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

Report Nos.: 50-269/88-19, 50-270/88-19, and 50-287/88-19

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

Docket Nos.: 50-269, 50-270, and 50-287

License Nos.: DPR-38, DPR-47, and DPR-55

Facility Name: Oconee 1, 2, and 3

Inspection Conducted: June 27 - July 1, 1988

Inspector: _____ 7/18/88
J. R. Harris Date Signed

Approved by: _____ 7/18/88
T. E. Conlon, Chief Date Signed
Plant Systems Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection was in the areas of Quality Assurance/Quality Control (QA/QC) Controls and Work Activities for Fire Protection, Seismic monitoring and followup on Licensee Identified Item (LER) 269/88-05.

Results: In the areas inspected, violations or deviations were not identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*D. O. Brandes, Analytical Engineer
*S. R. Christopher, Analytical Engineer
*B. Foster, Maintenance, Superintendent
*C. Hardin, Compliance Engineer
T. Kelly, Fire Protection Supervisor
*T. King, Safety Supervisor
E. Merrit, Electrical Engineer
F. Owens, Compliance Coordinator
N. Watson, Maintenance Coordinator

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, mechanics, security force members, technicians, and administrative personnel.

NRC Resident Inspector

*L. Wert

*Attended exit interview

2. Fire Protection/Prevention Program (64704)

a. The following Fire Protection/Administrative Control Procedures were reviewed:

Procedure No.	Title	Date
SD 4.2.1	Control-of-Combustible Materials	10/26/87
SD 4.2.2	Fire Brigade Organization and Training	09/29/87
SD 4.2.3	Reporting of Fire Protection Impairment	11/16/87
SD 4.2.4	Welding and Burning Safety Directive	12/01/84
SD 4.3.1	Housekeeping Responsibilities	10/03/87
SD 4.3.2	Cleanliness in Safety Related Areas	05/16/87
SD 4.3.3	Waste Oil Management Program	03/07/88
SD 4.3.4	Chemistry Approved Chemicals	12/01/84

Based on this review, it appears that the above procedures meet the intent of the NRC guidelines in the document entitled "Nuclear Plant fire Protection Functional Responsibilities Administrative Controls and Quality Assurance", of June 1977 and the licensees commitments in the letter dated January 16, 1978.

b. Fire Protection Surveillance Procedures

This inspector reviewed the following fire protection systems surveillance procedures:

Procedure No.	Title
PT/O/A/250/10A	Fire Protection System Monthly Check, 2/2/88
PT/O/A/250/10B	Fire Protection System Annual Check, 7/21/87
PT/O/B/250/26	Turbine Building Sprinkler System Annual Check 1/4/85
PT/O/B/250/30	Monthly Fire Brigade Equipment Inspection, 10/9/87
PT/O/A/250/29	Daily Visual Inspection of Turbine Building to Auxiliary Building Fire Doors, 3/23/88
MP/O/A/1705/13	Fire Protection Equipment Inspection Monthly, 11/4/87
MP/O/A/1705/13A	Reactor Building Hose Stations Inspection, Monthly During Outage, 11/4/87
MP/1/A/1705/18	Fire Barrier Inspection Every Six Months, 10/30/85
PT/O/A/0250/24	Fire Protection System Three Year Flow Test 10/29/85
MP/O/B/1705/22	Fire Protection Fire Hydrants and Post Indicator Valves, Semi Annually, 1/7/87
MP/1/A/1705/01	Fire Protection Equipment Inspection Monthly, 7/21/87
MP/1/A/1705/19	Fire Protection Inspection of Fire Doors, Every two months 5/20/85

The review showed that the various test outlines and inspection instructions implemented the surveillance requirements of the plant Fire Protection Technical Specifications and showed that inspection and test instructions followed general industry fire protection practices, NRC Fire protection guidelines and the guidelines of the National Fire Protection Association (NFPA) Fire codes.

c. Fire Protection Surveillance Inspections and Tests

The inspector reviewed the following surveillance inspection and test records for the dates indicated.

