



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

Report Nos.: 50-413/84-77 and 50-414/84-33

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

Docket Nos.: 50-413 and 50-414

License Nos.: CPPR-116 and CPPR-117

Facility Name: Catawba

Inspection Dates: June 25-29, 1984

Inspection at Catawba site near Rock Hill, South Carolina

Inspector: Gerald R. Wiseman
G. R. Wiseman

7/13/84
Date Signed

Approved by: T. E. Conlon
T. E. Conlon, Section Chief
Engineering Branch
Division of Reactor Safety

7/23/84
Date Signed

SUMMARY

Area Inspected

This routine unannounced inspection involved 32 inspector-hours on site in the area of fire protection.

Results

No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- J. Hampton, Station Manager
- R. L. Dick, Vice President - Construction
- *P. G. LeRoy, Licensing Engineer
- *H. D. Brandes, Design Engineer
- *A. Anderson, Security Coordinator
- *J. Willis, Quality Assurance
- *J. Rucci, Design Engineer
- *P. McAnulty, Training and Safety Coordinator
- J. Knuti, Operations Supervisor
- R. Maynard, Operations
- D. Coner, Maintenance
- *J. Cox, Superintendent Technical Services
- *A. Franklin, Superintendent Station Services
- F. Van Eijk, I&E Engineer (Detectors)

NRC Resident Inspectors

- *K VanDoorn
- *P. Skinner

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 29, 1984, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Deviation Item (413/84-36-04), Hydrogen Gas Piping System for Reactor Coolant Pump Drain Tank. The licensee has elected to provide an excess flow valve for this system which is designed to limit the maximum hydrogen concentration in the event of a line break to less than 2% in the affected area. The valve installation provided by modification ID No. CN-10138, Rev. 0 was inspected. Also the licensee's safety analysis for the Hydrogen Gas Piping, File No. CN-1435.03, was reviewed and is considered to be adequate.
- b. (Closed) Unresolved Item (413/84-46-10), Reevaluation of Standby Shutdown Facility (SSF) Diesel Generator Sprinkler System Operation During Cold Weather. The licensee has reviewed this item and determined that the design basis for the SSF Diesel Generator Room ventilation is 15°F during diesel operation and, thus, the sprinkler system may be subject to freezing during extremely cold weather.

The licensee committed to take compensatory fire protection measures such as posting a fire watch should the sprinkler system be out of service due to freezing. This action is considered acceptable.

- c. (Closed) Unresolved Item (413/84-46-11), Reevaluation of Fuel Oil Line Arrangement to SSF Diesel Engine. The licensee has reevaluated this item and determined that a piping modification is necessary. The licensee has committed to rigidly extend the fuel oil supply piping near the floor to a point inside the curbed area and shielding that exposed piping such to provide containment of fuel oil within the curbed area. This modification appears to bring the system into compliance with the July 5, 1983 SSF submittal. The completion schedule for this modification is prior to initial criticality of Unit 1.
- d. (Closed) Unresolved Item (413/84-46-12), Evaluation of Fire Barrier Requirements for Turbine Driven Auxiliary Feedwater Pump Room. Duke's letter from H. B. Tucker to H. R. Denton dated May 11, 1984, provided the NRC supplemental information on the re-analysis of this area and requested an exception to providing a fire resistive coating to the structural steel members in the Turbine Driven Auxiliary Feedwater Pump Room based upon the minimal fire loading of the room. The request has been reviewed and found acceptable by NRR and will be reported in a future Safety Evaluation Report (SER).
- e. (Closed) Unresolved Item (413/84-46-13), Possible Failure to Provide Fire Protection Features for Redundant Shutdown Cables. By supplemental SER, the NRC has accepted an exemption request for partial sprinkler protection in Fire Area 39 which contains the Turbine Driven Feedwater Pump pit. However, the fire detection system does not extend over this, 20' x 20' beamed ceiling area at EL 543' above the Turbine Driven Auxiliary Feedwater Pump pit. Duke's letter dated June 29, 1984, confirmed their commitment to install a fire detector in the bay above this pump pit. This modification will be completed prior to initial criticality of Unit 1.
- f. (Closed) Unresolved Item (413/84-46-14), Possible Deviation from a Commitment on Combustibility of Thermal Insulation Material. The NRC was provided information on these types of insulation materials by Duke's letter dated May 11, 1984. As utilized, these materials do not create a substantial fire hazard requiring replacement and appears to be an acceptable deviation from Appendix A to BTP APCS 9.5-1. This item is to be addressed by NRR in a future SER.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Permanent Plant Fire Protection/Prevention Features

The inspector reviewed the following permanent plant fire protection features:

a. Fire Detection System

Approximately 70% of the required fire detection systems are operational. The licensee stated that the systems for all Unit 1 safety-related areas are scheduled to be operational by fuel load. The inspector verified that the detectors and associated circuitry provided for the below listed zones were functionally tested during the preoperational testing phase.

