



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-414/85-37

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28242

Docket No.: 50-414

License Nos.: CPPR-117

Facility Name: Catawba Unit 2

Inspection Conducted: September 3 - 6, 1985

Inspector:

J. J. Lenahan

9/19/85

Date Signed

Accompanying Personnel: L. E. Nicholson

Approved by:

F. Jape, Section Chief
Engineering Branch
Division of Reactor Safety

9-19-85

Date Signed

SUMMARY

Scope: This routine, announced inspection entailed 54 inspector-hours on site in the areas of review of hot functional test procedures, observation of thermal expansion test performance, observation of testing of main steam safety relief valves, and review of results of main steam safety relief valve testing and thermal expansion testing.

Results: No violations or deviations were identified.

8509260129 850920
PDR ADOCK 05000414
Q PDR

REPORT DETAILS

1. Persons Contacted

Licensee Employees

W. L. Anfin, Mechanical Maintenance Support Engineer
J. Gilreath, Assistant Engineering Mechanical Maintenance
*J. W. Hampton, Station Manager
*P. G. LeRoy, Licensing Engineer
S. Mays, Assistant Engineer, Mechanical Maintenance

Other licensee employees contacted included three engineers and eight technicians.

NRC Resident Inspector

*P. K. Van Doorn

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on September 6, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during the inspection.

5. Pre-Operational Testing of Main Steam Safety Relief Valves (92706)

The inspectors reviewed Duke procedure number TP/2/A/1250/05, "Pre-operational Test of Unit 2 Main Steam Coded Safety Relief Valves." This procedure provided the test method, test data to be recorded, acceptance criteria, and detailed test procedure required to determine the actual set pressure of the safety relief valves prior to startup of Unit 2. The acceptance criteria was based on the set pressures specified in the draft

of Unit 2 Technical Specification 3.7.1.1. The inspectors witnessed testing of safety relief valve numbers 2SV-11 and 2SV-17. After completion of testing, the inspectors reviewed the test data for the 20 main steam safety relief valves and verified test data were recorded in accordance with test procedure requirements, and that setpoints of the relief valves met the test acceptance criteria (proposed Technical Specification set pressure).

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

6. Thermal Expansion Test (70370)

The inspectors examined the thermal expansion test procedures, observed portions of the thermal expansion test, and reviewed test data. Acceptance criteria utilized by the inspectors appear in Final Safety Analysis Report (FSAR) Section 3.9.2.1.2 and FSAR Table 14.2.12.1.

a. Review of Thermal Expansion Test Procedures

The inspectors examined test procedure number TP/2/A/1150/08, Thermal Expansion Testing on ASME Code Piping. This procedure covers testing of Duke Classes A, B, and C piping (ASME Classes 1, 2, and 3 piping, respectively) with the exception of the primary loop NSSS piping. The inspector verified test prerequisites were specified, test instructions and objectives were clearly stated, and acceptance criteria were specified. The test acceptance criteria requires that snubbers not be within 1/2-inch of either piston stop during the test, that spring load settings be within plus or minus ten percent of the values given on the as-built drawings, and that piping and components not contact any interference which may restrict piping expansion.

The inspector also examined procedures which control thermal expansion testing of the primary loop piping. These procedures were as follows:

- (1) Specification Number CNS-1144.05-00-0017, Specification for Shimming of Major NSSS Equipment Supports and Reactor Coolant System - Thermal Expansion Monitoring, Unit 2
- (2) Construction Procedure Number CP-762, Thermal Monitoring - Unit 2

b. Observation of thermal Expansion Test

The inspectors walked down portions of the reactor coolant (NC) system. During the walkdown, the NC system was operating at a temperature of between 545 and 555°F. The inspectors verified that temporary scaffolding and ladders and permanent plant equipment (HVAC ducts and equipment, cable tray supports, other piping, structural steel, whip restraints, etc.) did not interfere with piping thermal movements. The inspectors also made a detailed inspection of the NC piping in Math Models NC-206, NC-207, NC-210, and NC-213 and verified type and number

of supports were as shown on design drawings, verified spring can and snubber settings were accurately recorded by licensee inspectors, and verified that the licensee inspectors identified potential interference to thermal movements and recorded the potential interferences as required by the test procedure.

c. Review of Test Results

The inspectors reviewed data documenting the results of thermal expansion testing of the reactor coolant system for piping in Math Models NC-203, NC-204, NC-205, NC-206, NC-207, NC-210, NC-212, NC-213 and NC-231. This data included cold load setting of spring cans and snubbers at ambient temperature, identification and resolution of potential interferences to thermal movements identified at ambient temperatures, hot load setting of spring cans and snubbers at test temperature, and identification of potential interference at test temperature.

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