



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

Report Nos.: 50-413/84-62 and 50-414/84-29

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 Date: May 22 - 25, 1984

Inspection at Catawba site near Rock Hill, South Carolina

Inspector: Gerald R. Wiseman June 11, 1984
for W. H. Miller, Jr. Date Signed

Approved by: M. A. Hunt for 6/11/84
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Areas Inspected

This routine, announced inspection involved 24 inspector-hours on site in the area of fire protection.

Results

Of the area inspected, no violations or deviations were identified.

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PDR ADOCK 05000413
Q PDR

REPORT DETAILS

1. Persons Contracted

- *R. L. Dick, Vice President-Construction
- *E. M. Couch, Project Administrator
- *J. B. Bright, Construction Engineering Manager
- *L. R. Davison, Project QA Manager
- *R. A. Morgan, Senior QA Engineer
- *J. R. Hendricks, Design Engineer
- *H. D. Brandes, Design Engineer
- *J. M. Rucci, Design Engineer
- *D. E. Faulkner, Administration Methods
- *D. P. Hensley, QA Technician
- J. Turner, QC Piping Supervisor
- J. A. Munn, QC Inspector-Piping
- P. Leroy, Licensing
- P. C. McAnulty, Training and Safety Coordinator
- D. L. Walters, Safety Supervisor
- S. Mode, Safety Representative
- F. Van Eijk, I&E Engineer (Detectors)
- B. East, I&E Engineer
- A. Anderson, Security Supervisor
- J. Ryley, Compliance Lieutenant

NRC Resident Inspectors

- K. VanDoorn
- P. H. Skinner

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 25, 1984, with those persons indicated in paragraph 1 above.

3. Licensee Action On Previous Enforcement Matters

- a. (Open) Unresolved Item (413/84-36-01), Inadequate Number of Eight-Hour Emergency Lighting Units. Additional lighting units are to be installed within the control room, auxiliary feedwater pump room, and standby shutdown facility. Verification of the adequacy of the emergency lighting units will be made during a subsequent NRC inspection. This item remains open.
- b. (Open) 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 will be designed to limit the maximum hydrogen concentration in the event of a line break to less than 2% in the effected area. This modification will be provided in lieu of supporting the piping system to meet seismic Class I requirements and is scheduled to be completed by fuel load.

- c. (Closed) Unresolved Item (413/84-11-06 and 414/84-07-02) Inadequate Fire Protection QA Program. This item was formerly closed in Report Nos. 50-413/84-36 and 50-414/84-20 but was inadvertently identified as Unresolved Item (413/84-16-06 and 414/84-07-02).

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. Automatic Sprinkler Systems

The installation of the Unit 1 sprinkler systems is nearing completion. A review was made of the QC inspection records for the piping and the hydrostatic and flush tests for the below listed systems. No major discrepancies were identified; however, a few minor construction discrepancies exist. These are being corrected and the systems are to be reinspected by QC as required by the licensee's procedures. A "walkdown inspection" of these systems was conducted and it appeared that the systems were installed in accordance with the construction drawings. In general, these systems provide very good coverage for the areas protected. Multi-level protection is provided in the areas of heavy obstructions to assure an acceptable water discharge will be available at the floor level.

<u>System No.</u>	<u>Location</u>	<u>Drawing No.</u>	<u>QC Inspection Date</u>
1RF35	RHR Pumps	CNM 1206.09-0030	4-13-84
1RF36	KC Pumps	CNM 1206.09-0042 CNM 1206.09-0064	4-30-84
1RF37	Fuel Pool Filter Unit Nos. 1A1, 1A2, 1B1 & 1B2	CN1492-179 CN1492-180 CN1492-183 CN1492-186 CN1492-187	3-28-84 3-28-84 3-28-84 3-28-84 3-28-84
1RF39	Charging Pumps	CNM1206.09-0030	4-13-84

