

April 24, 2015

Dr. M. Katherine Banks, Director
Texas A&M Engineering Experiment Station
Texas A&M University
3126 TAMU
College Station, TX 77843-3126

SUBJECT: TEXAS A&M UNIVERSITY, TEXAS A&M ENGINEERING EXPERIMENT
STATION – NRC ROUTINE INSPECTION REPORT NO. 50-128/2015-201

Dear Dr. Banks:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) conducted an inspection, on March 26, 2015, at your Nuclear Science Center TRIGA Research Reactor Facility. The enclosed report documents the inspection results, which were discussed on March 26, 2015 with members of your staff.

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 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 and requests for withholding," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of 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>.

M. Banks

- 2 -

Should you have any questions concerning this inspection, please contact Mr. Mike Morlang at (301) 415-4092 or by electronic mail at Gary.Morlang@nrc.gov.

Sincerely,

/RA/

Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-128
License No. R-83

Enclosure:
Inspection Report No. 50-128/2015-201

cc: See next page

cc:

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Test, Research and Training
Reactor Newsletter
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Gainesville, FL 32611

Dr. Dimitris Lagoudas, Deputy Director
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Dr. Sean McDeavitt, Director
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1095 Nuclear Science Road, M/S 3575
College Station, Texas 77843

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

Docket No: 50-128

License No: R-83

Report No: 50-128/2015-201

Licensee: Texas A&M University

Facility: Texas A&M Engineering Experiment Station
Nuclear Science Center Reactor

Location: College Station, TX

Date: March 26, 2015

Inspector: Mike Morlang

Approved by: Kevin Hsueh, Chief
Research and Test Reactors Oversight Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Texas A&M University
Texas A&M Engineering Experiment Station
Nuclear Science Center Reactor
Inspection Report No. 50-128/2015-201

The primary focus of this routine, announced inspection included onsite review of selected aspects of the Texas A&M University (the licensee's) Class II research and test reactor safety programs including: organization and staffing, operations logs and records, and committees, audits and reviews. The licensee's programs were directed toward the protection of public health and safety. No findings of significance were identified.

Organization and Staffing

- The licensee's organization and staffing and assignment of responsibilities remained in compliance with the requirements specified in Technical Specifications Section 6.

Operations Logs and Records

- Operational activities were consistent with applicable Technical Specifications and procedural requirements.

Committees, Audits and Reviews

- The Reactor Safety Board completed the review, oversight, and audit functions required by Technical Specifications 6.2.

REPORT DETAILS

Summary of Facility Status

The Texas A&M University (the licensee's) TRIGA research reactor, licensed to operate at a maximum steady-state thermal power of one megawatt, continued to be operated in support of operator training, surveillance, research, and utilization involving isotope production. During the inspection the reactor was operated to conduct nuclear engineering laboratory classes.

1. Organization and Staffing

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

To verify that the licensee's organization and staffing were as stated in Section 6.1 of the Technical Specifications for the Texas A&M Engineering Experiment Station (TEES), Texas A&M University (TAMU) System, Nuclear Science Center Reactor (NSCR) Facility, Amendment No 17, dated July 22, 2009, the inspector reviewed:

- Organization and staffing for the TAMU Nuclear Science Center (NSC)
- Administrative controls and management responsibilities specified in the NSC Technical Specifications Sections 6
- Reactor Safety Board Audit on Reactor Operations dated March 24, 2015
- Reactor Operations Log Books #230-232, dated August 25, 2014 to present

b. Observations and Findings

The licensee restructured the organization in February of 2015 to evenly distribute the work load and establish an NSC Manager of Safety, a Reactor Operations Manager and a Manager of Engineering. Review of records verified that management responsibilities were administered as required by Technical Specifications Section 6.1.2 and applicable procedures.

To prevent further staffing problems as documented in previous facility incidents, the NSC Director implemented a new operator mentoring program. Newly licensed operators stand their duty position with a seasoned operator for a period of time following the issuance of a new NRC Reactor Operator License. The NSC Director also issued a directive in September of 2014 for each operator and on duty person to sign into the console log book themselves and indicate the duty position that they were fulfilling. This made identification of on duty personnel very clear and provided a reinforcement of current responsibilities by the duty staff.

The restructured organization and its staff's well-defined responsibilities have increased the flow of information throughout the facility and provided a clear sense of direction to all the staff.

c. Conclusion

The licensee's organization and staffing, and assignment of responsibilities were in compliance with the requirements specified in Technical Specifications Section 6.

