

August 31, 2010

Dr. Raymond Juzaitis
Head of Nuclear Engineering
Texas A&M University
Zachry Bldg. Room 129
College Station, TX 77843-3133

SUBJECT: TEXAS A&M UNIVERSITY - NRC NON-ROUTINE INSPECTION REPORT
NO. 50-059/2010-203

Dear Dr. Juzaitis:

On August 10-11, 2010, the U.S. Nuclear Regulatory Commission (NRC, the Commission) completed an inspection at your Texas A&M University AGN-201M Research Reactor facility (Inspection Report No. 50-059/2010-203). The enclosed inspection report documents the inspection results, which were discussed on August 11, 2010, with C. Crouch, Reactor Supervisor.

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, observation of activities, and interviews with 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 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 Mike Morlang at (301) 415-4092 or by electronic mail at Gary.Morlang@nrc.gov.

Sincerely,

/RA/

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

Docket No. 50-059
License No. R-023

Enclosure: NRC Inspection Report No. 50-059/2010-203
cc w/encl: See next page

Texas A&M University

Docket No. 50-59

cc:

Mayor of the City of College Station
College Station, TX 77843-3575

Governor's Budget and
Planning Office
P.O. Box 13561
Austin, TX 78711

Bureau of Radiation Control
State of Texas
1100 West 49th Street
Austin, TX 78756

Dr. W. D. Reece
Director, Nuclear Science Center
Texas A&M University
F.E. Box 89
College Station, TX 77843-3575

Test, Research, and Training
Reactor Newsletter
University of Florida
202 Nuclear Sciences Center
Gainesville, FL 32611

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ACCESSION NO.: ML102370360

TEMPLATE #: NRC-002

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NAME	GMorlang	GLappert	JEads
DATE	8/26/2010	8/26/2010	8/31/2010

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

Docket No.: 50-059

License No.: R-23

Report No.: 50-059/2010-203

Licensee: Texas A&M University

Facility: AGN-201M Research Reactor

Location: College Station, TX

Dates: August 10-11, 2010

Inspector: Mike Morlang

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

EXECUTIVE SUMMARY

Texas A&M University
AGN-201M Research Reactor
Report No: 50-059/2010-201

The primary focus of this non-routine, announced inspection included on-site review of selected aspects of the Texas A & M University's (the licensee's) Class II research reactor safety program including: 1) operations logs and records; 2) procedures and 3) surveillance and limiting conditions for operations 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 deviations or violations were identified.

Operations Logs and Records

- The reactor had recently been restarted following an extended shutdown period of more than 10 years.

Procedures

- Facility procedures had been revised to reflect the new control console and other facility upgrades.

Surveillances and Limiting Conditions for Operation

- The licensee had completed all Technical Specification required surveillance items prior to restarting the reactor.

REPORT DETAILS

Summary of Plant Status

The Texas A&M University (TAMU, the licensee) 5 watt Aerojet General Nucleonics-201 Modified (AGN-201M) training reactor had been restarted on June 10, 2010 following an extended shutdown of over 10 years. The licensee had recently completed an upgrade to the control system to utilize current digital technology. During the inspection, the reactor was operated at a power level of 0.25 watts.

1. Reactor Operations and Logs and Records

a. Inspection Scope (IP 69001)

The inspector reviewed selected portions and/or aspects of:

- Reactor Safety Board meeting minutes for October 31, 2007 to the present
- Reactor Console Log Book from June 10, 2010 to present
- Annual Operating Report of the Texas A&M University AGN-201M Training Reactor, for the period June 1, 2008 - May 31, 2009
- Rod Calibration Curves dated June 25, 2010

b. Observations and Findings

As noted previously, the last date of operation of the reactor was August 25, 1999. In order to improve the operation of the reactor, the licensee had completed various upgrades to different components of the reactor control system. Most recently, the licensee had completed the reconfiguration of the control console to have digital outputs for power and period in addition to having analog scrams to conform to the present safety analysis report. The licensee had restarted the reactor on June 10, 2010. The restart plan included all technical specification (TS) required surveillance items.

c. Conclusion

Reactor operations were being conducted in accordance with the requirements of the TS.

2. Procedures

a. Inspection Scope (IP 69001)

To determine whether facility procedures met the requirements outlined in TS Section 6.5, the inspector reviewed:

- PWCL-3, Power Calibration dated June 27, 2010

- ROEX-3, Determining Total Excess Reactivity dated June 25, 2010
- RDTM-6, Measuring Rod Drop Times dated June 10, 2010
- RITM-6, Measuring Control Rod Reactivity Insertion Rates dated June 8, 2010
- RCAL-6, Determining the Reactivity Worth of Each Control Rod dated June 25, 2010
- Numerous maintenance and test procedures

b. Observations and Findings

All preventive maintenance and TS required surveillance procedures had been rewritten and approved by the Reactor Safety Board prior to restart of the reactor. The licensee had completed all TS required surveillance and maintenance procedures.

c. Conclusion

Procedures were being reviewed, approved and used in accordance with TS.

3. Surveillance and Limiting Conditions for Operation

a. Inspection Scope (IP 69001)

The inspector reviewed the following to ensure that the surveillance requirements and limiting conditions for operation specified in TS Section 4.0 will be met prior to restart:

- AGN Reactor Console Instrumentation and Electronics Upgrade Modification Authorization, dated January 21, 2008
- All Preventive Maintenance Procedures
- Maintenance Log dated November 3, 1983 to present
- Scram Circuit diagram
- Console Upgrade Block diagram
- Surveillance and Maintenance records notebook
- CRIS-6, Maintenance Procedure for conducting a detailed Control Rod Inspection and Functional Check, dated October 16, 1979
- Annual Reports for the Texas A&M University AGN-201M Training Reactor for the periods from June 1, 2007 to May 31, 2008 and from June 1, 2008 to May 31, 2009

b. Observations and Findings

The licensee had completed the actions specified in TS Section 4 prior to bringing the reactor back into full operation. The licensee was committed to following the surveillance program once the reactor was again operational.

c. Conclusion

The licensee had completed all TS required surveillance and maintenance activities prior to restarting the reactor.

4. Exit Interview

The inspection scope and results were summarized on August 11, 2010 with members of licensee management. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Crouch Reactor Supervisor

Other Personnel

D. Menchaca Manager and Radiological Safety Officer, Environmental Health and Safety Department, Texas A&M University

A. Hanna Electronics Technician, Texas A&M University NSC

INSPECTION PROCEDURES USED

IP 69001 Class II Research and Test Reactors

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

50-059/2006-201-03 IFI Follow-up to verify the licensee sends a plan to the NRC describing how the operator will become proficient in the operation of the AGN.

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AGN	Aerojet General Nucleonics
10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
EHSD	Environmental Health and Safety Department
E-Plan	Emergency Plan
HP	Health Physics
IFI	Inspector Follow-up Item
IP	Inspection Procedure
mr	Millirem
NRC	U. S. Nuclear Regulatory Commission
NSC	Nuclear Science Center
OSL	Optically Stimulated Luminescent
RS	Reactor Supervisor
RSB	Reactor Safety Board
SRO	Senior Reactor Operator
TS	Technical Specifications