Procedure No.	Test Records
PT/0A/250/10A	Fire Protection System Monthly Check, November, December 1987, January, February, March, April, May, and June, 1988
PT/0/B/250/30	Monthly Fire Brigade Equipment Inspection December 22, 1987, January, February, March, April, May, and June, 1988
PT/0/B/250/26	Turbine Building Sprinkler System Annual Test, May 17, 1988
PT/0/A/250/29	Visual Inspection of Turbine To Auxiliary Building Fire Doors June 1 to June 15, 1988
PT/0/A/250/10B	Fire Protection Three Year Flow Test, June 6, 1987 through July 7, 1987
MP/2/A/1705/01	Monthly Fire Protection Equipment Inspection January 3, February 10, March 3, April 8, and May 2, 1988
MP/1/A/1705/01	Monthly Fire Protection Equipment Inspection January 7, February 10, March 1, 1988
MP/0/B/1705/22	Fire Protection Fire Hydrants Post Indicator Valves, Semi Annually, November 16, 1987, and May 11, 1987
MP/1/A/1705/19	Fire Protection Fire Rated Doors, Bi-monthly Inspection, February 19, 1988, April 19, 1988, and June 19, 1988
MP/0/A/1705/13	Reactor Building Fire Extinguishers and Hose Stations, Monthly During Outage, March 29-31, 1988; and April 21, 1988
MP/0/A/200/59	Keowee Hydro Station, Periodic Test of Co_2 System Generator No. 1, June 1, 1988

Procedure No. (Continued)	Test Records
MP/0/A/200/60	Keowee Hydro Station, Periodic Test of Co_2 System Generator No. 2, June 1, 1988

The surveillance test record data and testing frequency associated with the above fire protection system surveillance test inspections were found to be satisfactory with regard to meeting the requirements of the plants Fire Protection Technical Specifications.

d. Fire Protection Audits

The most recent audit report of the Oconee Fire Protection program was reviewed. This was annual audit Number NP-88-10 (ON) conducted May 9 to 20, 1988.

This audit identified several fire protection program discrepancies and unresolved items and recommended several program improvements. The licensee appeared to be taking appropriate corrective action on these audit findings.

e. Fire Brigade

(1) Organization

The fire brigade is composed of approximately 168 members from the operation's group. The brigade leader is normally one of the assistant chief supervisors and other brigade members are nuclear equipment operators. Sufficient personnel are assigned to each shift to meet the minimum operations staffing requirements of the Technical Specifications including five members for fire brigade duties. The inspector reviewed the shift assignment for May and June 1988 and verified that sufficient manpower to meet these requirements were assigned to each shift.

(2) The inspector reviewed the training and drill records for all brigade leaders and brigade members for the fourth quarter of 1987 and the first and second quarter of 1988. The records reviewed indicated that each of these leaders and members had received an annual medical review, attended the required training, and participated in the required number of drills.

The inspector also verified that a fire brigade drill had been conducted each quarter of 1987 and 1988. The fire brigade training records were found satisfactory.

In addition the inspector reviewed the licensee's initial fire brigade training to verify the following topics were being covered.

- Indoctrination of plant fire fighting plant with specific identification of each individuals responsibilities.

- Indentification of the type and location of fire hazards and associated types of fires that could occur in the plant.

- The toxic and corrosive characteristics of expected products of combustion.

- Identification of the location of fire fighting equipment for each area and familiarization with the layout of the plant including access and egress routes to each area.

- The proper use of available fire fighting equipment and the correct methods of fighting each type of fire.

- The proper use of communication, lighting, ventilation and emergency breathing equipment.

- The proper methods for fighting fires inside buildings and confined spaces.

Based on this review, the inspector concluded that the licensee's initial fire brigade training program covered the above training topics. In addition, it appears that the licensee's fire brigade training program repeats the basic fire fighting skills of the initial program.

(3) Fire Brigade Fire Fighting Strategies

The inspector reviewed the following plant fire fighting strategies (pre-fire plans):

Plan No. 1	Unit 1 Control Battery Room Auxiliary Building Room 400, Level 4
Plan No. 3	Unit 2 Control Battery Room Building 458, Level 14
Plan No. 6	Unit 1 and 2 Blockhouse, Turbine Building Level 3
Plan No. 8	Unit 1 Cable Spreading Room, Auxiliary Building Room 403, Level 4
Plan No. 11	Unit 1 and 2 Control Room, Level 5 of Turbine Auxiliary Building
Plan No. 15	Unit 1 - Turbine Driven Emergency Feedwater Pump, Level 1 of Turbine Building

Plan No. 23	Unit 1 and 2 HPI Pumps, Level 1 of Auxiliary Building
Plan No. 25	HPSW Pumps A and B, Located In Turbine Basement
Plan No. 26	HPSW Jockey Pump, Turbine Building Basement Column I-H and J-29
Plan No. 28	Unit 1 LPI Pumps and RBS Pumps, Auxiliary Buildings Level 771, Room 119
Plan No. 34	Unit 1 Penetration Room, Level 4 of the Auxiliary Building
Plan No. 40	SSF - Pump Room
Plan No. 41	Unit 1 and 2 Switchgear Room, Level 3 of the Turbine Building
Plan No. 46	Transformer CT-2 Located E side of Turbine Building between Transformer CT-2 and CT-3
Plan No. 51	Radwaste Facility Located at South End of Turbine Building

Based on this review, the inspector determined that the above fire fighting strategies adequately addressed the fire hazards in the area, the type of extinguishers to be utilized, the direction of attack, systems in the room/area to be managed in order to reduce fire damage, heat sensitive equipment in the room/area, and specific fire brigade duties with regard to smoke control and salvage.