<u>Zone No.</u>	<u>Date of I&E Functional Test</u>	<u>Date of I&E Detector Test</u>
212	6/24/84	6/25/84
215	6/25/84	6/24/84
216	6/25/84	6/24/84
27	6/24/84	6/22/84
28	6/24/84	*
29	6/24/84	6/4/84
30	6/24/84	6/4/84
46	6/24/84	6/24/84

Note:

*Testing in process and scheduled to be completed prior to fuel load

b. Interior Fire Hose and Extinguisher Station

The below listed fire hose and extinguisher stations were inspected.

<u>Elevation</u>	<u>Drawing No.</u>	<u>Hose Valve No.</u>	<u>Extinguisher No.</u>	<u>Hydrostatic Test Date</u>
543'	CN 1209-10-11		Aux 543-10	3/84
	CN 1209-10-11		Aux 543-11	3/84
	CN 1209-10-11	IRF 271	Aux 543-3	3/84
554'	CN-1209-10-12		Aux 554-3	8/81
	CN-1209-10-12		Aux 554-4	8/81
560'	CN-1209-10-12		Aux 560-1	8/81
577'	CN-1209-10-13	IRF 252	Aux 577-8	1/81
	CN-1209-10-13	IRF 244	Aux 577-9	1/81

<u>Elevation</u>	<u>Drawing No.</u>	<u>Hose Valve No.</u>	<u>Extinguisher No.</u>	<u>Hydrostatic Test Date</u>
594'	CN-1209-10-14	IRF 259	Aux 594-10	8/81
	CN-1209-10-14		Aux 594-13	7/81
631'	CN-1209-10-15	IRF 495	Aux 631-2	7/81
Nuclear Service Water Pump hose		IRF 939	WSWSP-1	7/81
		IRF 940	WSWSP-2	7/81

The inspector verified that the stations were apparently installed in accordance with the construction drawings, correct hose and nozzle combinations provided, and the extinguishers had been hydrostatically tested within the required period of NFPA 10, Chapter 5.

c. Interim Barrier Fire Protection/Prevention

A review was made of the fire protection features provided for the interim barrier areas for Unit 1 operation during the construction of remaining Unit 2 areas. The fire protection features provided for selected areas as identified by drawings CN-1206-20 thru 24 on both the Unit 1 and Unit 2 sides of the internal severity barrier were inspected. Within the areas reviewed, it appeared that the Standby Shutdown System and redundant hot standby shutdown functions for Unit 1 were either separated by elevation fire barriers or provided with active detection systems. It could not be confirmed that such protection was provided for the cold shutdown functions. The licensee committed to perform a more complete review and walkdown of these areas within the cold shutdown analysis requirements of Appendix R for the interim period in which Unit 1 is operational and Unit 2 is under construction. This analysis and any required compensatory measures are to be completed and in service prior to initial criticality for Unit 1.

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

6. Inspector Followup Items (IFI)

- a. (Closed) IFI (413/84-26-05), Surveillance Inspection and Test Procedures Not Provided For All Required Fire Protection Systems. A procedure program has been developed for all fire protection systems to be included in the Technical Specifications. All procedures have been written except for those identified in Duke's Catawba Status of Completion letter of June 29, 1984. Duke has provided for these temporary inspection procedures during this interim period. The permanent procedures will be reviewed during future NRC inspections.

- b. (Open) IFI (413/84-36-01), Inadequate Number of 8-Hour Emergency Lighting Units. (Note: Inspection Report 50-413/84-62 inadvertently assigned this as an Unresolved Item). Ninety-minute emergency lighting units have been installed in the SSF structure control room for entering the structure. The licensee has provided the NRC with documentation which verifies that the lighting will operate at an adequate illumination level for at least eight hours. These units appear to be acceptable; however, the licensee has not completed the evaluation of the eight-hour emergency lighting system to assure compliance with the requirements of 10 CFR 50, Appendix R Section III.J. Documentation of the licensee's evaluation and resultant lighting units installation will be reviewed on a subsequent NRC inspection.