

June 18, 2018

Mr. Matthew Lund, Interim Director
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University of Utah
Salt Lake City, UT 84112

SUBJECT: UNIVERSITY OF UTAH – U.S. NUCLEAR REGULATORY COMMISSION
ROUTINE INSPECTION REPORT NO. 50-407/2018-201

Dear Mr. Lund:

From May 21-24, 2018, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at your University of Utah TRIGA Reactor Facility. The enclosed report documents the inspection results which were discussed with you on May 24, 2018.

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 inspector 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 NRC's document system (Agencywide Documents Access and Management System (ADAMS)). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Craig Bassett at (240) 535-1842 or by electronic mail at Craig.Bassett@nrc.gov.

Sincerely,

/RA/

Anthony J. Mendiola, Chief
Research and Test Reactors Oversight Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket No. 50-407
License No. R-126

Enclosure:
As stated

cc: See next page

University of Utah

Docket No. 50-407

cc:

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SUBJECT: UNIVERSITY OF UTAH – U.S. NUCLEAR REGULATORY COMMISSION
ROUTINE INSPECTION REPORT NO. 50-407/2018-201 DATE: JUNE 18, 2018

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DATE	6/11/18	6/4/18	6/18/18

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

Docket No. 50-407

License No. R-126

Report No. 50-407/2018-201

Licensee: University of Utah

Facility: University of Utah TRIGA Reactor

Location: Salt Lake City, Utah

Dates: May 21-24, 2018

Inspector: Craig Bassett

Approved by: Anthony J. Mendiola, Chief
Research and Test Reactors Oversight Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Enclosure

EXECUTIVE SUMMARY

University of Utah
University of Utah TRIGA Reactor Facility
U.S. Nuclear Regulatory Commission
Inspection Report No. 50-407/2018-201

The primary focus of this routine, announced inspection was the onsite review of selected aspects of the University of Utah (the licensee's) 100 kilowatts Class II research reactor safety program, including: (1) organization and staffing; (2) procedures; (3) health physics; (4) design changes; (5) committees, audits, and reviews; and, (6) transportation of radioactive material since the last U.S. Nuclear Regulatory Commission (NRC) inspection of these areas. The licensee's program was acceptably directed toward the protection of public health and safety, and in compliance with NRC requirements. No violations or deviations were identified.

Organization and Staffing

- The licensee's organizational structure and staffing were in compliance with requirements specified in the technical specifications (TSs).

Procedures

- Facility procedural review, revision, control, and implementation satisfied TS requirements.

Health Physics

- Surveys were being completed and documented acceptably to permit evaluation of the radiation hazards present.
- Postings met regulatory requirements.
- Personnel dosimetry was being worn as required, and doses were well within the licensee's procedural action levels and NRC regulatory limits.
- Radiation monitoring equipment was being maintained and calibrated, as required.
- The Radiation Protection and as low as reasonably achievable (ALARA) programs satisfied regulatory requirements.
- Training was being provided to staff members in the area of radiation protection in accordance with regulatory requirements.
- Effluent monitoring satisfied license and regulatory requirements and releases were within the specified regulatory and TS limits.
- Releases were within the specified regulatory and TS limits.

Design Changes

- Change reviews were being conducted in accordance with the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.59, “Changes, tests and experiments.”

Committees, Audits, and Reviews

- The Reactor Safety Committee (RSC) was meeting as required.
- Audits and reviews were being conducted by designated individuals and reviewed by the RSC in accordance with the requirements specified in TS Section 6.2, “Review and Audit.”

Transportation of Radioactive Material

- The licensee transferred radioactive waste material to the campus Radiological Health Department (RHD) for disposal as needed.
- None of the licensee personnel had the current training required to ship radioactive material from the facility.

REPORT DETAILS

Summary of Plant Status

The University of Utah (the licensee) continued to operate the 100 kilowatts TRIGA Mark I research reactor as needed in support of sample irradiation, reactor operator training, educational demonstrations, preventive maintenance, and operational surveillance testing required by the TSs. While the reactor was not operated during this inspection due to fuel inspection which was in progress, it is typically operated one or two days a week at various power levels up to 90 kilowatts.

