

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-213/79-08

Docket No. 50-213

License No. DPR-61 Priority - Category C

Licensee: Connecticut Yankee Atomic Power Company
Hartford, Connecticut 06101

Facility Name: Haddam Neck Plant

Inspection at: Haddam, Connecticut

Inspection conducted: March 20-23, 1979

Inspectors: W. H. Baunack
W. H. Baunack, Reactor Inspector

5/7/79
date signed

date signed

date signed

Approved by: H. B. Kister
H. B. Kister, Chief, Nuclear Support
Section No. 2, RO&NS Branch

5/8/79
date signed

Inspection Summary:

Inspection on March 20-23, 1979 Report 50-213/79-08

Areas Inspected: Routine, unannounced inspection by a regional based inspector of licensee action on previous inspection findings; administrative control of safety related calibrations; surveillance calibration of safety related components and equipment required by Technical Specifications; calibration required by Technical Specifications of components and equipment associated with safety related systems and/or functions; inspector witnessing of calibrations; calibration and control of test equipment; and facility tours. The inspection involved 25 inspector-hours onsite by one NRC regional based inspector.

Results: Of the seven areas inspected, no items of noncompliance were identified in six areas; one apparent item of noncompliance (Deficiency-Failure to prepare a temporary procedure change-Paragraph 4.c) was identified in one area.

DETAILS

1. Persons Contacted

- G. Bouchard, Maintenance Foreman
- N. Burnett, Operations Supervisor
- *T. Campbell, Instrument and Control Supervisor
- J. Chiarella, Instrument and Control Foreman
- *J. Ferguson, Engineering Supervisor
- R. Gracie, Operations Assistant
- R. Reeves, Supervisory Control Operator

The inspector also interviewed other licensee employees which included members of the engineering, instrument and control, and operations staffs, and reactor operators.

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (213/78-07-01): The inspector verified changes had been made to the following procedures to correct inconsistencies between data sheets and values given in the procedures: SUR 5.2-34, Boric Acid Storage Tank Level Calibration; SUR 5.2-17, Boric Acid Control Calibration, Boric Acid Flow Recorder; SUR 5.2-17, Boric Acid Flow Integrator Calibration; SUR 5.2-46, Demineralized Water Storage Tank Level Calibration, High Level Alarm.

(Closed) Unresolved Item (213/78-07-02): The data associated with a retest of EG-2B, KW Meter performed on March 3, 1978 was reviewed and found to be acceptable.

(Closed) Deficiency (213/78-07-03): The inspector verified that an instrument and control instruction has been issued which provides instruction relative to test gauge calibration documentation. In addition, test gauge calibration documentation was found attached to surveillance calibration procedures where applicable during the inspection.

(Closed) Unresolved Item (213/78-07-05): The inspector verified that the licensee has prepared procedures for charging pump and boric acid pump surveillance requirements. Charging pump surveillance has been included in SUR 5.1-4, Core Cooling System Hot Operational Test, Revision 4, August 25, 1978, and Boric Acid Pump Surveillance is performed in accordance with SUR 5.1-104, Boric Acid Pump Weekly Functional Test, Revision 1, October 27, 1978.

3. Administrative Control of Safety Related Calibrations

The inspector performed an audit of the licensee's administrative controls in this area by conducting a sampling review of the below listed administrative procedures with respect to the requirements of the Technical Specifications, Section 6, "Administrative Controls," ANSI N18.7, "Administrative Controls for Nuclear Power Plants" and Regulatory Guide 1.33, "Quality Assurance Program Requirements."

- Administrative Procedure No. 1.1-42, Periodic Procedure Review Program, Revision 3, May 12, 1977.
- Quality Assurance Procedure (QAP) No. QA 1.2-5.2, Procedure Format, Revision 2, May 12, 1977.
- QAP No. QA 1.2-6.4, Temporary Procedure Change, Revision 5, June 2, 1978.
- QAP No. QA 1.2-11.1, Operational Surveillance Tests, Revision 2, May 7, 1976.
- QAP No. QA 1.2-11.2, Review of Test Data, Revision 1, June 11, 1978.
- QAP No. QA 1.2-12.1, Control of Measuring and Test Equipment, Revision 3, August 4, 1978.

