

December 7, 2007

Mr. Stephen G. Frantz, Director  
Reed Reactor Facility  
Reed College  
3203 S.E. Woodstock Boulevard  
Portland, OR 97202-8199

SUBJECT: NRC INSPECTION REPORT NO. 50-288/2007-201

Dear Mr. Frantz:

On November 26 - 29, 2007, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at your Reed Reactor Facility. The enclosed report documents the inspection results which were discussed on November 29, 2007, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the NRC's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, no significant safety concerns or noncompliances of NRC requirements were identified. No response to this letter is required.

In accordance with Section 2.390, "Public inspections, exemptions, and requests for withholding," of Title 10 of the Code of Federal Regulations (CFR), 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 NRC's 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 (404) 358-6515.

Sincerely,

**/RA/**

Johnny H. Eads, Branch Chief  
Research and Test Reactors Branch B  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

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

Enclosure: NRC Inspection Report 50-288/2007-201  
cc w/encl.: Please see next page

Reed College Docket No. 50-288

cc:

Mayor of the City of Portland  
1220 Southwest 5<sup>th</sup> Avenue  
Portland, OR 97204

Reed College  
ATTN: Dr. Peter Steinberger  
Dean of Faculty  
3203 S.E. Woodstock Boulevard  
Portland, OR 97202-8199

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ATTN: David Stewart-Smith, Director  
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Test, Research, and Training  
Reactor Newsletter  
University of Florida  
202 Nuclear Sciences Center  
Gainesville, FL 32611

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**ACCESSION NO.: ML073380699**

**TEMPLATE #: NRR-106**

OFFICE	PRTB:RI	PRT:LA	PRTB:BC
NAME	CBassett cb	EHylton egh	Plsaac for JEads
DATE	12/6/07	12/6/07	12/7/07

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

Docket No: 50-288

License No: R-112

Report No: 50-288/2007-201

Licensee: Reed College

Facility: Reed Reactor Facility

Location: 3203 S.E. Woodstock Boulevard  
Portland, OR 97202-8199

Dates: November 26-29, 2007

Inspector: Craig Bassett

Accompanied by: Patrick Isaac, Examiner

Approved by: Johnny H. Eads, Branch Chief  
Research and Test Reactors Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

## EXECUTIVE SUMMARY

Reed College  
TRIGA Mark-I Research Reactor  
Report No: 50-288/2007-201

The primary focus of this routine, announced inspection included on-site review of selected aspects of the licensee's Class II research reactor safety program including: organizational structure and staffing; review and audit and design change functions; radiation protection and ALARA programs; environmental monitoring program; procedural controls; and, transportation of radioactive material program since the last NRC inspection of these areas. The licensee's programs were acceptably directed toward the protection of public health and safety, and in compliance with NRC requirements.

### Organizational Structure and Staffing

- Facility organization and staffing were in compliance with the requirements specified in Section I of the Technical Specifications.

### Review and Audit and Design Change Functions

- Audits were being conducted by the Reactor Operations Committee and the Radiation Safety Committee in compliance with the requirements specified in the Technical Specifications.
- Proposed changes and a new experiment developed at the facility had been analyzed using the 10 CFR 50.59 safety evaluation process and had been reviewed and approved by the Reactor Operations Committee as required.

### Radiation Protection Program

- Signs, notices and postings met the regulatory requirements.
- Personnel dosimetry was being worn as required and doses were well within the licensee's procedural action levels, and NRC's regulatory limits.
- Surveys were completed and documented acceptably to permit evaluation of the radiation hazards present.
- Radiation survey and monitoring equipment was being maintained and calibrated acceptably.
- Radiation protection training was acceptable and was being conducted as required.
- The Radiation Protection and ALARA Programs satisfied regulatory requirements.

#### Environmental Monitoring Program

- Effluent monitoring satisfied licensee procedural and regulatory requirements and releases were calculated to be within the specified regulatory and Technical Specification limits.

#### Procedures

- Facility procedures were acceptably reviewed, approved, and implemented.

#### Transportation of Radioactive Materials

- The program for shipping radioactive material satisfied regulatory requirements.

