

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Inspection Report: 50-407/95-01

Operating License: R-126

Licensee: University of Utah
Salt Lake City, Utah 84112

Facility Name: Nuclear Engineering Laboratory

Inspection At: University of Utah, Merrill Engineering Building
Salt Lake City, Utah

Inspection Conducted: December 11-15, 1995

Inspector: Phillip M. Qualls, Reactor Inspector, Engineering Branch

Approved:

Blaine Murray
Blaine Murray, Chief, Plant Support Branch
Division of Reactor Safety

1/23/96
Date

Inspection Summary

Areas Inspected: Routine, announced inspection of the licensee's organization and management controls, qualifications and training, special nuclear material and accountability, reviews and audits, logs and records, procedures, reactor operations, surveillances, experiments, transportation of radioactive materials, radiation protection, radiological effluents and environmental monitoring, emergency preparedness, physical security, and reports and notifications.

Results:

- The licensee's organization and staffing met requirements. All organizational positions were filled with qualified personnel. Supervisory controls and reactor implementing responsibilities were implemented as required. The reactor safety committee membership met requirements and performed its required duties (Section 1).

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- The nuclear engineering laboratory maintained a well-qualified staff. An approved requalification training program for reactor operators was being implemented. The nuclear engineering laboratory's orientation and radiation safety training programs was well implemented (Section 2).
- The inventory and control of special nuclear material on site met the conditions of the TRIGA operating license (Section 3).
- Comprehensive audits and required safety reviews were performed by the reactor safety committee (Section 4).
- Detailed TRIGA reactor maintenance and operations logs were well maintained (Section 5).
- Well written approved procedures, checklists, and data forms were maintained for reactor safety-related operational and surveillance activities (Section 6).
- The TRIGA reactor was being operated in accordance with operating license and Technical Specification requirements (Section 7).
- The licensee had performed all Technical Specification surveillance requirements (Section 8).
- Reactor experiments had been reviewed and authorized in accordance with Technical Specification requirements (Section 9).
- Shipment of special nuclear material met applicable transportation and regulatory requirements (Section 10).
- The radiation protection program had been effectively implemented (Section 11).
- No radioactive liquid waste had been released from the reactor facility. Radioactive gaseous releases from the reactor facility met Technical Specification requirements (Section 12). An environmental monitoring program was maintained around the reactor facility (Section 12).
- The licensee's emergency equipment, instrumentation, and supplies were maintained in a state of operational readiness. Licensee staff and support organization personnel had been trained and demonstrated knowledge of the emergency plan and emergency procedures (Section 13).
- The licensee was implementing an approved physical security plan (Section 14).
- Annual operating reports for the TRIGA reactor included the required information (Section 15).

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Summary of Inspection Findings:

- Open Item 407/9001-03 was closed (Section 16.1).
- Open Item 407/9301-01 was closed (Section 16.2).

Attachments:

- Attachment 1 - Persons Contacted and Exit Meeting
- Attachment 2 - Physical Security Plan - PROPRIETARY INFORMATION

DETAILS

1 ORGANIZATION AND MANAGEMENT CONTROLS (40750)

The inspector reviewed the organization, management controls, and staffing to determine agreement with the commitments in the TRIGA safety evaluation report, NUREG-1096, and compliance with Technical Specifications 6.1, 6.2, 6.5.1, 6.5.2, and 6.5.3.

The inspector verified that the organizational structure of the nuclear engineering laboratory for the reactor operations was as defined in the safety evaluation report and Technical Specifications. The nuclear engineering laboratory staff assignments of responsibilities were described in the operations manual. All organizational positions were filled with qualified personnel. The inspector verified that the supervisory control and reactor implementing responsibilities were being implemented in accordance with safety evaluation report and Technical Specifications.