No items of noncompliance were identified.

4. Surveillance Calibration of Safety Related Components and Equipment Required by Technical Specifications

- a. The inspector reviewed calibration procedures and associated data sheets on a sampling basis to verify the following:
 - Calibration frequency requirements have been met;
 - Applicable system status during component calibration was in conformance with Technical Specification limiting conditions for operations;
 - Procedure format provided detailed stepwise instructions;
 - Procedure review and approval were as required by Technical Specifications;

- Trip points of calibrated components were in conformance with Technical Specification requirements; and,
 - Technical content of procedures was sufficient to result in satisfactory component calibration.
- b. The following calibration procedures/data were selected for the above review:
- Surveillance Procedure No. SUR 5.2-6, Steam Generator Level, Revision 2, April 20, 1978. Data was reviewed for surveillance performed February 7, 1979.
 - Surveillance Procedure No. SUR 5.2-11, Steam Generator Steam Flow and Feedwater Channel Calibration and Checkout of Associated Trips, Alarms and Controls, Revision 2, June 11, 1978. Data was reviewed for calibration performed February 20, 1979.
 - Surveillance Procedure No. SUR 5.2-23, Reactor Coolant Flow Channel Calibration, Revision 0, August 8, 1974. Data was reviewed for calibration performed February 14, 1979.
 - Surveillance Procedure No. SUR 5.2-19, Reactor Coolant Loop Valve Interlock Test, Revision 1, August 25, 1976. Data was reviewed for calibration performed March 2, 1979.
 - Surveillance Procedure No. SUR 5.2-10, Refueling Water Storage Tank Level Check, Revision 1, September 16, 1976. Data was reviewed for check performed December 7, 1978.
 - Surveillance Procedure No. SUR 5.2-18, Refueling Water Storage Tank Level Calibration, Revision 1, January 28, 1977. Data was reviewed for calibration performed January 11, 1979.
 - Surveillance Procedure No. SUR 5.2-20, Residual Heat Removal Flow Calibration, Revision 1, October 23, 1977. Data was reviewed for calibration performed January 12, 1979.
 - Surveillance Procedure No. SUR 5.2-14, Reactor Containment Pressure Channel Calibration, Revision 1, June 28, 1978. Data was reviewed for calibration performed January 13, 1979.

- Surveillance Procedure No. SUR 5.1-75, Power Range Calibrations, Revision 1, August 25, 1977. Data was reviewed for calibrations performed March 1, 1979 through March 22, 1979.
- Surveillance Procedure No. SUR 5.5-3, Testing of Rod Step Counters, Revision 2, November 23, 1977. Data was reviewed for test performed February 24, 1979.

b. As a result of the above review the following items were identified.

- (1) Surveillance Procedure SUR 5.2-18, Refueling Water Storage Tank Level Calibration, requires that the low level alarm setpoint shall be set equal to or greater than 230,000 gallons. (Technical Specifications require that not less than 230,000 gallons be maintained in the refueling water storage tank). Records of a surveillance performed on January 13, 1979 show that the low level alarm was set to alarm at a level of 227,000 gallons. Procedure QA 1.2-6.4, Temporary Procedure Change, Step 5.1, states "When a deviation from a procedure is required, a temporary procedure change shall be utilized." No temporary procedure change was prepared for the deviation from the calibration procedure. This is considered to be an item of noncompliance at the deficiency level (213/79-08-01).
- (2) Technical Specification Table 4.2-1 requires that a nuclear power channel calibration be performed daily. Records show that daily power range calibrations are being performed. However, the procedure describing the performance of this required surveillance is written only for the 100% power condition. For power levels at other than 100% power, normal operating procedures specify the desired power range channel settings. The licensee stated the power range calibration procedure would be reviewed to provide for its use at all power levels, and to include requirements now provided in normal operating procedures. This item is unresolved pending completion of the licensee's action described above and subsequent NPC:RI review (213/79-08-02).

5. Calibration Required by Technical Specifications of Components and Equipment Associated with Safety Related Systems and/or Functions

- a. The inspector reviewed on a sampling basis, the program established for calibration of components associated with safety related systems required by ANSI 18.7 and Appendix "A", USNRC Regulatory Guide 1.33, November 1972. These components are used to monitor system parameters to comply with the safety limits, limiting conditions of operation, and/or meet the surveillance requirements of the Technical Specifications.