## REPORT DETAILS

### **Summary of Plant Status**

The licensee's two hundred and fifty-kilowatt (250 kW) TRIGA Mark-I research reactor continued to be operated in support of undergraduate instruction and laboratory experiments, reactor operator training, and various types of research. During the inspection, the reactor was operated for laboratory experiments.

### **1. Organizational Structure and Staffing**

#### **a. Inspection Scope (Inspection Procedure [IP] 69001)**

The inspector reviewed the following regarding the licensee's organization and staffing to ensure that the requirements of the Technical Specification (TS), Section I, Amendment No. 7, dated March 11, 2003, were being met:

- current facility organization and staffing
- management responsibilities as outlined in the applicable procedures
- Reed Reactor Facility (RRF) Administrative Procedures, latest revision (rev.) dated August 2006

#### **b. Observations and Findings**

The organizational structure had not changed since the last NRC inspection which occurred in January 2007 (Inspection Report No. 50-288/2006-201). However, the previous Associate Director and the Reactor Supervisor at the facility had graduated and two of the Senior Reactor Operators on staff at the facility had been selected to fill those positions. Radiation protection duties were being completed by a contract Health Physicist. The campus Environmental Director continued to also fill the position as the Radiation Safety Officer for the facility. The organizational structure and staffing at the facility were as required by the TS. Review of records verified that management and staff responsibilities were carried out as required by the TS and applicable procedures.

#### **c. Conclusions**

The licensee's organization and staffing were in compliance with the requirements specified in the TS, Section I.

### **2. Design Change and Review and Audit Functions**

#### **a. Inspection Scope (IP 69001)**

In order to ensure that the audits and reviews stipulated in the requirements of TS Sections I.2 and I.3 were being completed and to verify that any modifications to the facility were consistent with 10 CFR 50.59 and were reviewed as stipulated in TS Section I.4 and RRF Administrative Procedures, Section 2.3.1, the inspector reviewed the following:

- changes reviewed using the licensee's RRF 10 CFR 50.59 Review Forms
- changes reviewed using the licensee's RRF 10 CFR 50.59 Screen Forms
- Radiation Safety Committee (RSC) meeting minutes from May 2006 to date
- TS responsibilities specified for the Reactor Operations Committee and the RSC
- Safety review and audit records for 2005-2006 and 2006-2007 as documented on RRF Standard Audit Forms
- Reactor Operations Committee (ROC) meeting minutes from May 2006 to the present
- Reactor Review Committee (RRC) meeting minutes from November 2006 to the present (this was a joint committee composed of both the ROC and the RSC)
- RRF Administrative Procedures, latest rev. dated August 2006
- RRF Standard Operating Procedure (SOP) 16, "Changes, Tests, and Approvals," latest rev. dated November 2007

b. Observations and Findings

1) Review and Audit Functions

The inspector reviewed the ROC and RSC meeting minutes from May 2006 to the present. These meeting minutes showed that each committee met as required by the TS with a quorum being present. Records showed that the safety reviews and audits conducted by the committees were completed at the TS required frequency. Topics of these reviews were also consistent with TS requirements and provided guidance, direction, and oversight, and acceptable use of the reactor.

The inspector noted that the safety reviews and audits that had been completed, and the associated findings, were acceptably detailed and that the licensee responded and took corrective actions as needed.

2) Design Change

Through review of the ROC and RSC meeting minutes, and through interviews with licensee personnel, the inspector determined that no major changes had been initiated and/or completed at the facility since the last NRC inspection. However, one 10 CFR 50.59 review/evaluations was completed in 2006 and it entailed a new proposed experiment. It was entitled "Adding an Antimony Beryllium Source," and was dated November 1, 2006. In 2007 the review process was changed to include a "screen" form so that the licensee could more readily select which changes to procedures, experiments, or structures/systems/ components needed to receive a full 50.59 Evaluation and Review. The inspector reviewed the "screen" forms that had been completed for 2007. None of the changes proposed in the screening process required a more extensive review.