<u>System No.</u>	<u>Hydrostatic Segment No.</u>	<u>Hydrostatic Test Date</u>	<u>Flush Test No.</u>	<u>Flush Test Date</u>
1RF35	196 197	11-30-83 11-30-83	CP913	8-31-83
1RF36	143 144 145	05-19-84 05-19-84 05-19-84	CP926	1-20-84
1RF37	198*	08-15-83	CP786	8-03-83
1RF39	136	03-15-84	CP921	12-27-83

*Note: This system will be retested due to several system modifications.

b. Fire Detection System

Very few of the fire detection systems are fully operational. However, 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, provided for the below listed areas, were apparently installed in accordance with the construction drawings and that the systems were to be functionally tested during the preoperational phase.

<u>Zone No.</u>	<u>Location</u>	<u>Drawing No.</u>	<u>Date of I&E Functional Test</u>
1	RHR Pump B	CN-1762-01.01-01	5-14-84
2	RHR Pump A	CN-1762-01.01-01	5-14-84
3&4	Containment Spray Pumps	CN-1762-01.01-01	5-14-84
212	Sump Pump	CN-1762-01.01-01	*
215	Diesel Tunnel A	CN-1762-01.01-03	**
216	Diesel Tunnel B	CN-1762-01.01-03	**
29	Switchgear Room B	CN-1762-01.01-03	**
30	Penetration Room B	CN-1762-01.01-03	**

NOTES: * Installation was not completed
 ** Tests in process and scheduled to be completed prior to fuel load

c. Interior Fire Hose Station

The below listed interior fire hose stations were inspected and the correct hose, nozzle and orifice were provided, except for the SSF structure which had not yet been turned over to operations. These items are to be corrected and will be reviewed during a future NRC inspection.

<u>Hose Valve No.</u>	<u>Orifice Size</u>
1RF 487	3/4"
1RF 269	3/4"
1RF 271	3/4"
1RF 492	7/8"
1RF 493	7/8"
1RF 272	7/8"
1RF 265	Not Required
1RF 495	Not Required
1RF 935	*Not Provided

Note: *Orifice required but not yet provided.

d. Exterior Hydrant/Hose Houses & Cabinets

Hose house No. 5, hose cabinet Nos. 2 and 4 and the hose cart house south of the Unit 1 diesel generator structure were inspected. These cabinets and houses contained the required fire hose, nozzles, gated wye, and other miscellaneous fire fighting equipment, except the emergency hand lights and pry bar required for each house and cabinet had not yet been provided. Also, the equipment was in the original shipping containers and was not yet properly stored. This equipment is to be properly stored prior to fuel load. A review of these items will be made during a subsequent NRC inspections.

e. Fire Pump - Cable Fire Barrier

The power cables to fire pump "B" beneath the intake structure deck are enclosed within a 1-hour fire rated enclosure from the pump to a point where the cables for pump "B" are separated from the cables to pumps "A" and "C" by a distance of approximately 14 feet. This arrangement was reviewed and found acceptable by NRR. QC inspection of May 2, 1984, verified that the installation conformed to construction drawing CN-1939-01. The inspector reviewed this installation and found the installation to be in conformance with the drawing.

f. Self Contained Breathing Apparatus

A review and inspection of the self contained breathing apparatus (SCBA) indicated that a total of eleven SCBA units and 20 spare cylinders were assigned to the fire brigade. An additional 21 SCBA units and 30 spare cylinders are also available for use by the brigade. An air compressor with cascade system is available to refill the SCBA cylinders. A sufficient number of units and spare cylinders are available to meet the commitments of Section D.5.(h) of Duke's Fire Protection Review dated July 1983 which requires a minimum of 10 SCBA units, two extra cylinders per unit plus an additional six hour supply.

g. A Fire Brigade Equipment

The fire brigade equipment is stored in the brigade response locker located in the turbine building. Sufficient turnout gear (coats, boots, helmets, gloves, etc.) is available to equip nine brigade members. Additional turnout gear for the brigade leader is stored in the shift supervisors office adjacent to the control room. Two electrical smoke ejectors, foam maker, additional hose, nozzles and miscellaneous equipment are also stored in the brigade locker. The brigade turnout gear and equipment was properly stored and appeared to be satisfactorily maintained.