1. **Organization and Staffing**

a. Inspection Scope (Inspection Procedure (IP) 69001, Section 02.01)

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of Section 6.1 of the TSs were being met:

- Organizational structure and management responsibilities
- Utah Nuclear Engineering Program (UNEP) Procedure P-001 R1, "Description of Operations," Section I, entitled "Organization and Responsibilities," which contained reactor facility organizational guidance
- Amendment Number (No.) 9 to Facility Operating License No. R-126, dated December 12, 2011, which amended the TSs

b. Observations and Findings

Through discussions with licensee representatives, the inspector determined that there had been no changes to management responsibilities and the organizational structure at the University of Utah TRIGA Reactor (UUTR) facility since the last NRC inspection in the area of radiation protection conducted in April 2016 (NRC Inspection Report No. 50-407/2016-202). It was noted that the person who had been the designated Facility Director had taken a position with the International Atomic Energy Agency and the Reactor Supervisor had been appointed as the Interim Director in addition to being the Reactor Supervisor. Because the current operational schedule is not overly burdensome, the Reactor Supervisor appeared to be able to fill both positions without any detrimental effects on the program. Allowing one person to fill two positions appeared to be acceptable for the present but the licensee was encouraged to fill the Facility Director position as quickly as possible.

Through review of records and logs, and through observation and discussions with licensee personnel, the inspector determined that shift staffing and the organizational structure observed at the UNEP TRIGA Reactor Facility met the requirements stated in Section 6.1 of the TSs.

c. Conclusion

The organizational structure and staffing were consistent with TS requirements.

2. Procedures

a. Inspection Scope (IP 69001, Section 02.03)

The inspector reviewed selected aspects of the following to verify that the licensee was complying with the requirements of TS Section 6.4:

- Records of procedure changes
- Various administrative and radiation protection procedures
- Related logs and records documenting procedure implementation
- UNEP Procedure P-001 R1, "Description of Operations," Section I.4, entitled "Documentation," which outlined administrative controls
- UNEP-001 R14, "TRIGA Prestart Checklist," last updated in 2016
- UNEP-035 R4, "Audit and Review Program Checklist," which documented the audits that had been completed
- RSC meeting minutes from October 2015 to the present

b. Observations and Findings

The inspector noted that the licensee used procedures to conduct operations at the facility as required and the procedures were available for those tasks and items required by the TSs. The procedures were typically comprised of checklists or forms to assist staff members in completing required work in a systematic, step-by-step manner. (However, some job aides were also available for use.) It was noted that substantive changes to the procedures were reviewed and approved by the RSC as required. Also, facility procedures were reviewed, as needed, with the last review being completed in May 2017. Training of personnel on procedures and the applicable changes was acceptable.

In the area of radiation protection, the licensee did not have facility-specific procedures, but rather referred to those maintained by the university RHD and contained in the "Radiological Procedures and Records [RPR]," which were available on-line at the RHD website. Those procedures were reviewed and approved by the university's Radiation Safety Committee. The licensee also had access to the University of Utah Radiation Protection Program manual and the Radiation Safety Policy Manual, which were also available on the RHD website.

c. Conclusion

Procedural review, revision, control, and implementation satisfied TS requirements.

3. Health Physics

a. Inspection Scope (IP 69001, Section 02.07)

To verify compliance with 10 CFR Parts 19 and 20, and TS Sections 3.4, 3.7, 4.3, 4.7, 5.4, 6.3, and 6.7, the inspector reviewed selected aspects of:

- Radiological signs and postings at the facility
- Personnel dosimetry records for 2016, 2017, and to date in 2018