The inspector verified that the new experiment and the "screens" conducted in 2007 had been evaluated using the licensee's 10 CFR 50.59 review process and were then reviewed by the ROC. It was noted that the evaluation of the new experiment had been signed by the Facility Director as required, as well as by the Chair of the ROC. The screen forms had been signed by the Operations Supervisor, the Associate Director, and the Director as required.



c. Conclusions

Review and oversight functions required by TS Section 6.2 were acceptably completed by the ROC and the RSC. Proposed changes and a new experiment developed at the facility had been analyzed using the 10 CFR 50.59 safety evaluation process and had been reviewed and approved by the ROC as required.

**3. Radiation Protection Program**

a. Inspection Scope (IP 69001)

The inspector reviewed the following to verify compliance with 10 CFR Parts 19 and 20 and TS Sections G requirements:

- Health Physics Logbook
- radiological signs and posting
- Radiation Work Permit Notebook
- RRC Audits for 2005-2006 and 2006-2007
- routine surveys and monitoring records for 2007
- Reactor Console Logbook No. 69 for July - November 2007
- Radiation Protection Program, latest rev. dated August 2006
- personnel dosimetry records for 2005, 2006, and to date in 2007
- Daily Reactor Startup and Shutdown Checklists for the past 12 months
- records of maintenance and calibration of radiation monitoring instruments
- Wipe Test Log Book containing "A-Week Routine Wipe Test" and "B-Week Routine Wipe Test" forms for 2006 and 2007
- As Low As Reasonably Achievable (ALARA) Program as described in the Radiation Protection Program and in the Radioisotope and Radiation Safety Committee ALARA Policy Statement dated July 17, 1990
- RRF SOP 20, "Health Physics," latest rev. dated October 2006
- RRF SOP 21, "High Radiation Areas," latest rev. dated October 2006
- RRF SOP 22, "Decontamination," latest rev. dated October 2007
- RRF SOP 23, "Wipe Tests," latest rev. dated October 2007
- RRF SOP 25, "Portable Radiation Monitor Calibration," latest rev. dated November 2007
- RRF SOP 27, "Waste Handling and Disposal," latest rev. dated March 2006
- RRF SOP 28, "Radiation Work Permits," latest rev. dated March 2007
- RRF SOP 30, "RAM Calibration," latest rev. dated January 2007
- RRF SOP 31, "CAM Calibration," latest rev. dated May 2007
- RRF SOP 35, "Hand and Foot Monitor Calibration," latest rev. dated July 2007
- RRF SOP 70, "Weekly Checklist," latest rev. dated August 2007
- RRF SOP 71, "Bimonthly Checklist," latest rev. dated May 2007
- RRF SOP 72, "Semiannual Checklist," latest rev. dated April 2007
- RRF SOP 73, "Annual Checklist," latest rev. dated March 2007
- "Radioactive Materials Handling Study Guide," rev. dated January 2007
- "Reed College Radioactive Materials Policy and Procedures Manual," rev. dated January 2007

The inspector also observed the use of dosimetry and radiation monitoring equipment during tours of the facility.

b. Observations and Findings

(1) Postings and Notices

Copies of current notices to workers were posted inside the Reactor Control Room at RRF. Radiological signs were typically posted at the entrances to controlled areas as well. The posted copies of NRC Form-3, "Notice to Employees," observed at the facility were the latest issue, as required by 10 CFR Part 19.11, and were also posted in the Reactor Room, and in the Laboratory Room.

Caution signs, postings, and controls for radiation areas were as required in 10 CFR Part 20, Subpart J. The inspector verified that licensee personnel observed the precautions for access to radiation areas.

(2) Dosimetry

The inspector determined that the licensee used optically stimulated luminescent (OSL) dosimeters for whole body monitoring of beta and gamma radiation exposure (with an additional component to measure neutron radiation for certain individuals). The licensee also used thermoluminescent dosimeter (TLD) finger rings for extremity monitoring. The dosimetry was supplied and processed by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited vendor. An examination of the OSL and TLD results indicating radiological exposures at the facility for the past two years showed that the highest occupational doses, as well as doses to the public, were well within 10 CFR Part 20 limitations. The records showed that the highest annual whole body exposure received by a single individual for 2005 was 67 millirem deep dose equivalent (DDE). The highest annual extremity exposure for 2005 was 180 millirem shallow dose equivalent (SDE). The highest annual whole body exposure received by a single person for 2006 was 123 millirem DDE and the highest annual extremity exposure for 2006 was 130 millirem SDE. Through September 2007, the highest individual whole body exposure that had been received was 27 millirem DDE and the highest extremity exposure was 60 millirem SDE.

