

APPENDIX  
U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-59/82-01

License: R-23

Docket: 50-59

Category: H

Licensee: Texas A&M University (TAMU)  
College Station, Texas

Facility Name: AGN-201M Reactor (5 Watts)

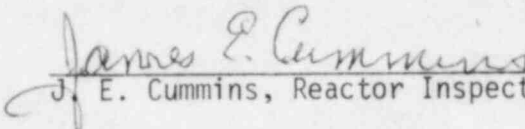
Inspection At: College Station, Texas

Inspection Conducted: June 23, 1982

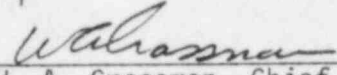
Inspectors:

  
G. L. Constable, Reactor Inspector

Sept 28, 1982  
Date

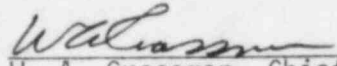
  
J. E. Cummins, Reactor Inspector

Sept. 28, 1982  
Date

  
W. A. Crossman, Chief  
Reactor Project Section B

10/4/82  
Date

Approved:

  
W. A. Crossman, Chief  
Reactor Project Section B

10/4/82  
Date

Inspection Summary

Inspection on June 23, 1982 (Report No. 50-59/82-01)

Areas Inspected: Routine, unannounced inspection of the licensee's organization, operations and maintenance logs, reactor safety board activities, operator requalification program, surveillance requirement, experiments, radiation protection and emergency planning. The inspection involved 24 inspector-hours by three NRC inspectors.

Results: Of the eight areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

\*Dr. C. A. Erdman, Head, Department of Nuclear Engineering  
\*Dr. G. A. Schlapper, Reactor Supervisor (Acting)  
B. L. Willits, Reactor Operator  
D. C. Carpenter, Reactor Operator  
J. E. Simet, Health Physics

\*Present at exit interview.

2. Scope of Inspection

The purpose of this inspection was to review the operating history of the reactor for the period April 1980 through June 1982 and to verify that the facility was operated and maintained in accordance with regulatory requirements.

3. Organization

The NRC inspectors reviewed changes to the licensee's organization since March 1980. The previous reactor supervisor resigned in October 1980. The position was temporarily filled during March of this year and a permanent reactor supervisor is presently in training. During July of 1981, Dr. Erdman succeeded Dr. Cochran as Nuclear Engineering Department Head. The facility now appears to be emerging from a period of inactivity.

No violations or deviations were noted.

4. Reactor Operation

The NRC inspectors observed a reactor startup to 5 (watts) power level and a manual scram. A pre-startup checkout of the reactor was observed as a part of the startup. The startup was performed in accordance with the operating procedure pertaining to Texas A&M University AGN-201M training reactor facility.

No violations or deviations were noted.

5. Logs and Records

The NRC inspectors reviewed the Reactor Operation Log Book 29 with entries dated from March 3, 1981, to April 13, 1982, and Book 30 with entries dated April 14, 1982, to June 23, 1982.

The annual operating reports for the years 1979-80, 1980-81, and 1981-82, were reviewed.

No violations or deviations were noted.

6. Review and Audit

Texas A&M conducts combined Reactor Safety Board (RSB) meetings for both the AGN-201M and the Nuclear Science Center pool-type research reactors. The NRC inspectors reviewed RSB minutes and audits listed below.

RSB Minutes

Meeting Number

87	April 30, 1980
88	June 3, 1980
89	October 24, 1980
90	January 23, 1981
91	January 28, 1982
92	March 5, 1982

It appears that for a period of time since the last NRC inspection, the AGN facility operations staff consisted essentially of only the Nuclear Engineering Department Head. Several routine activities were not conducted. During the past year, four new people have become actively involved with the facility and appear to be making a dedicated effort to reevaluate their compliance with regulatory requirements through formal and informal audits of facility status. In view of this fresh look at facility operation, it appears that these activities are being adequately addressed.

No violations or deviations were identified.

7. Surveillance and Maintenance

The NRC inspectors reviewed maintenance procedures and logs to verify compliance with Technical Specifications. The procedures and logs reviewed were as follows:

a. Monthly Maintenance Procedures

- Checking Subcritical Assembly Water Conductivity (CAPH-1)
- Testing Emergency Lighting (EMLT-1)
- Checking Operations of Radiation Survey Instruments (INOP-1)

Maintenance completion for the monthly maintenance procedures was logged in a monthly certification log. The log showed that the monthly maintenance had not been performed between January 15, 1981, and January 22, 1982.

b. Quarterly Maintenance

Power Calibration (PWCL-3)  
Setting Channel One High Voltage (CH1P-3)  
Setting Channel Two High Voltage (CH2P-3)  
Setting Channel Three High Voltage (CH3P-3)  
Setting Skirt Monitor High Voltage (SKMP-3)  
Calibrate Channel No. 1 and Verify Low Trip (C1LT-3)  
Verify Channel No. 2 Low Trip (C2LT-3)

The quarterly certification log showed that the quarterly preventive maintenance had not been performed during the time periods indicated below.