- Environmental dosimetry records for 2016, 2017, and to date in 2018
- UNEP-020 R13, "Monthly Inspection/Surveillance Checklist," which documented routine surveys and monitoring as well as various calibration activities performed by licensee personnel
- UNEP-023 R5, "Annual Maintenance and Calibration of the Area Radiation Monitors (ARMs) and Continuous Air Monitor (CAM)," which specifically documented maintenance and calibration of radiation monitoring equipment
- UNEP-032, "Liquid Effluent Discharge Authorization," documenting the discharge of any radioactive effluents from the facility
- RHD "Radiological Procedures and Records," RPR No. 1, "Radiation User Personal Data"
- Various other RHD RPR procedures including: No. 12, "Bioassays for Internal Radioactivity;" No. 44, "Training Radiation Users;" No. 45, "Radiation Emergency Response;" No. 46, "Personnel Exposure Investigation Levels and Reports;" No. 50, "Radioisotope Laboratory Evaluations;" No. 52, "Portable Radiation Survey Instruments Use and Calibration;" and No. 80, "Utah Nuclear Engineering Program (UNEP) Research (TRIGA) Reactor (UUTR)"
- Various RPR forms including: Form RPR 50A, "Laboratory Evaluation Checklist;" Form RPR 50B, "Total Contamination Survey;" Form RPR 50C, "Removable Contamination Survey;" Form RPR 50D, "Exposure Rate Survey;" Form RPR 50E, "Radionuclide Laboratory Evaluation Report;" Form RPR 52A, "Exposure Rate Meter Calibration Record;" and Form RPR 52B, "Contamination Survey Meter Efficiency Calibration Record"
- RSC meeting minutes for the past 2 years which included a quarterly report from the university Radiation Safety Officer (RSO) containing personnel and environmental thermoluminescent dosimeter (TLD) results
- "Assessment of Radiation Dose from Air Emissions of Radioactive Material, Calendar Year 2016," dated June 28, 2017, which was completed by the university RHD
- The UUTR Annual Operating Report for the reporting period of July 1, 2015, through June 30, 2016, submitted to the NRC on July 29, 2016
- The UUTR Annual Operating Report for the reporting period of July 1, 2016, through June 30, 2017, submitted to the NRC on July 12, 2017

b. Observations and Findings

(1) Surveys

The inspector reviewed monthly radiation and contamination surveys of licensee controlled areas within the UUTR for the past 2 years, which were conducted by campus RHD personnel. The inspector also reviewed the records documenting the monthly general area radiation and contamination surveys of the Reactor Room and support areas which were completed by licensee personnel from 2016 to present. These latter surveys had been completed, as required, by UNEP-020, "Monthly Inspection/ Surveillance Checklist." The results of all the surveys reviewed had been documented and evaluated, as required, and corrective actions were taken when readings or results exceeded set action levels.

During the inspection, the inspector accompanied a licensee operator trainee during a radiation survey of the Reactor Room and adjacent laboratory and Radioactive Material Storage areas. The readings detected during this survey were compared with those recorded on previous survey maps, which had been completed by a campus RHD Radiological Analyst. The survey results noted by the licensee were comparable to those recorded by the RHD Radiological Analyst and no anomalies were noted.

(2) Postings and Notices

During tours of the facility, the inspector observed that caution signs and postings in place and controls established for the controlled areas were acceptable for the hazards involving radiation, high radiation, and contamination, and were posted as required by 10 CFR Part 20, Subpart J, "Precautionary Procedures." Through observations and interviews with licensee staff, the inspector confirmed that personnel complied with the signs, postings, and controls. The facility's radioactive material storage areas were noted to be properly posted. No unmarked radioactive material was detected in the facility.

Copies of notices to workers were posted in various areas in the facility. Radiological signs were typically posted at the entrances to controlled areas. Other postings also characterized the industrial hygiene hazards that were present in the areas as well. During a facility tour, the inspector noted that the copies of NRC Form 3, "Notice to Employees," which were posted at the facility as required by 10 CFR 19.11, "Posting of notices to workers," were not the current version. When the licensee was informed of this problem, the current form was immediately located on the NRC website and copies were printed out. The correct current copies were then posted on the Bulletin Board by the main entrance to the Laboratory Area, in the Control Room, and at other locations in the facility. Subsequently, notices, caution signs, postings, and controls for radiation areas were as required in 10 CFR Parts 19 and 20.