Through direct observation the inspector determined that dosimetry was acceptably used by facility personnel and exit frisking practices were in accordance with facility radiation protection requirements.

(3) Surveys

Selected daily, weekly, biweekly, bimonthly, semiannual, and annual radiation and/or contamination surveys and related tests and checks were reviewed by the inspector. The surveys, tests, and checks had been completed by staff members as required. Any contamination detected in concentrations above the established action level was noted and the area was decontaminated. Results of the surveys were documented so that facility personnel would be knowledgeable of the radiological conditions that existed therein.

(4) Radiation Monitoring Equipment

Examination of selected radiation monitoring equipment indicated that the instruments had an acceptable up-to-date calibration sticker attached. The instrument calibration records indicated that the calibration of portable survey meters was typically completed by licensee staff personnel and/or a contractor who was the Reactor Health Physicist (RHP). Calibration frequency met procedural requirements and records were maintained as required. Area Radiation Monitors and stack monitors were also being calibrated as required. These monitors were also typically calibrated by licensee staff personnel and/or the RHP.

During the inspection the inspector also visited the calibration range at the facility and observed the calibration of a survey meter by the RHP. The inspector concluded that the calibrations of instruments at the facility were completed using the appropriate techniques and according to procedure. Proper precautions were in place to maintain doses ALARA.

The inspector reviewed selected calibration records and compared them with reactor operations logs and startup and shutdown checklists for the past 18 months. The daily startup checklists typically contained a listing of portable monitors that were available for use during reactor operations. The instruments had been calibrated as required.

(5) Radiation Protection and ALARA Programs

The licensee's Radiation Protection and ALARA programs were established and described in the Reed Reactor Facility Radiation Protection Plan, latest rev. dated August 2006, and through associated SOPs that had been properly reviewed and approved. The programs contained instructions concerning organization, training, monitoring, personnel responsibilities, audits, record keeping, and reports. The ALARA program provided guidance for keeping doses as low as reasonably achievable and was consistent with the guidance in 10 CFR Part 20. The programs, as established, appeared to be acceptable.

The inspector determined that the licensee had completed an annual reviews of the radiation protection program as required by 10 CFR 20.1101(c).

The licensee did not require or use a respiratory protection program or planned special exposure program.

(6) Radiation Work Permits (RWPs)

The inspector reviewed the RWPs that had been written and used during the past several years as stipulated in RRF SOP 28. It was noted that the controls specified in the RWPs were acceptable and applicable for the types of work being done. The RWPs had been initiated, reviewed, and approved as indicated on the forms.

(7) Radiation Protection Training

The inspector reviewed the radiation worker (or rad worker) training given to RRF staff members, to student operators, to those who were not members of the reactor staff but who were authorized to handle radioactive material (Principal Users), and to students who worked with/for the Principal Users (Authorized Users). The licensee indicated that rad worker training for staff members was given upon initial entry into the RRF program and then reiterated during Operator Requalification training. Training records showed that personnel were acceptably trained in radiation protection practices. The training program was acceptable.

(8) Facility Tours

The inspector toured the Control Room, the Reactor Room, the Mechanical Room, the Laboratory Room, and the Counting Room at the facility. Control of radioactive material was acceptable, as was control of access to radiation areas.

c. Conclusions

The inspector determined that the Radiation Protection and ALARA Programs, as implemented by the licensee, satisfied regulatory requirements because: 1) postings met regulatory requirements; 2) personnel dosimetry was being worn as required and recorded doses were within the NRC's regulatory limits; 3) surveys and associated checks were completed and documented acceptably to permit evaluation of the radiation hazards present; 4) radiation survey and monitoring equipment was being maintained and calibrated as required; and 5) the radiation protection training program was acceptable.

