well implemented, responsibilities and response requirements were defined clearly and understood, and appropriate test procedures were being used. The inspector also noted that several changes had been made to the PSP. These changes had been reviewed by the RSC who determined that the changes did not constitute an unreviewed safety question or decrease the effectiveness of the plan.

No violations or deviations were identified.

b. Safeguards

The inspector reviewed safeguards activities to determine agreement with License Conditions 2.B.2 and 2.C.3; 10 CFR 73 and 10 CFR 70 requirements. The inspector reviewed the licensee's accountability records, material status reports, and procedures to control and account for the special nuclear material and determined that the licensee had implemented an adequate program to ensure that physical and administrative control of special nuclear material is maintained.

The inspector discussed safeguards events with licensee personnel and noted that the licensee had neither experienced a case in which he had to conduct a trace investigation for lost or unaccounted for shipments, nor an incident where an attempt had been made, or believe to have been made, to commit a theft or unlawful diversion of special nuclear material.

No violations or deviations were identified.

10. Committees, Audits, and Reviews:

The inspector reviewed the licensee program to determine compliance with TS 6.5.1, 6.5.2, 6.5.3, and 8.6. The inspector reviewed records for the licensee's review and audit program and verified that reviews of facility changes, operating and maintenance procedures, design changes, and unreviewed experiments had been conducted by the RSC as required by the TS.

Annual audits were conducted in June of 1987, 1988, and 1989 by a RCS member who was not a part of the reactor staff. The results of these audits were documented by letters to the RSC.

The RSC met on a quarterly basis during the period of this inspection (April 18, 1987, through October 18, 1989) as required by the TS. Each RSC meeting concluded with an inspection of the logs and a facility tour.

No violations or deviations were identified.

11. Procedures

The inspector reviewed procedures to determine compliance with TS 6.6.7. The inspector reviewed the licensee's procedures and determined that the procedures had been issued, reviewed, changed or updated, and approved in accordance with TS requirements. The procedure content appeared adequate to accomplish the intended purpose in relation to safely operating and maintaining the facility.

No violations or deviations were identified.

12. Reports, Notification, and Records

The inspector reviewed reports, notifications, and records to determine agreement with TS 6.5.4, 6.9, 6.9.1.2, 6.9.2, and 6.10. The inspector noted that the licensee had prepared and distributed reports, notifications, and records in accordance with the TS requirements.

No violations or deviations were identified.

13. Exit Interview

The inspector met with the licensee's representatives denoted in paragraph 1 at the conclusion of the inspection on October 18, 1989, and summarized the scope and findings of the inspection as presented in this report. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the inspector during the inspection.