(3) Dosimetry

The inspector determined that the licensee used optically-stimulated luminescent dosimeters (OSLs) for whole body monitoring of beta and gamma radiation exposure with an additional component to measure neutron radiation. The licensee also used TLD finger rings for monitoring beta and gamma radiation exposure of the extremities. The dosimetry was supplied and processed by a National Voluntary Laboratory Accreditation Program accredited vendor. Through direct observation the inspector determined that dosimetry was acceptably used by facility personnel and was in accordance with university radiation protection requirements. Examination of the OSL and TLD results indicating radiological exposures at the facility for the past 3 years showed that all occupational doses were well within 10 CFR Part 20 limitations.

(4) Radiation Monitoring Equipment Use and Calibration

The use and calibration of radiation monitoring equipment was reviewed by the inspector. Portable survey meters and friskers were calibrated by campus RHD personnel. Fixed radiation detectors and the CAM were typically calibrated by licensee staff personnel. The inspector reviewed calibration records maintained by RHD and licensee personnel. Through this review the inspector determined that records were being maintained as required and that calibration frequencies met the requirements established in the applicable surveillance procedures. Through observations of activities at the UUTR facility, the inspector determined that the monitoring equipment was being used and maintained acceptably. It was noted that survey instruments awaiting repair and/or calibration, or those that were in storage and not calibrated, were labeled with a red tag to preclude inadvertent use.

(5) Radiation Protection Program and ALARA Policy

The licensee's Radiation Protection Program was established in various University of Utah campus documents including: (1) the RHD's "Radiological Procedures and Records," last updated September 2016; (2) "The University of Utah Radiation Safety Policy Manual," latest revision dated June 1996; (3) "The University of Utah Radiation Protection Program," and (4) RPR No. 80, "Utah Nuclear Engineering Program (UNEP) Research (TRIGA) Reactor (UUTR)," dated June 2013. The program stated that all personnel who had unescorted access to work in a radiation area or who worked with radioactive material were required to receive training in radiation protection policies, principles, procedures, and requirements prior to starting work. The inspector also confirmed that the UUTR radiation protection program was being reviewed annually, as required.

The ALARA Policy was also outlined and established in the manuals and RPRs mentioned above. The ALARA program provided appropriate guidance for keeping doses ALARA and was consistent with the guidance in 10 CFR Part 20.

(6) Radiation Worker Training

As noted above, all university personnel who worked in radiation areas or handled radioactive material, including licensee staff, were required to receive training in radiation protection. This was accomplished by staff members completing an "online" course, entitled "General Radiation Safety Training," and then taking a quiz on the material covered. The trainees then attended an "In-Person" class and were required to successfully pass a written examination. The class, entitled "Radioactive Materials Safety Class," was an interactive/practical session consisting of lecture, demonstration, and practical applications. Those who successfully completed the course were given a certificate. Completion of this training by facility personnel was verified by RHD personnel, as well as by the Reactor Administrator and/or the Reactor Supervisor.

Upon completion of the course, reactor staff members were issued a dosimeter and allowed to work under the direction of a Responsible User.

The inspector reviewed documentation of the training provided to selected licensee staff members, including the certificates of completion. The documents indicated that all current staff members had received the required training. It was also noted that staff members, who were also reactor operators, received further continuing radiation protection training through the licensee's Operator Requalification Program. The inspector determined that the personnel training program satisfied requirements in 10 CFR 19.12, "Instruction to workers." The training materials appeared to be beneficial in helping trainees understand the various concepts of radiation protection. The content and periodicity of training were acceptable.

(7) Environmental Monitoring and Effluents

The inspector reviewed the ARMs and CAM calibration records. The ARMs and CAM had been calibrated annually by licensee staff in accordance with procedures. The monthly setpoint and high radiation warning verification records for the monitoring equipment were also reviewed. Corrective actions, including recalibration, were completed if the setpoint values were exceeded.

The inspector determined that gaseous releases continued to be monitored as required. The releases were calculated by the RHD according to established procedure, using the EPA COMPLY code. The dose rate to the public, as a result of the gaseous releases, was well below the dose constraint of 10 millirem per year specified in 10 CFR 20.1101, "Radiation protection programs," paragraph (d). The inspector noted that airborne concentrations of gaseous releases were also calculated by the licensee. These calculations showed that gaseous releases were well within the concentrations stipulated in 10 CFR Part 20, Appendix B, Table 2, and TS limits. The results were acceptably documented in the facility annual reports, as required.