**4. Environmental Monitoring Program**

a. Inspection Scope (IP 69001)

The inspector reviewed selected aspects of the following:

- Health Physics Logbook
- RRC Audits for 2005 and 2006
- routine surveys and monitoring records
- release calculation records maintained by the RRF Director
- counting and analysis records documented in Health Physics Logbook 3B
- RRF Annual Reports for September 1, 2005 through August 31, 2006, and for September 1, 2006 through August 31, 2007
- RRF SOP 24, "Environmental Sampling," latest rev. dated October 2007
- RRF SOP 32, "APM Calibration," latest rev. dated May 2007
- RRF SOP 33, "GSM Calibration," latest rev. dated May 2007
- RRF SOP 70, "Weekly Checklist," latest rev. dated August 2007
- RRF SOP 71, "Bimonthly Checklist," latest rev. dated May 2007
- RRF SOP 72, "Semiannual Checklist," latest rev. dated April 2007
- RRF SOP 73, "Annual Checklist," latest rev. dated March 2007

b. Observation and Findings

Environmental soil and water samples were collected, prepared, and analyzed consistent with procedural requirements. Radiation monitoring inside the Reactor Room and outside the facility was completed using TLDs placed in accordance with the applicable procedures as well. The data, along with licensee records and calculations, indicated that the air emissions of radioactive material to the environment were well below the 10 millirem constraint specified in 10 CFR 20.1101(d). These calculations indicated an effective dose equivalent to the public of 0.25 millirem per year (mr/yr) for the year 2005 and 0.52 mr/yr for the year 2006. This was outlined in the RRF Annual Reports. Because other methods were used, it was noted that the licensee did not use the EPA COMPLY code to demonstrate compliance with 10 CFR 20.1101. The inspector found no new potential release paths following observation of the facility.

The program for the monitoring, storage, or transferring of radioactive liquid, gases, and solids was consistent with applicable regulatory requirements. Items/materials that were radioactive or potentially contaminated or radioactive were monitored and released when below acceptable limits or transferred to the campus Radiation Safety Office for disposal. The principles of ALARA were acceptably implemented to minimize radioactive releases. Records were current and acceptably maintained and indicated that no liquid or solid waste had been released from the reactor facility during 2006 or to date in 2007. Monitoring equipment was acceptably maintained and calibrated.

c. Conclusion

Effluent monitoring satisfied procedural and regulatory requirements and releases were within the specified regulatory and TS limits.

**5. Procedures**

a. Inspection Scope (IP 69001)

The inspector reviewed selected aspects of the following to verify compliance with TS Section I.5:

- selected SOP procedures
- procedural implementation
- minor and substantive procedural changes
- ROC and RSC meeting minutes for May 2006 through the present
- administrative controls specified in RRF Administrative Procedures, latest rev. dated August 2006
- RRF SOP 15, "Procedure Writing," rev. dated December 2006

b. Observations and Findings

The inspector verified that facility procedures were being reviewed biennially as required and upgraded/revised as needed. Administrative control of changes to procedures, and the associated review and approval process, were as stipulated by procedure. Training of personnel on procedures and changes was acceptable. Through observation of activities in progress, the inspector verified that licensee

personnel conducted operations and radiological surveys in accordance with applicable procedures. Observation and review also showed that procedures for instrument calibration, reactor operation, maintenance, and emergency conditions were available as required.

c. Conclusions

Facility procedures were acceptably reviewed, approved, and implemented.

**6. Transportation**

a. Inspection Scope (IP 86740)

To verify compliance with 10 CFR Part 71.5 and procedural requirements for the transfer or shipment of licensed radioactive material, the inspector reviewed the following:

- records of radioactive material shipments completed since 2004
- training records of staff members responsible for shipping licensed radioactive material
- RRF SOP 27, "Waste Handling and Disposal," latest rev. dated December 2004
- RRF SOP 54, "Shipping Radioactive Material," latest rev. dated December 2003

b. Observations and Findings

Through records reviews and discussions with licensee personnel, the inspector determined that the licensee had not shipped any licensed material since the last inspection in this area in October 2005. Appropriate procedures remained in place for shipping such material. The inspector verified that the person designated as the "shipper" had completed the required training in July 2007.

c. Conclusions

The program for shipments of radioactive material satisfied regulatory requirements.

