

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-602/91-01

Construction Permit: CPRR-123

Docket: 50-602

Licensee: University of Texas
College of Engineering
Department of Mechanical Engineering
Nuclear Engineering Program
Austin, Texas 78712

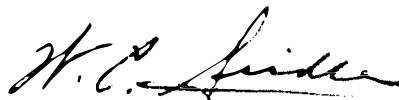
Facility Name: Nuclear Engineering Teaching Laboratory (NETL)
(TRIGA Mark II)

Inspection At: NETL, Balcones Research Center

Inspection Conducted: July 16, 1991

Inspector: M. E. Murphy, Reactor Inspector, Test Programs Section
Division of Reactor Safety

Approved:



W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety

7/23/91
Date

Inspection Summary

Inspection Conducted July 16, 1991 (Report 50-602/91-01)

Areas Inspected: Routine, announced inspection of status of three open items.

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

The status of three emergent equipment problem items that were considered necessary for fuel loading and startup and identified in NRC Inspection Reports 50-602/90-03 and 50-602/90-04 were reviewed. All repairs, calibrations and installations associated with these open items were found to be completed satisfactorily. The three open items identified as 602/8904-05, 602/8904-06, and 602/9003-01 were closed.

DETAILS

1. PERSONS CONTACTED

*T. Bauer, Assistant Director/Supervisor, NETL
M. Krause, Manager of Reactor Operations
B. Wehring, Director, NETL

*Denotes attendance at exit meeting.

2. LICENSEE ACTION ON PREVIOUS INSPECTION FINDINGS

2.1 (Closed) Open Item (602/8904-05): The licensee had experienced some component failure problems with the Argon-41 monitoring system. This system is described in the safety analysis report (SAR) and also included in the draft Technical Specifications. The system is designed to measure the concentrations of Argon-41 released from the facility and to alert reactor operators if concentrations exceed established limits. This item remained open pending installation, calibration, and declaring the system operational before initial criticality.

The inspector reviewed the licensee's annotated radiation monitoring system checkout and evaluation sheet for the status of the Argon-41 monitoring system. The entry, dated January 22, 1991, stated that a replacement module was received from the vendor for the analog meter, count rate discriminator and HV (high voltage) circuit board. Installation and checkout was signed off on June 24, 1991, and the unit declared fully operational on July 3, 1991. The inspector also reviewed the original calibration reference, dated July 2, 1989, and the revision of transfer calibration, dated July 3, 1991. The inspector observed a system response check conducted by the licensee that was satisfactory.

This item is closed.

2.2 (Closed) Open Item (602/8904-06): The high efficiency particulate air (HEPA) filter system did not meet the acceptance criteria for by-pass leakage during the initial in-place testing of the system. The HEPA filter system is described in the SAR and was designed to reduce radioactive gaseous effluents released from the reactor facility. This item remained open pending repairs, installation, and meeting the in-place testing criteria, before initial criticality.

The inspector reviewed the maintenance history for the HEPA filter and the test report submitted by Energy Testing and Balance, Inc., of Austin, Texas. The HEPA filter met the in-place testing criteria and is considered fully operational.

This item is closed.

2.3 (Closed) Open Item (602/9003-01): Beam port shield plug No. 3 was found to have an extensive crack in the graphite portion of the plug. This crack

could have caused separation of the graphite section from the steel and lead flange section. This item remained open pending resolution of the failure and repair or replacement of the beam port shield plug. The resolution of the failure was to encapsulate the graphite portion of all five plugs with a thin aluminum sheath. All five plugs have been modified, received back from the supplier, and installed.

This item is closed.

3. EXIT MEETING

The inspection scope and findings were discussed with Dr. Tom Bauer at the conclusion of the inspection on July 16, 1991. The licensee did not identify as proprietary any of the material provided to, or reviewed by, the inspector.