The inspector verified that there had been no liquid releases from the facility to the sanitary sewer within the past 2 years. It was noted that the last liquid release occurred in 2000. It was also noted that no solid waste had been transferred from the facility to the campus RHD during the past 2 years.

On-site and off-site gamma radiation monitoring was completed using environmental TLDS in accordance with the applicable university procedures. The data, which was reviewed by both UUTR and RHD staff members, indicated that there were no unusual dose rates in the areas surrounding the UUTR facility and that there were no measurable doses above any regulatory limits. These results were also acceptably reported in the Reactor Operations Annual Report. Through observation of the facility, the inspector did not identify any new potential release paths.

(8) Facility Tours

The inspector toured the Control Room, Reactor Room, and selected support laboratories and offices. Control of radioactive material and control of access to radiation and high radiation areas were acceptable. As noted earlier, the postings and signs for these areas were appropriate. During the inspection, the inspector also observed a portion of the fuel inspection process. Appropriate radiation protection precautions were observed and each member of the staff was wearing their assigned dosimetry as required. No problems were noted.

c. Conclusion

Based on the observations made and the records reviewed, it was determined that the Radiation Protection Program being implemented by the licensee satisfied regulatory requirements because: (1) surveys were being completed and documented acceptably; (2) postings met regulatory requirements; (3) personnel dosimetry was being worn as required and doses were well within the NRC regulatory limits; (4) radiation monitoring equipment was being maintained and calibrated as required; (5) training was being conducted as required; and, (6) effluent monitoring satisfied license and regulatory requirements and releases were within the specified regulatory and TS limits.

4. Design Changes

a. Inspection Scope (IP 69001, Section 02.08)

The inspector reviewed the following to verify compliance with 10 CFR 50.59 and TS Section 6.2:

- RSC meeting minutes from October 2015 to the present
- UNEP Job-Aid 002 R1, "10 CFR 50.59 Screening"
- UNEP Procedure P-001 R1, "Description of Operations," Section I, entitled "Organization and Responsibilities," which contained limited guidance concerning 10 CFR 50.59 reviews and evaluations
- Form UNEP-022 R4, "Maintenance Log," which documented maintenance activities that had been completed and included the 10 CFR 50.59 screening forms for various changes
- Facility Annual Operating Reports for the last two reporting periods

b. Observations and Findings

The inspector noted that one item of nuclear instrumentation needed to be repaired or replaced since the last inspection. The screening review for this project had been completed by the licensee to verify that a 10 CFR 50.59 evaluation was not needed. The inspector reviewed the screening review associated with this project and noted that it appeared to be adequate. The licensee determined that no evaluation was needed in this instance.

c. Conclusion

The licensee's design change control program was being implemented as required.

5. Committees, Audits, and Reviews

a. Inspection Scope (IP 69001, Section 02.09)

The inspector reviewed the following to ensure that the review and audit requirements in TS Section 6.2 were being met:

- RSC meeting minutes from October 2015 to the present
- Radiation Safety and ALARA audits completed during the past 2 years and licensee responses to the safety reviews and audits
- UNEP Procedure P-001 R1, "Description of Operations," Section I, entitled "Organization and Responsibilities," which contained guidance for the RSC
- Form UNEP-035 R4, "Audit and Review Program Checklist," which documented the audits that had been completed
- Facility Annual Operating Reports for the last two reporting periods

b. Observations and Findings

The inspector verified that the RSC met at least annually as required by the TSs. It was noted that a subcommittee (or the full committee) generally held quarterly meetings in addition to the TS-required annual meetings. The inspector reviewed the minutes of the RSC meetings held since October 2015. It was noted that the minutes contained, among other documents, quarterly or monthly reports from the Reactor Director, the Reactor Supervisor, and the university RSO. Review of the committee meeting minutes indicated that the RSC completed the required reviews as stipulated in the TSs thereby providing appropriate guidance and direction for reactor operations and ensuring acceptable use and oversight of the reactor.