**7. Follow-up on Previously Identified Issues**

a. Inspection Scope

The inspector reviewed the licensee's actions taken in response to previously identified items in NRC Inspection Report No. 50-288/2005-201.

b. Observation and Findings

- (1) IFI 50-288/2005-201-01 -- During a previous inspection in 2005, the inspector determined that safety reviews and audits that had been completed, and the associated findings, were acceptably detailed and that the licensee responded and took corrective actions as needed. However, it was also noted that audits of five operating procedures, which were due in April 2005, had not been completed to date. In discussing this issue with licensee representatives, they indicated that the

audits would be assigned to others and that they would be completed by the end of October 2005. The licensee was informed that the issue of completing the required audits by the end of October would be identified and followed by the NRC as an Inspector Follow-up Item (IFI).

During this inspection the inspector reviewed the audits that had been conducted. It was noted that a member of the ROC had completed the aforementioned audits during October 26, 2005. The audits were comprehensive and various issues were noted and recommendations made. The licensee had taken the appropriate actions to address these issues as required. This IFI is considered closed.

- (2) IFI 50-288/2005-202-02 – During the inspection in 2005, the inspector noted that one instrument, identified as G-33 (an Eberline ESP-1 instrument with a serial number of 2779) was calibrated on November 5, 2003, and that the calibration expired on November 5, 2004. However, the daily startup checklists for November 11, 12, and 14, 2004, indicated that G-33 was in the Reactor Room and available for use. Further records review indicated that the instrument was not used during that period for any surveys of record but was in the Reactor Room. When this issue was discussed with the licensee, they indicated that the instruments are required to be battery and response checked and that the calibration date is supposed to be checked to ensure that the instrument is within the prescribed calibration period. The licensee was informed that G-33 was available for use past the expiration of the calibration date but that it was apparently not used for conducting any surveys. Because the safety implications were minor, this incident was not cited as a violation. Nevertheless, the licensee was informed that the issue of maintaining properly calibrated instruments for use in the Reactor Room would be identified and followed by the NRC as an IFI.

During this inspection the inspector reviewed the program for maintaining the various instruments used at the facility in calibration. The records of various instruments in use in the Reactor Room were reviewed. The calibration records indicated that all the instruments had been calibrated in the proper timeframe. The licensee had taken the appropriate action to address the issue as required. This IFI is considered closed.

c. Conclusions

Two Inspector Follow-up Items were reviewed and closed.

**8. Exit Interview**

The inspection scope and results were summarized on November 29, 2007, with members of licensee management and staff. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. Although proprietary material was reviewed by the inspector during the inspection, none is included in this report.

## **PARTIAL LIST OF PERSONS CONTACTED**

### **Licensee**

R. Bjorkquist	Operations/Reactor Supervisor
T. Cook	Training Supervisor
S. Frantz	Director, Reactor Facility and Acting Radiation Safety Officer
V. Holfeltz	Associate Director, Reactor Facility
J. Schornack	Requalification Supervisor

### **Other Personnel**

B. Day	Reactor Health Physicist - Contractor
K Fisher	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**

50-288/2005-202-01	IFI	Follow-up on the licensee's actions to complete those audits that had not been done in April by the end of October 2005.
50-288/2005-202-02	IFI	Follow-up on the licensee's actions to maintain properly calibrated instruments in the Reactor Room for use while conducting radiation/contamination surveys.

## **LIST OF ACRONYMS USED**

ALARA	As low as reasonably achievable
CFR	Code of Federal Regulations
DDE	Deep dose equivalent
IFI	Inspector Follow-up Item
IP	Inspection Procedure
kW	kilowatt
mr/yr	millirem per year
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accreditation Program
OSL	Optically stimulated luminescent (dosimeter)



Rev.	Revision
RHP	Reactor Health Physicist
ROC	Reactor Operations Committee
RRC	Reactor Review Committee
RRF	Reed Reactor Facility
RSC	Radiation Safety Committee
RWP	Radiation Work Permit
SDE	Shallow dose equivalent
SOP	Standard Operating Procedure
TLD	Thermoluminescent dosimeter
TS	Technical Specification