2. Operations Logs and Records

a. Inspection Scope (IP 69001)

The inspector reviewed selected aspects of the following to verify compliance with Technical Specifications Sections 2, 3, and 6 and the applicable procedures:

- Staffing for operations as recorded on the reactor log sheets
- NSCR Operations Log Books Numbers 230-232, dated August 25, 2014, to present
- Selected entries on the following facility forms:
 - NSC Form 531, entitled "Morning Facility Checklist - Daily," latest revision dated June 26, 2003, from January 2014 to present
 - NSC Form 532, entitled "TRIGA Reactor Pre-startup Checklist," latest revision dated September 4, 2014, from November 2014 to present
 - NSC Form 533, entitled "Reactor Operations Facility Checklist - Daily Surveillance," latest revision dated May 13, 2013, from November 2014 to present
 - NSC Form 534, entitled "Facility Security Shutdown Checklist - Daily Surveillance," latest revision dated July 13, 2013, from November 2014 to present
- Selected TAMU NSC Daily Senior Reactor Operator Checklists for 2014 and 2015

b. Observations and Findings

Reactor operations were carried out following written procedures and Technical Specifications requirements. Information on the operational status of the facility was recorded in console log books and on checklists as required by procedure. The inspector verified that required items were logged and cross referenced with other logs and forms, and that Technical Specifications Sections 2 and 3 operational limits had not been exceeded.

The logs and checklists were being reviewed on a daily basis and any discrepancies were quickly corrected and a note to the appropriate file was written to explain the issue. With the increased review and correction of checklist errors, the Inspector Follow-up Item issued during the September inspection for incomplete checklists is considered closed. (IFI-05-128/2014-201-01)

The inspector attended a safety brief for a fuel movement required to set up for an upcoming nuclear engineering lab. The brief was very thorough and

individual responsibilities and possible hazards related to each step were covered in detail.

c. Conclusion

Operational activities were consistent with applicable Technical Specification and procedural requirements.

3. Committees, Audits, and Reviews

a. Inspection Scope (IP 69001)

To verify that the licensee had established and conducted reviews and audits as required in Technical Specifications 6.2, the inspector reviewed:

- Completed audits and reviews from 2014 to date
- SOP, Section I, Procedure H, "Reactor Safety Board," dated August 19, 2003
- Reactor Operations Audit, dated March 24, 2015

b. Observations and Findings

Technical Specifications Section 6.2.4 requires that the Reactor Safety Board or a subcommittee thereof shall audit reactor operations and the radiation protection programs at least quarterly, but at intervals not to exceed 4 months. Audits shall include, but are not limited to, the following:

Facility operations, including radiation protection, for conformance to the TS, applicable license conditions, and SOPs at least once per calendar year (interval between audits not to exceed 15 months)

The retraining and requalification program for the operations staff at least once per calendar year (interval between audits not to exceed 15 months)

The facility security plan and records at least once per calendar year (interval between audits not to exceed 15 months)

The reactor facility emergency plan and implementing procedures at least once per calendar year (interval between audits not to exceed 15 months)

The inspector reviewed the documentation and results of the audit that had been conducted by the Reactor Safety Board on March 24, 2015. The audit results indicated only minor editorial errors and recommendations to make log entries clearer to oncoming shift personnel.

As a result of an outside peer review conducted by the TEES Compliance Office with the assistance of the Test Research and Training Reactor Executive

Committee, the Reactor Safety Board has started meeting monthly. This monthly meeting is expected to continue until all the recommendations of the peer review have been completed.

As a result of the Reactor Safety Board Audit, the licensee's implementation of the fingerprinting requirements in 10 CFR 73.57 were reviewed and verified. Specifically, the licensee has at least one NRC-approved reviewing official to receive fingerprinting results and make trustworthiness and reliability determinations based on those results. The licensee is appropriately limiting unescorted access to special nuclear material (SNM) to those individuals who have been determined to be trustworthy and reliable based on a fingerprint-based criminal history records check. The licensee was properly controlling and protecting the fingerprint records as required by regulations. Based on the observations and findings of the inspection the fingerprinting requirements appear to be acceptably implemented by the licensee.

c. Conclusion

The Reactor Safety Board acceptably completed review and oversight functions required by Technical Specifications 6.2.

4. Exit Interview

The inspector presented the inspection results to the licensee staff at the conclusion of the inspection on March 26, 2015. The inspector described the areas inspected and discussed in detail the inspection observations. The licensee acknowledged the findings presented and did not identify as proprietary any of the material provided to or reviewed by the inspector during the inspection.

PARTIAL LIST OF PERSONS CONTACTED

Licensee Personnel

S. McDeavitt	Director, Nuclear Science Center
J. Newhouse	Associate Director, Nuclear Science Center
A. Booth	Radiation Safety Officer

INSPECTION PROCEDURES USED

IP 69001	Class II Non-Power Reactors
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ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-128/2014-201-01	IFI	Failure of Senior Reactor Operator to review numerous checklist
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LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
IP	Inspection Procedure
NSC	Nuclear Science Center
NSCR	Nuclear Science Center Reactor
NRC	U.S. Nuclear Regulatory Commission
SNM	Special Nuclear Material
SOP	Standard Operating Procedure