The inspector reviewed the reactor safety committee's charter and membership. The reactor safety committee membership was in accordance with the charter and Technical Specification requirements. The inspector verified that selected reactor safety committee meeting minutes were being conducted at least quarterly during 1994 and 1995 in accordance with the charter and Technical Specification requirements. The reactor safety committee meeting agendas and minutes indicated that the reactor safety committee performed the required reviews.

2 QUALIFICATIONS AND TRAINING (40750)

The inspector reviewed the training and qualification programs for nuclear engineering laboratory personnel and experimenters working in the nuclear engineering laboratory to determine and compliance with Technical Specifications 6.3, 6.4, and 6.5.2 and 10 CFR 19.12 and 55.

The inspector reviewed the education and experience of the present nuclear engineering laboratory staff and reactor safety committee members and determined that all of the nuclear engineering laboratory staff and the reactor safety committee members met the qualifications required in the Technical Specifications.

The inspector reviewed the reactor operator requalification program dated March 4, 1994. It was noted that the reactor operator requalification program had been approved by the NRC, and it conformed to the requirements of 10 CFR Part 55, Appendix A. The reactor operator training manual was reviewed and found to be satisfactory to implement the TRIGA reactor operator requalification program. Senior Reactor Operator requalification examinations for 1995 were reviewed and the completed examinations were included in the

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training records for the TRIGA reactor operators. All operators at the facility had senior reactor operator licenses at the time of this inspection.

The inspector reviewed the nuclear engineering laboratory orientation and radiation safety training programs given to visitors, experimenters, and students who work in the nuclear engineering laboratory and reactor facility. The orientation and radiation safety training materials and examinations were reviewed. The orientation and radiation safety training conducted by the nuclear engineering laboratory staff and the university's radiological health department met the requirements of 10 CFR 19.12 and included material from Regulatory Guides 8.13 and 8.29.

3 LICENSEE CONDITIONS AND SPECIAL NUCLEAR MATERIAL CONTROL AND ACCOUNTABILITY (85102)

The licensee's special nuclear material and accountability program was reviewed to determine compliance with 10 CFR Part 70 and TRIGA Operating License R-126.

The inspector reviewed the storage and inventory of the licensee's special nuclear material for compliance with the TRIGA Reactor Operating License R-126, Amendment 5, dated April 17, 1985. License condition 2.3.4.2 authorizes the possession of a 5 curie (Ci) sealed plutonium-beryllium neutron startup source and up to 4.9 kilograms of uranium-235. The inspector determined that the licensee possessed 105 grams of plutonium-239 which is equivalent to approximately 6.43 Ci. This amount of plutonium-239 was divided between a 5 Ci sealed plutonium-beryllium neutron startup source stored in the TRIGA reactor tank and a plutonium-239 foil of approximately 1.5 Ci stored in Room 1205-B of the nuclear engineering laboratory. The plutonium-239 foils were licensed under the university's radioactive materials license issued by the State of Utah. The inspector performed an inventory of the TRIGA fuel on site. It was determined that the licensee had 5 spent fuel elements in the spent fuel storage wells, 57 fuel elements in the fuel storage racks at the bottom and on the inside perimeter of the reactor tank, and 77 fuel elements in the reactor core. Based on approximately 34 grams of uranium-235 per fuel element, the licensee's TRIGA fuel contained approximately 4.73 kilograms of uranium-235 which was less than 4.9 kilograms of uranium-235 allowed by the TRIGA operating license.

4 REVIEWS AND AUDITS (40750)

The inspector reviewed the review and audit programs conducted by the reactor safety committee to determine agreement with commitments in Section 13.4 of the TRIGA Safety Evaluation Report, and compliance with Technical Specifications 6.5.4, 6.5.5, and 6.5.6.

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The inspector determined that the reactor safety committee audits of operations and maintenance activities and radiation safety were being performed semiannually as required by the Technical Specifications. Audit reports generated during 1994 and 1995 were reviewed for scope to ensure thoroughness of program evaluation. The audits included reviews of the reactor maintenance and operations logs; procedures for reactor operations and maintenance; instrument calibration procedures; reactor operating, testing, and surveillance records; experiment authorizations; reactor modification authorizations; unusual or abnormal events; and radiation safety. The reactor safety committee audits met the Technical Specification audit requirements.