<u>Procedure</u>	<u>Performed</u>	<u>Next Performed</u>
PD2M-3	10-23-80	12-18-81
C1LT-3	10-23-80	12-18-81
C2LT-3	10-23-80	12-18-81
C3LT-3	10-23-80	12-18-81
C2HT-3	10-23-80	12-18-81
C3HT-3	10-23-80	12-18-81
ROEX-3	10-17-80	10-5-81

c. Semiannual Maintenance

Conducting a Detailed Control Rod Inspection and Functional Check (CRIS-6)  
Measuring Rod Drop Times (RDTM-6)

Semiannual certification log showed that the semiannual preventive maintenance had not been performed during the time periods indicated below.

<u>Procedure</u>	<u>Performed</u>	<u>Next Performed</u>
RCAL-6	7-21-80	10-2-81
RSIC-6	7-22-80	10-23-81
RADS-6	6-4-80	10-23-81
EALM-6	9-25-80	12-18-81

Technical Specification 4.2.C requires that the preventive maintenance be performed at specified intervals for reactor operation. A review

of the reactor operations log by the NRC inspectors showed that the reactor had been operated at various times during the time periods when the preventive maintenance had not been performed. Recent organizational and administrative changes in the control of the AGN-201M facility have been taken that should correct these problems in the future. The effectiveness of these corrective actions will be reviewed on a subsequent NRC inspection.

This is an open item (8201-01).

The NRC inspectors noted that Technical Specification 3.2 requires that the safety and coarse rods be interlocked, but there is no surveillance performed that verifies these interlocks work. At the exit meeting, the NRC inspectors requested that the RSB review this matter to determine an effective method by which the interlock function could be assured.

This is an open item (8201-02).

No violations or deviations were identified.

8. Requalification Program

An audit dated March 26, 1982, conducted by Dr. G. A. Schlapper, Reactor Supervisor (Acting), identified several deficiencies in the licensee's implementation of the requalification program. In part, these deficiencies were the result of a personnel turnover and resulting vacancies in the facility staff. Since these deficiencies were identified by the licensee's staff and corrective action was in progress at the time of this inspection, the overall requalification program will be inspected during the next scheduled NRC inspection (Open Item 8201-03) in order to ascertain adequate corrective actions.

No violations or deviations were identified.

9. Experiments

The NRC inspectors reviewed the experiment procedures. No new experiments have been approved since 1976.

No violations or deviations were noted.

10. Facility Tour

The NRC inspectors toured the reactor facility. The following items were examined.

- Housekeeping
- Availability of Procedures
- Posting per 10 CFR 19 and 10 CFR 20
- Access Control
- Personnel Monitoring
- Availability of Radiation Survey Meters

No violations or deviations were noted.

11. Radiation Control

The NRC inspectors reviewed radiation surveys and calibration of radiation monitoring and measurement instrumentation for compliance with 10 CFR 19 and 10 CFR 20.

No violations or deviations were identified.

12. Emergency Planning

The NRC inspectors reviewed the Texas A&M University AGN-201M Training Reactor Facility Emergency Plan, dated March 2, 1982. The submittal of an upgraded emergency plan for the subject facility was discussed. Guidance criteria as contained in NUREG-0849, "Standard Review Plan for the Review and Evaluation of Emergency Plans for Research and Test Reactors," and Regulatory Guide 2.6, "Emergency Planning for Research and Test Reactors," Revision 1, March 1982, were referenced. The submittal date for the upgraded plans as contained in the final amendment to 10 CFR 50.54(r) was noted.

No violations or deviations were identified.

13. Open Items

Open items are matters discussed during the course of the inspection that will be reviewed during future inspections to determine if future NRC action is appropriate. During the course of this inspection, three new open items were identified.

<u>Number</u>	<u>Title</u>	<u>Paragraph</u>
8201-01	Preventive Maintenance Requirements	7
8201-02	Control Rod Interlocks	7
8201-03	Requalification Program Implementation	8

No violations or deviations were identified.

14. Exit Interview

At the conclusion of the inspection, the inspection findings were discussed with the individuals listed in paragraph 1.