Since the last inspection, all required audits of reactor facility activities and reviews of programs, procedures, equipment, and proposed tests or experiments had been completed and documented as required. The audits were completed by specific RSC members or by designated individuals and then reviewed by a quorum of the RSC. The inspector noted that the safety reviews and audits and the associated findings were acceptably detailed and that the licensee responded and took corrective actions as needed. Additionally, the annual reviews of the Radiation Protection Program and the Emergency Plan, as well as the biennial review of the Security Plan, had been conducted and acceptably documented.

c. Conclusion

The RSC was meeting as required. Audits and reviews were being conducted as required and reviewed by the RSC in accordance with the requirements specified in TS Section 6.2.

6. Transportation of Radioactive Material

a. Inspection Scope (IP 86740)

The inspector reviewed selected aspects of:

- UNEP-027 R6, "TRIGA Reactor Irradiation Request and Performance," which documented radioactive material transfers and/or releases which had occurred
- RPR Procedures including: No. 13, "Radioisotope Acquisition and Disposition;" No. 14, "Shipment of Limited Quantity of Radioisotopes;" and No. 55, "Transportation of Radioactive Materials"
- Various forms including: Form RPR 13A, "Radioisotope Package Arrival Report;" Form RPR 13B, "Radioisotope Receipt and Verification;" and, Form RPR 13C, "Radioisotope Disposition Record"

b. Observations and Findings

Records indicated that radioactive waste designated for disposal was typically transferred from the reactor facility to the University of Utah's broad scope license, Utah Department of Environmental Quality, License No. 1800001, Amendment No. 56, effective until May 31, 2019, in accordance with RHD requirements. The last materials that were produced in the facility and transferred from the UNEP to the broad scope license were five containers of resin. That transfer occurred several years ago.

On occasion, radioactive material that had been irradiated in the reactor was transferred on-campus to an individual licensed to receive the radioactive material. A review of the records indicated that no such transfers had occurred recently (within the last 2 years). The radioactive material that was produced, but not transferred, was stored at the UUTR for decay or disposal at a later date.

The inspector also reviewed the documentation of transfers of radioactive sources completed between the reactor facility and the RHD. The sources were used to calibrate the ARMs in the facility. The records indicated that the shipping containers were properly packaged and surveyed and the applicable labels were filled out with the required information and attached to the shipping containers.

The inspector noted that none of the licensee personnel had the current training required to ship radioactive material as required by the Department of Transportation. In the instances involving the transfer of radioactive sources, this was not an issue because the paperwork and shipments were completed by qualified personnel in the RHD. If routine shipping operations from the reactor resumed, the campus RSO indicated that licensee personnel would receive the appropriate training or RHD personnel would complete the required paperwork.

c. Conclusion

The licensee transferred radioactive waste material to the campus RHD as needed. None of the licensee personnel had the current training required to ship radioactive material from the facility.

7. Exit Meeting Summary

The inspection scope and results were summarized on May 24, 2018, with the facility Interim Director. The inspector discussed the findings for each area reviewed. The licensee did not identify any of the material provided to or reviewed by the inspector as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Craynor	Reactor Operator
D. Feist	Student Operator Trainee
M. Lund	Interim Facility Director and Reactor Supervisor
S. Pappas	Student Operator Trainee
A. Reifsnyder	Student Operator Trainee

Other Personnel

M. Beitollahi	Health Physicist and Adjunct Associate Professor, Radiological Health Department, University of Utah
F. Monette	Director, Radiological Health Department and Campus Radiation Safety Officer, University of Utah

INSPECTION PROCEDURE (IP) USED

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

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

PARTIAL LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ALARA	As Low As Reasonably Achievable
ARMs	Area Radiation Monitors
CAM	Continuous Air Monitor
IP	Inspection Procedure
No.	Number
NRC	U.S. Nuclear Regulatory Commission
OSL	Optically stimulated luminescent (dosimeter)
RHD	Radiological Health Department
RSO	Radiation Safety Officer
RPR	Radiological Procedures and Records
RSC	Reactor Safety Committee
TLD	Thermoluminescent dosimeter
TSS	Technical Specifications
UNEP	Utah Nuclear Engineering Program
UUTR	University of Utah TRIGA Reactor