Agendas and minutes of the reactor safety committee meetings held during 1994 and 1995 were reviewed. The reactor safety committee meeting minutes indicated that the required reactor safety committee reviews were completed. The inspector reviewed the nuclear engineering laboratory annual schedule which was developed to schedule and track the required administrative, training, operations, surveillance, and instrument calibration activities including reviews, audits, and reports and determined that the nuclear engineering laboratory and reactor safety committee required activities were scheduled in accordance with Technical Specification requirements. The audit findings were discussed at each reactor safety committee meeting and remained on the reactor safety committee meeting agenda until resolved and closed during a reactor safety committee meeting and so documented in the reactor safety committee meeting minutes.

5 LOGS AND RECORDS (40750)

The inspector reviewed the licensee's program for documentation of the reactor operations and maintenance activities to determine compliance with Technical Specification 6.9.

The inspector reviewed the documentation of TRIGA reactor maintenance and operations for 1994 and 1995. The logs and records documenting TRIGA reactor maintenance, routine operation, fuel inventory and storage, fuel inspection, experiment authorization and performance, reactor startup checklists, instrument checks and calibrations, radiation surveys, and personnel radiation exposure were reviewed. The inspector determined that the annual TRIGA reactor operating reports and the maintenance and operations history logs and records adequately documented reactor maintenance and operations activities.

6 PROCEDURES (40750)

The inspector reviewed the nuclear engineering laboratory operations manual and reactor operating procedures to determine agreement with commitments in Section 4.7 of the TRIGA Safety Evaluation Report, and compliance with Technical Specification 6.8.

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The licensee had written and approved procedures, checklists, and data forms for safety-related operational and surveillance activities that included reactor startup, operation, and shutdown; maintenance; and checks and calibration of equipment and instrumentation. A review of selected procedures and data forms, revised and approved since the previous NRC inspection in September 1990, indicated that progress had been made in developing and updating programmatic procedures. The procedures were reviewed by the reactor safety committee and the reviews were documented in the quarterly reactor safety committee meeting minutes.

7 REACTOR OPERATIONS (40750)

The inspector observed TRIGA reactor operations and reviewed logs and records to determine compliance with Technical Specifications 2.0, 3.0, and 5.0.

The inspector inspected the licensee's reactor facilities; reviewed operations and maintenance logs and records, annual reports, and records of experiment performance; and observed the startup and operation of the reactor at low power to verify reactor protection systems operation. The licensee stated that the reactor was routinely operated approximately 10 hours per week for the purpose of laboratory instruction, reactor system tests, reactor surveillances, and sample irradiations. The licensee initiated startup of the reactor on December 14, 1995, and operated the reactor for approximately 30 minutes at 90 kilowatts steady-state power. The inspector observed that the operator properly used reactor startup and shutdown checklists and followed appropriate operating procedures. All logs were properly taken and necessary data recorded.

The inspector reviewed the reactor's operations logs and records to determine compliance with the operating license and Technical Specification requirements. The licensee had operated the reactor at thermal power levels less than 100 kilowatts in compliance with Operating License Condition 2.C.(1) and Technical Specification 3.1. The reactor safety limits for fuel element temperature were verified to be in compliance with Technical Specifications 2.1 and 2.2.

Technical Specification limiting conditions for operation were reviewed. The reactor shutdown margin was verified to be \$0.99 on January 19, 1995, during the latest semiannual control rod worth determination. This value was greater than \$0.50 and in compliance with Technical Specification 3.2(1). The excess reactivity in the reactor was also determined during the latest semiannual control rod worth determination to be \$0.83 which was less than \$2.80 and in compliance with Technical Specification 3.2(4). All other reactor reactivity limitations were verified to be in compliance with Technical Specification 3.2.