(4) Fire Brigade Drill

During this inspection, the inspector witnessed an unannounced fire brigade drill. The drill scenario involved a failure of several batteries due to overcharging results in an explosion, fire, electrolyte release in the Unit 2 battery room, and the stairwell fills with smoke.

The drills was announced over the P.A. system at 9:29 a.m. and repeated at 9:32 a.m.

Twelve Fire brigade members and one chemistry technician responded to the fire. The initial size up of the fire condition was made by the fire brigade captain and strategies were decided by the fire brigade leader and manpower was deployed for equipment placement. The fire brigade leader assigned two man teams to prepare for entry. The assigned teams entered the access

corridor with a radio, two Co_2 extinguishers and a 1.5 inch hose line. The line officer advised the fire brigade leader of heavy smoke and requested smoke ejectors. The fire brigade leader advised the control room to have AHU-16 deenergized. The attack team entered the battery room and attacked the fire with Co_2 extinguishers. The controller advised the team that the fire was out. One member simulated application of soda on the electrolytic spill. The adjacent batteries and rooms were checked for damage. Two operation fire brigade members arrived with ventilation equipment. Two of the entry team members left the battery room to report to the fire brigade leader. Two fire brigade members remained to observe for reflash. The drill was secured at 9:45 a.m.

The fire brigade utilized proper manual fire fighting methods and reacted to the drill scenario in an effective and efficient manner.

f. Plant Tour and Inspection of Fire Protection Equipment

(1) The inspector performed an inspection of the fire brigade equipment, consisting of fire hoses, nozzles, tools and miscellaneous equipment. The equipment is stored on three trailers in the exterior area of the plant, on two tool carts adjacent to the control rooms and in cabinets on the Unit 2 control lobby, Unit 2 and 3 elevator lobby, and turbine building.

Three portable foam carts were also inspected. Examination of equipment in these showed that the proper amount of equipment was stored in the referenced areas and that the equipment was properly maintained.

(2) Permanent Plant Fire Protection Features

A plant tour was made by the inspector. During the tour, the following safe shutdown plant areas and their related fire protection features were inspected:

Units 1, 2, and 3 Control Room
Unit 1, Control Battery Room
Unit 2, Control Battery Room
Unit 3, Control Battery Room
Unit 1 and 2, Switchgear Room
Unit 1, 2, and 3 Cable Shaft
Unit 1, 2, and 3 Cable Spreading Room
Turbine Building Basement, Electric and Jockey Fire Pumps
Transformers CT-1, CT-2, CT-3, CT-5, Keowee Hydro Station
Generator 1 and 2

The fire smoke detection systems and manual fire fighting equipment for the above plant areas were inspected and verified

to be in service. Based on this inspection it appears that the fire protection features associated with the above plant areas are satisfactorily maintained. The plant tour also verified the licensee's implementation of the fire prevention administrative procedures. The control of combustibles and flammable materials, liquids and gases, and the general housekeeping were found to be acceptable in the areas inspected.

Within the areas inspected no violations or deviations were identified.

3. Action on Previous Inspection Findings (92702)

(Open) Deviation 269/86-20-02, Discrepancies Between FSAR and Installed Seismic Instrumentation. Section 3.7.4.1 of the Oconee Final Safety Analysis Report (FSAR) provides the location and description of the seismic instrumentation installed at the site. Five of the 2 G peak recording accelerometers in the reactor building are out of service. Discussions with the responsible engineer indicated these instruments would be replaced during the next outage for Unit 1.

4. Licensee Event Report (LER) 92700

(Closed) LER 269/88-05, Inoperable fire barrier penetration seals. On May 18, 1988, 188 penetration fire barriers were declared inoperable because documentation qualifying their specific arrangements as a tested three hours fire rates assembly could not be substantiated. This incident was discovered as a result of Design Engineering review and a QA audit.

During this inspection this inspector discussed this item with responsible design engineers and inspected ongoing repairs. Observation of ongoing work and discussions with responsible engineers indicated that proper repairs were being made.

During the exit on July 1, 1988, the licensee indicated work would be completed by the end of the week. This item is closed.

5. