



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA ST., N.W., SUITE 3100  
ATLANTA, GEORGIA 30303

Report No. 50-370/82-35

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

Facility Name: McGuire 2

Docket No. 50-370

License No. CPPR-84

Inspection at McGuire site near Charlotte, NC

Inspector:

*T. E. Conlon*  
W. H. Miller, Jr.

*for*

*12/29/82*  
Date Signed

Approved by:

*T. E. Conlon*  
T. E. Conlon, Section Chief

Engineering Program Branch  
Division of Engineering and Operational Programs

*12/29/82*  
Date Signed

#### SUMMARY

Inspection on December 14-17, 1982

#### Areas Inspected

This routine, unannounced inspection involved 27 inspector-hours on site in the areas of fire protection/prevention.

#### Results

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

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*M. S. Starnes, Senior Construction Engineer
- \*E. B. Miller, Project QA Engineer
- \*G. B. Robinson, Project QA
- \*D. F. James, Project QA
- \*W. M. Sample, Licensing
- \*G. A. Copp, Nuclear Production
- \*J. V. Almond, Nuclear Production/Safety & Fire Protection
- \*H. D. Brandes, Design, Fire Protection
- \*J. A. Oldham, Design, Fire Protection
- F. Bulgin, QA Engineer
- J. Davis, QA Representative
- D. Caldwell, QC Mechanical
- J. Barber, QC, Electrical
- R. Talbert, Mechanical Technical Support
- G. D. Houser, QC, Mechanical

#### Other Organizations

- T. Chambers, Project Manager/Bahnson
- B. Williams, QC Engineer/Bahnson

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on December 17, 1982, with those persons indicated in paragraph 1 above.

### 3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Deviation Item (370/80-07-01) - Substandard sprinkler system installation. The sprinkler systems provided for Unit 2 appear to meet the Duke design requirement and the commitment to NRC/NRR. Therefore, this item is closed.
- b. (Closed) Infraction Item (370/80-15-02) - Failure to follow fire prevention welding procedures. The licensee has revised the construction site welding procedures and trained craft personnel in the application of these procedures. QA special surveillances, SS-268 and SS-326, indicated that the crafts were familiar with the procedures and were in compliance with the requirements. The inspector did not note any procedure violations during this inspection. Therefore, this item is closed.

- c. (Closed) Deviation Item (370/82-10-02) - Substandard fire protection QA program. The licensee's response of November 1, 1982, stated that prior to initial fuel load all of the Unit 2 fire protection systems and features in areas containing safety-related equipment for which design drawings were released for construction after September 1, 1977, will be either verified to have been installed under the fire protection QA program or will be visually inspected to verify installation or construction. The inspector confirmed that this inspection program was being accomplished. This item is closed.
- d. (Closed) Unresolved Item (370/82-10-03) - Evaluation of hydrostatic tests for fire protection systems. Duke design group has evaluated the hydrostatic test procedures and completed test data and determined that these were adequate. This item is closed.
- e. (Closed) Unresolved Item (370/82-10-04) - Licensee's evaluation of turnover work packages for fuel storage building fire detection system. The final inspection data for this system was not available for review during the previous NRC inspection. Subsequently, the licensee located this data. The final QC inspection was conducted on this system on February 12, 1982. This inspection data referenced the correct drawing revision. Also, the licensee has issued NCI No. 14,252 which indicates that only the fire detection bases were installed and that revisions would complete the detection installation. The QA/QC inspection procedure, Form M-53A.03, has been revised to indicate that the QC inspections are to include either the detector unit or the detector base unit. In general, the operations group is to install the detector device. This item is closed.

#### 4. Unresolved Items

Unresolved items were not identified during this inspection.

#### 5. Permanent Plant Fire Protection Features

The following permanent plant fire protection features were reviewed by the inspector:

##### a. Fire Protection Systems

<u>System</u>	<u>Location</u>	<u>Drawing No.</u>	<u>Date of QC Inspection</u>
Halon	Diesel Room 2A	MCM 2206-07-02	5-16-79
Halon	Diesel Room 2B	MCM 2206-07-02	5-16-79
Halon	AFW Pump Room	MCM 2206-07-04	9-9-81
Sprinkler	NSW Pump Area	MCM 1206-07-74 MCM 1206-07-87	*7-30-80

<u>System</u> (Continued)	<u>Location</u>	<u>Drawing No.</u>	<u>Date of QC Inspection</u>
Sprinkler	Battery Room Corridor	MCM 1206-07-87	*7-30-80
Sprinkler	KC Pump Area	MCM 1206-07-74 MCM 1206-07-87	*7-30-80
Detector-36	Penetration Room 733' EL	1762-01.00-03	6-3-80
Detector-44	Switchgear Room 733' EL	1762-01.00-03	6-3-80
Detector-43	Switchgear Room 750' EL	1762-01.00-04	11-18-78
Detector-35	Switchgear Room 750' EL	1762-01.00-04	11-18-78
Detector-52	Cable Room 750' EL	1762-01.00-04	11-18-78

Note: \*Inspection only included piping configuration. Hangers are to be inspected by another group.

The inspector conducted a walkdown inspection of these systems. These systems appeared to be installed in accordance with the design requirements. However, all of the hangers for the sprinkler piping had not yet been installed. The licensee stated that the hangers were to be inspected upon completion of construction to verify proper installation. One upright sprinkler head over the component cooling pumps on 733' elevation at column line HH-57 was noted to be installed in the pendent position. The licensee has issued nonconformance item Q-1A No. 14,449 to correct the discrepancy, determine the cause, and prevent future similar occurrences. Correction of the item will be reviewed during a future NRC inspection.

b. Hanger Installation

<u>System</u>	<u>Location</u>	<u>Hanger No.</u>	<u>Date of QC Inspection</u>
Halon	AFW Pump Room	2 MCA-S-RF-500-1-A	12-8-80
		2 MCA-S-RF-500-1-B	10-8-80
Halon	Diesel Room 2A	2 MCA-S-RF-512-1-H	8-13-81
Halon	Diesel Room 2B	2 MCA-S-RF-511-1-G	8-7-81
		2 MCA-S-RF-511-1-T	7-31-81

The inspector visually inspected the above hangers and noted that each hanger appeared to be constructed in accordance with the design requirements.

c. Construction Tests

<u>System</u>	<u>Location</u>	<u>Test</u>	<u>Date of Test</u>
Sprinkler	NSW Pump Area	Hydrostatic	11-3-78
		Flush	11-3-78
Sprinkler	Battery Room Corridor	Hydrostatic	3-4-81
		Flush	4-11-79
Halon	Diesel Generator Bldg.	Pressure	1-15-79
		Air Flow	1-12-79
Halon	AFW Pump Room	Pressure	9-16-81
		Air Flow	9-16-81

The inspector reviewed the above test data and confirmed that the tests apparently meet the construction test procedures. The licensee performed an audit of the hydrostatic and cleanliness tests conducted on the fire protection systems. This audit was completed on August 27, 1982, and identified ten minor sections of the fire protection piping system in which the hydrostatic and flushing test data was not available. The licensee's investigation determined that these tests were actually performed but the test data had been misplaced. Some of this piping is not associated with systems protecting safety related areas of the plant. Also, portions of these systems have been in service for about five years. The licensee does not plan to retest these systems. The inspector concurs with this decision.

d. Fire Dampers

<u>Location</u>	<u>BAHNSON Damper No.</u>	<u>Size</u>	<u>Date of QC Inspection</u>
Auxiliary Bldg-733' EL	2338-9-10-3	36" x 10"	10-8-81
	2338-9-10-5	39" x 19"	10-8-81
Auxiliary Bldg-750' EL	2338-9-13-1	36" x 15"	12-9-80
	2338-9-13-5	38" x 30"	10-23-81
Auxiliary Bldg-767' EL	2338-9-18-1	18" x 8"	10-22-81
	2338-9-18-9	42" x 23"	10-22-81
	2338-9-18-10	42" x 23"	10-22-81

Each of the above dampers was inspected by the inspector and found to be installed in accordance with either the design or manufacturers requirements. While reviewing the QC inspection records for the fire

dampers the inspector noted that the inspection records and other data for the safety related component and the fire protection features of the HVAC systems were stored in ordinary metal filing cabinets. The licensee considers these records to be working documents and therefore not yet required to meet the stringent storage requirements for QA documents. The inspector pointed out the desirability of storing these records in either a fire resistant vault or cabinet. However, since these records are not "completed records" per Duke's Procedure QA-301 this is not considered an enforcement item.

e. Oil Collection System

<u>Drawing No.</u>	<u>Date of QC Inspection</u>
MC-2414-03.21-00	2-10-82
MC-2414-03.21-01	2-10-82
MC-2414-03.21-02	2-10-82

The inspector reviewed the oil collection drainage system for the reactor coolant pumps as shown on the above construction drawings. The drain piping to these systems had been inspected by QC and found to be satisfactory. Drain piping from reactor coolant pump D to the storage tank was reviewed by the inspector and found to conform to the design drawings. The principle outstanding construction item was completion of the hanger installations. These hangers are to be inspected by QC to verify conformance to the design requirements.

Within the areas examined no violations or deviations were disclosed.