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The reactor control and safety requirements were reviewed. The reactor scram times for the scramble control rods were verified to be less than one second which were less than 2 seconds as required by Technical Specification 3.3.1. The inspector verified that all of the reactor control system instrument channels required in Technical Specification 3.3.2 were tested and operable and were included on the TRIGA Prestart Checklist, Form NEL-001, Revision 4, which had been completed prior to each startup of the reactor. The reactor safety systems listed in Technical Specification 3.3.3 were all verified to be operable and included on the TRIGA Prestart Checklist.

The annual reports for 1994 and 1995 were reviewed and the Argon-41 discharge limit of $1.0E-08$ microcuries per milliliter ($\mu\text{Ci/ml}$) averaged over 1 year in accordance with Technical Specification 3.4 was not exceeded. Operation records indicated that the ventilation system had operated as required in Technical Specification 3.5. A review of reactor experiment authorization forms determined that Technical Specification 3.6 limitations on experiments were checked for each experiment configuration prior to issuing an experiment performance authorization. Effluent releases from the reactor facility had been controlled and were as low as reasonably achievable (ALARA) and met Technical Specification 3.7 requirements. The pool water chemistry conditions were maintained in compliance with Technical Specification 3.8 requirements.

The TRIGA design features for reactor fuel, reactor core, control rod elements, radiation monitoring system, fuel storage, reactor building ventilation system, and reactor pool water systems in accordance with Technical Specification 5.0 were inspected and verified. The reactor fuel was verified to be of the type and enrichment described and required in Technical Specification 5.1. The inspector reviewed the current reactor core configuration map and verified that the fuel elements were positioned in the reactor grid plate in accordance with the current core map and in compliance with Technical Specification 5.2. The three reactor control elements were verified to have the required scram capabilities and contained the materials specified for standard TRIGA control elements in compliance with Technical Specification 5.3. All fuel elements not positioned in the reactor core were stored in the reactor pool in storage racks or in the spent fuel storage pits. The fuel elements stored in the reactor pool were stored in racks at the bottom of the reactor pool in an arrangement where the K_{eff} had been calculated to be less than 0.8 per Technical Specification 5.5. The minimum free volume of the reactor room calculated by the licensee was verified by the inspector and found to meet the Technical Specification 5.6(1) requirement. The ventilation stack from the reactor facility appeared to be of adequate height to meet the Technical Specification 5.6(2) requirement of at least 40 feet above the ground. The inspector verified that the reactor cooling water system met the requirements in Technical Specification 5.7(1). A pool level alarm was provided to indicate a loss of reactor coolant if the reactor pool level dropped more than 2 feet below the normal level in compliance with Technical Specification 5.7(3).

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Area radiation monitors were installed in key locations throughout the reactor facility at the surface of the reactor pool, on the ceiling directly over the reactor pool, and in the exhaust ventilation duct. These area radiation monitors were gamma-sensitive detectors. The detectors were properly calibrated and alert and alarm setpoints were calculated and set to initiate an alarm at activity concentrations below the maximum permissible concentrations and provided an activity readout at the reactor control console in compliance with Technical Specification 5.4(1). These radiation monitors were verified to be operational and provided the required alarm function at the reactor control console during the completion of the TRIGA prestart checklist prior to the reactor startup witnessed by the inspector on December 14, 1995.

8 TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENTS (40750)

The inspector reviewed reactor surveillance results to determine compliance with Technical Specification 4.0.

The inspector verified that the fuel element temperature measuring channel was calibrated semiannually in compliance with Technical Specification 4.3(2) and documented on Form NEL-011, Revision 1. The calibration records were reviewed for 1994 and 1995. The channel check for the fuel element temperature measuring channel was made each time the reactor was operated in compliance with Technical Specification 4.2(3) and documented on the TRIGA prestart checklist. The inspector verified that the reactor shutdown margin was determined in conjunction with the semiannual control rod worth determinations and documented on Form NEL-003, Revision 1. The results of these determinations were reviewed and determined to be in compliance with Technical Specification 4.3.1(1). Surveillance records indicated that the reactor control rods were visually inspected biennially as required in Technical Specification 4.3.1(2) and were documented on Form NEL-002, Revision 1. The inspector verified that the scram times were less than 1 second and measured at least annually in compliance with Technical Specification 4.3.2(1). The scram times were determined semiannually at the same time the control rod worth determinations were performed. Channel checks of each of the reactor safety channels were performed before each day's operation as required by Technical Specification 4.3.2(2) and documented on the TRIGA prestart checklist. Channel calibration of the power level monitoring channels was performed semiannually in compliance with Technical Specification 4.3.2(3) and documented on Form NEL-012, Revision 1. The inspector reviewed the results of the reactor power level instrument calibrations for 1993 and 1994. The fuel temperature measuring channel was tested semiannually during 1994 and 1994 in compliance with Technical Specification 4.3.2(4) and documented on Form NEL-011.

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The inspector verified that the required radiation monitoring systems were installed and operational. The licensee's records indicated that the radiation monitoring systems were calibrated annually in compliance with Technical Specification 4.3.3 and documented on Form NEL-023, Revision 1. The inspector verified that the licensee was using a certified calibration source traceable to the National Institute of Standards and Technology to produce a specific monitor response when placed at specific positions from the detector.

The inspector reviewed TRIGA Prestart Checklist, NEL-001, for selected reactor startups during 1994 and 1995 and verified that the reactor room ventilation system was operational and that a negative air pressure was maintained in the reactor pool room during reactor operation. The air pressure differential between the reactor pool room and the areas outside the reactor pool room was measured at 0.05 inches which was in compliance with Technical Specification 4.3.4.

The inspector reviewed several of the licensee's completed experiment authorization forms and determined that an analysis of irradiation experiments had been performed by the reactor supervisor and approved by the reactor safety committee, if required, in compliance with Technical Specification 4.3.5.

9 EXPERIMENTS (40750)

The inspector reviewed the program for control and conduct of reactor experiments including evaluations, authorizations, conduct, and documentation of experiments performed to determine compliance with Technical Specifications 1.2, 3.2(5), 3.6, 4.3.5, and 6.5.4(1).

The inspector reviewed selected reactor experiment authorization forms generated during 1994 and 1995, which documented the licensee's compliance with the Technical Specification requirements regarding the evaluation, review, and approval of reactor experiments. The inspector verified that the experiment authorization form included all of the Technical Specification requirements regarding experiments performed in the reactor. It was noted that the reactor supervisor approved all experiments and that the reactor safety committee reviewed all new Class II experiments. The inspector also reviewed selected reactor irradiation request and performance forms (NEL-27), which were completed during the performance of reactor irradiation experiments. The selected reactor irradiation request and performance forms reviewed were for the performance of the reactor experiments which were authorized by the reactor experiment authorization forms which were reviewed. The reactor experiments primarily involved the irradiation of ore samples, biological samples, and the production of radioactive isotopes for medical applications.

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10 TRANSPORTATION OF RADIOACTIVE MATERIALS (86740)

The inspector reviewed the licensee's program for the transportation of radioactive materials and special nuclear materials to determine compliance with the requirements in the TRIGA reactor operating license, Technical Specifications, 10 CFR Part 71, and 49 CFR Parts 172-189.

The licensee had transferred radioactive byproduct material produced during the irradiation of samples in conducting experiments to other licensed personnel authorized to receive such byproduct material. The inspector reviewed selected TRIGA reactor irradiation request and performance data sheets, Form NEL-027, Revision 1, which were completed for each irradiation experiment performed. Form NEL-027 documents the sample and reactor data and radioactive material release survey data associated with each experiment. The form also included the specific isotopic activity of radioactive byproduct material which was transferred and documented the transferee's license number authorizing the transferee to receive that quantity of radioactive byproduct material.