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

6. Inspector Followup Items (IFI)

- a. (Closed) IFI (413/84-36-02) Verification of Orifice Size in Water Supply Connections to Auxiliary Buildings. The orifice in the supply connection to the Unit 1 Auxiliary Building was inspected on May 24, 1984, by QC and verified to be of proper size (5.37 inch diameter). The orifice in the Unit 2 supply connection was scheduled to be inspected on May 26, 1984, and was to be replaced if found to be of the incorrect size. Therefore, this item is closed.
- b. (Open) IFI (413/84-36-03), Reevaluation of Fire Protection/Detection Systems for Ventilation Systems. The carbon filter units for various ventilation systems are presently provided with an automatic fire detection system which is connected to the plant HVAC control and annunciation panel located in the control room. Also, a manually activated water spray system is provided. These fire detection and protection systems are not required to be operable or functional by the Technical Specifications, but are commitment items within the FSAR. The licensee considers these items to be part of the HVAC System and not a fire protection feature. The detection system is to be functionally tested during the preoperational test program by Procedure IP/O/A/3890/18, Alison A971 Fire Detection Panels, but the licensee's commitments for future periodic surveillance inspections and tests 6K of these systems are not clearly described. Presently, the detection system is classified as "safety related" but the licensee stated that

these systems are to be either reclassified as "nonsafety related" systems or possibly as fire protection "QA Condition 3" systems. The inspector advised the licensee that it was only prudent to include these fire protection and defecation systems under some reasonable surveillance inspection and test program. This item remains open pending resolution by the licensee.

- c. (Closed) IFI (413/84-26-01), Fire Brigade Organization Does Not Conform to NRC Requirements. The operations fire brigade does not fully meet the NRC guidelines due to the use of security officers in lieu of operations personnel as brigade members; however, the proposal to use two nuclear equipment operators as technical assistants to the brigade should provide sufficient technical expertise to help prevent fire fighting operations from damaging safety systems in the event of fire. The security organization has developed sufficient procedures to assure that at least four personnel will always be available for fire brigade duties if required. The implementation of the fire brigade organization and training requirements will be reviewed during future NRC inspections to verify that the proposed organization is meeting the intent of the NRC guidelines. Therefore, this item is closed.
- d. (Closed) IFI (413/84-26-02), Inadequate Fire Protection Prevention Administrative Procedures. Catawba Procedure 2.12.2, Fire Brigade Organization, Training and Responsibility, has been revised to indicate that the fire brigade training and drills must meet the frequency specified by the NRC guidelines. The licensee stated that Duke's physicians had evaluated the NRC requirement for fire brigade members to satisfactorily complete an annual physical examination for performance of strenuous fire fighting activity and determined that the present program of an annual physical assessment by the plant nurse and followup review by the Duke physician with periodic physical examination by a physician was adequate to meet the NRC requirements. An instruction has been included in the plant's "Performance Manual" to require all leak tests to prohibit open flame or combustion generated smoke. Therefore, this item is closed.
- e. (Closed) IFI (413/84-26-03), Fire Fighting Strategies Not Available. Fire fighting strategies are to be provided for all safety related areas. On the date of this inspection, these procedures were in the licensee's final review process. The inspector reviewed the draft strategies for Fire Areas 1, 6 and 10 and noted that these met the NRC guidelines. The strategies will be reviewed during future NRC inspections. This item is closed.
- f. (Open) IFI (413/84-26-04), Independent Verification Not Provided for Fire Protection Features. This item remains open pending resolution.

- g. (Open) IFI (413/84-26-05), Surveillance Inspection and Test Procedures Not Provided for All Required Fire Protection Systems. (Note - This item was inadvertently assigned No. 413/84-26-04). Procedures have not yet been provided for all fire protection systems to be included in the Technical Specifications, but are scheduled to be provided by fuel load. This item remains open.