The following were verified:

- Specific requirements have been established for the below calibrations including schedules and frequencies;
 - Procedures have been reviewed and approved in accordance with the Technical Specifications, contain acceptance criteria consistent with the Technical Specifications, and contain detailed instructions commensurate with the complexity of the calibration; and,
 - Technical content of procedures are adequate to perform a satisfactory calibration.
- b. The following components identified in facility surveillance test procedures were selected at random and the specific requirements established for their calibration were verified.
- Primary Drain Tank Level, scheduled for calibration each refueling in accordance with procedure 5.2-46. Last calibrated during past refueling.
 - RHR Pump Discharge Pressure, scheduled for calibration prior to each RHR pump surveillance in accordance with procedure 5.2-46.
 - Auxiliary Feed Pump Discharge Pressure, scheduled for annual calibration or as requested. Performed in accordance with procedure 5.2-46. Last calibrated January 15, 1979.
 - Pressurizer Relief Tank Level, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated February 21, 1979.

- Surge Line Temperature, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated December 5, 1978.
- Reactor Vessel Flange Leak Detection Temperature, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated January 13, 1979.
- Relief Line Temperature, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated December 6, 1978.
- Labyrinth Seal D/P, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated December 20, 1979.
- CCW Total Flow, scheduled for calibration each refueling in accordance with a preventive maintenance program and data sheets. Last calibrated December 9, 1978.
- Waste Gas Decay Tank Pressure, last calibrated April 20, 1976. This instrument will be added to the preventive maintenance program and placed on a refueling interval calibration frequency.

No items of noncompliance were identified.

6. Inspector Witnessing of Calibrations

No calibrations were being performed during this inspection. Therefore, the inspector evaluated the calibration data of calibrations identified in paragraph 4.b above to verify acceptable calibration results.

No items of noncompliance were identified.

7. Calibration and Control of Test Equipment

a. The inspector reviewed the calibration and control of test equipment used as standards in the calibration of components identified in Paragraphs 4 and 5 to verify the following:

- Establishment and adherence to calibration schedules.

- Maintenance of calibration records identifying standards used which have traceability to the National Bureau of Standards or other independent testing organization.
- Proper storage and labeling of test equipment.
- Adequate control of test equipment including recordkeeping.

The following devices were selected as a sampling:

- DWT, -5 calibration performed May, 1976.
- DVM, S-29, calibration performed September, 1978.
- Test Gauge, TG-105, calibrated February 14, 1979.

- b. As a result of the above review the following item was identified.

Procedure QA 1.7-12.1, Control of Measuring and Test Equipment, Step 10.2, states, "A measuring and test equipment History Use Log shall be maintained by the cognizant department head, to identify the use of each instrument when it is utilized in the measurement, inspection and testing of QA material, equipment and parts." Inspection findings show that the use of the Instrument and Control Departments Equipment History Use Log has been discontinued since 1976. Traceability, however, is being maintained by recording the instruments used on each surveillance test procedure. The licensee stated this discrepancy between administrative controls and actual practice would be resolved by either maintaining the History Use Log or changing the administrative procedure. This item is unresolved pending completion of the licensee's action described above and subsequent NRC:RI review. (213/79-08-03).

8. Facility Tours

On several occasions during the inspection, tours of the facility were conducted of the turbine building, diesel generator room and portions of the security fence. During the tours, the inspector discussed plant operations and observed housekeeping, radiation control measures, monitoring instrumentation, and controls for Technical Specification compliance. In addition, the inspector observed control room operations on both day and evening shifts for control room manning, and facility operation in accordance with administrative and Technical Specification requirements.

9. Unresolved Items

Unresolved items are findings about which more information is required in order to ascertain whether they are acceptable items, items of non-compliance or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 7.b, and 4.c.

10. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on March 23, 1979. The inspector summarized the scope and findings of the inspection. A subsequent discussion of the inspector's findings occurred in a telephone conversation between Mr. Graves and Mr. Baunack on March 28, 1979.