11 RADIATION PROTECTION (40750)

The inspector reviewed the licensee's radiation protection program to determine agreement with the recommendations of Industry Standard ANSI/ANS-15.11-1977 and compliance with Technical Specifications 3.7, 4.3.6, and 5.4, and 10 CFR Part 20.

Radiation exposure records for nuclear engineering laboratory personnel were reviewed. It was noted that personnel with duties in the nuclear engineering laboratory and reactor facility on either a regular or occasional basis were issued a personal dosimeter on a monthly basis by the university's Department of Radiological Health. During the period July 1, 1993, through June 30, 1994, a total of 14 nuclear engineering laboratory personnel were badged and the average monthly dose received was less than 10 millirem with the highest measured exposure being 40 millirem. During the period July 1, 1994, through June 30, 1995, a total of 19 nuclear engineering laboratory personnel were badged and the average dose received was less than 10 millirem with the highest measured exposure being 20 millirem. Over the 2-year reporting period (July 1, 1993, through June 30, 1995) 600 visitors toured the nuclear engineering laboratory under the Department of Energy's Reactor Sharing Program. No visitor received a measurable dose.

The inspector reviewed selected monthly radiation and contamination survey records for 1994 and 1995 performed by both the university's Department of Radiological Health and the nuclear engineering laboratory personnel. The radiation surveys were thorough and some indicated minor localized removable contamination which was immediately cleaned. The radiation surveys did not indicate any unusual radiation levels over previous years.

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12 RADIOLOGICAL EFFLUENTS AND ENVIRONMENTAL MONITORING (40750)

The inspector reviewed the radiological effluent and environmental programs to determine agreement commitments in Sections 12.6 and 12.7 of the TRIGA Safety Evaluation Report, and compliance with Technical Specifications 3.4 and 3.7 and 10 CFR 20.106.

The inspector reviewed the annual reactor operating reports for the periods July 1, 1993, through June 30, 1994, and July 1, 1994, through June 30, 1995, concerning effluent and environmental monitoring activities. During these periods, the average annual calculated concentration of Argon-41 generated during operations was estimated to be about $1 \text{ E-}10 \text{ } \mu\text{Ci/ml}$.

The licensee maintained an air monitoring station outside the reactor building, which was operated by the U.S. Environmental Protection Agency. The measurement results from the air monitoring station indicated no unusual changes in radiation or radioactive material concentrations. Environmental monitoring was conducted by the university's Radiological Health Department by positioning six thermoluminescent dosimeters in the area surrounding the Merrill Engineering Building, which houses the reactor facility. The thermoluminescent dosimeters were exchanged and analyzed quarterly. No unusual dose rates were detected.

13 EMERGENCY PLANNING AND PREPAREDNESS (40750)

The inspector reviewed emergency equipment and supplies, changes to the emergency plan and emergency procedures, and documentation related to emergency preparedness to determine if the licensee's emergency preparedness program had been maintained in a state of operational readiness. The inspector met with licensee personnel responsible for implementing the emergency plan and emergency procedures to determine whether the licensee's staff was trained and prepared to respond to emergency conditions.

13.1 Changes to the Emergency Plan and Implementing Procedures

The inspector reviewed the emergency plan Revision 3, dated February 28, 1994. The plan had been properly approved and appeared to comply with 10 CFR 50.54.

The inspector reviewed the licensee's emergency procedures contained in Section 5 of the Facility Operations Manual. The procedures had been changed to appropriately incorporate revised plan requirements on February 9, 1995. Current copies of the emergency plan, emergency procedures, and emergency call list were located in the reactor control room.

The inspector toured the reactor facility to determine if adequate emergency response equipment and instrumentation were available. Survey instruments and monitoring equipment specified in Section 8.3 of the emergency procedure were maintained and kept in calibration. First aid and dedicated emergency

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contamination control supplies were found located outside the reactor control room as indicated in the emergency plan. The inspector observed that the emergency battery power supply had been maintained. Records of monthly operability checks of emergency instrumentation and the backup power supply were found to be complete.

