



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

Report No. 50-13/82-02

Licensee: Babcock and Wilcox Company  
Lynchburg Research Center  
Lynchburg, VA 24505

Facility Name: Lynchburg Research Center

Docket No. 50-13

License No. CX-10

Inspection at Lynchburg Research Center, near Lynchburg, Virginia

Inspector: A. K. Hardin 10/11/82  
A. K. Hardin Date Signed

Approved by: C. W. Burger 10/5/82  
C. Burger, Section Chief, Division of Project and Resident Programs Date Signed

SUMMARY

Inspection on September 22-23, 1982

Areas Inspected

This routine unannounced inspection involved 9 inspector-hours on site in the areas of Organization, Logs and Records, Requalification Training, Procedures, Safety Review Committee Audits, Procedure Compliance, Surveillance and Licensee Event Reports.

Results

Of the seven areas inspected, no items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

\*Dr. T. C. Engelder, Director, Lynchburg Research Center

\*M. N. Baldwin, Operations Supervisor

G. S. Hoovler, Senior Reactor Operator

\*A. F. Olsen, Licensing Administrator

C. A. Burnham, Senior Reactor Operator

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 23, 1982, with those persons indicated in paragraph 1 above.

### 3. Licensee Action on Previous Enforcement Matters

No previous enforcement items were reviewed by the inspector.

### 4. Unresolved Items

No unresolved items were identified.

### 5. Organization, Logs and Records

The organization of the Lynchburg Research Center as it relates to the CX-10 Critical Facility was reviewed. No items of noncompliance or deviations were identified. Operations log books for the period February 15, 1982 through September 2, 1982 were reviewed. A spot check of the log verified that the qualification status of the operator and senior operator had been entered in the log at the beginning of each reactor run. Several Daily Check Lists and Weekly Check Lists were reviewed, to verify that the lists were being completed as required by the licensee's procedures.

### 6. Requalification Training

The licensee's Requalification Training Program was reviewed against their commitment to the NRC of April 8, 1974. At present there are four licensed personnel associated with the CX-10, three Senior Reactor Operators and one Reactor Operator. Two licenses SOP-3263-1 and OP-2086-8 had expired on 6/6/82 and 5/24/82 respectively. However, the licensee had made application for renewal on 4/28/82 and 3/24/82, thus effectively extending the licenses. Requalification exams and the grades achieved were examined.

The licensee's requalification program requires the reactor operations supervisor to evaluate the performance of each operator and senior operator

enrolled in the requalification program for the CX-10 facility. The inspector reviewed the evaluations made for the last two operator requalification periods. At the exit interview the inspector stated, one evaluation was satisfactory while the latest evaluation did not appear to meet the requirements of a performance evaluation. The evaluation in question consisted of an observation that the operator had made a passing grade on the requalification tests. The licensee responded that requalification test would be given later in 1982 and at this time a more extensive performance evaluation of operators enrolled in the program would be made.

No items of noncompliance or deviation were identified in the area.

#### 7. Procedures

A document entitled "Revised CX-10 Operating Procedures", dated July 25, 1980 was reviewed by the inspector. The Procedure Manual contained ten procedures several of which had been revised as late as May 4, 1982. The procedures had been prepared, approved, and issued in accordance with the licensee's procedure and were considered adequate by the inspector, to meet the needs of the facility. Revisions to the procedure were spot checked to verify they were authorized by the Reactor Supervisor, concurred in by the Site Facility Supervisor and reviewed and approved by the Safety Review Committee.

#### 8. Safety Review Committee

The minutes of the Safety Review Committee (SRC) meetings for the period July 1981 through April 1982, and four audits conducted by Safety Review Committee members were reviewed. The inspector observed that for all meetings that five of seven members were present which represented acceptable attendance. Four audits of the CX-10 Facility were conducted between December 1971 and August 1982. The items reviewed in the SRC audit and the frequency of the review were considered satisfactory by the inspector. No areas of noncompliance or deviations were identified by the inspector.

#### 9. Procedure Compliance

The facility is presently being operated for critical experiments of Urania-Gadalinia fuel program. The inspector observed a period of operation of the facility including compliance with facility procedures. During observation of operation and during a tour of the facility the inspector observed radiation controls and general housekeeping. No areas of noncompliance or deviations were identified.

#### 10. Surveillance

During the inspection a review was made of surveillance procedures dealing with rod drop time measurements, rod worth measurements and power calibration measurements. Also daily and weekly surveillance, as recorded in the

control room logs, from January 1982 through September 1982 were reviewed. No items of noncompliance or deviations were identified in these areas.

#### 11. Licensee Event Report

On May 18, 1981 the licensee sent to NRR a report describing an improper period channel response. An attempt was made on April 24, 1981 to calibrate the log N-2 channel, one of two redundant period channels, in the safety system. A 13 second period was simulated by a linear voltage ramp at the output of the Log N amplifier. The period meter indicated a varying 40 to 80 second period. The licensee found no evidence of equipment failure, component degradation or improper adjustment. The licensee stated in the event report that operation had been suspended and would not be resumed until the problem was corrected and the system successfully tested. The licensee committed to informing the NRC of the result of the investigation when the investigation was completed. As of the inspection date the licensee had not reported on the results of the investigation. During the inspection a review was made of the investigation and discussions were held with reactor personnel regarding modifications made and the safety implications of the Log N-2 problem. The licensee's review of the event is contained in a letter entitled "CX-10 Operating Procedure Change - Request for SRC Approval" with three attachments, dated June 5, 1981.

The inspector concluded the review and action taken by the licensee were satisfactory. However, at the exit interview the inspector stated the licensee should meet the commitment to inform the NRC in writing of the results of their investigation. The licensee stated they would prepare and send to NRR the results of their investigation by November 3, 1982. This item is identified as open item 13/82-02-01.