13.2 Offsite Support

The inspector visited the dispatch facility of the university's Department of Public Safety. The facility is continuously staffed and would be responsible for dispatching security, police, and fire personnel in response to emergencies at the nuclear engineering laboratory. The inspector found that current copies of the licensee's emergency call list and emergency procedures were on file as well as safety service's contingency protocols for responses.

13.3 Emergency Alarms

The inspector reviewed documentation of monthly checks of radiation and intrusion alarms from the nuclear engineering laboratory and found these records to be in order. Independent tests of the intrusion alarm and the radiation alarms were performed. Receipt of the alarms was verified in the university's safety service dispatch facility.

13.4 Emergency Preparedness Exercises and Drills

The inspector reviewed documentation of emergency drills and exercises conducted since the previous NRC inspection. Emergency exercises had been conducted approximately every 12 months. The exercise scenarios involved good challenges for emergency response personnel. Critiques were performed following each exercise, and critique recommendations were documented.

13.5 Training

Reactor operators had been trained in the emergency plan and emergency procedures during the course of initial operator training and annual requalification operator training. The inspector reviewed documentation of radiation safety training given to response personnel employed by outside response organizations. The training materials supplied to response personnel included information regarding site-specific hazards and emergency procedures. Attendance at the training sessions included appropriate organizational representation from the university's Department of Public Safety, police, and city fire departments.

14 PHYSICAL SECURITY (81401, 81402, 81403, 81431, and 81810)

The inspector reviewed the physical security program to determine compliance with the TRIGA Operating License Condition 2.C.(3), 10 CFR 50.54(p), and Physical Security Plan, Revision 3, dated February 19, 1992.

In accordance with 10 CFR Part 2.790(d), the material concerning the physical security plan is exempt from disclosure. Therefore, this material is discussed in Attachment 2 and will not be placed in the NRC Public Document Room.

15 REPORTS AND NOTIFICATIONS (40750)

The inspector reviewed the licensee's submittal of reports and notifications to the NRC to determine compliance with Technical Specification 6.10 and 10 CFR 73.71(c).

The inspector reviewed the licensee's two annual reactor operating reports for the period July 1, 1993, through June 30, 1995. It was determined that the annual reactor operating reports contained all of the information required by Technical Specification 6.10(5).

No special reports were issued to the NRC since the previous NRC inspection of the nuclear engineering laboratory conducted in 1993.

The annual operating reports for the TRIGA reactor included the required information.

16. FOLLOWUP (92904)

16.1 (Closed) Open Item 407/9001-03:Argon-41 Ventilation Monitor

The licensee installed a new continuous air monitor that incorporated three independent detectors. Three separate channels were monitored for particulates, iodines, and Argon-41 in the reactor facility ventilation exhaust stack. The installation and calibration of this new continuous air monitor in the reactor facility ventilation exhaust stack is considered adequate action to close this item.

16.2 (Closed) Open Item 407/9301-01:Emergency Classification

The licensee's emergency action level classification scheme outlined in the emergency plan was revised such that emergency action levels related to facility parameters and prompt monitoring capabilities. The inspector interviewed several operators and determined that the operators understood the emergency classifications and could promptly and appropriately implement the emergency plan.

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ATTACHMENT 1

1 PERSONS CONTACTED

1.1 Licensee Personnel

- *D. Slaughter, Reactor Administrator
- *L. Maddox, Administrative Affairs Officer
- *K. DeVries, Associate Dean, College of Engineering
- *H. Mueller, Senior Reactor Operator
- *M. Krahenbuhl, Senior Reactor Operator
- J. Thompson, Radiation Safety officer

*Indicates those present at the exit meeting on December 15, 1995.

2 EXIT MEETING

An exit meeting was conducted on December 15, 1995. During this meeting, the inspector reviewed the scope and findings of the report. The licensee identified the physical security plan, which was provided to and reviewed by the inspector, as proprietary information.

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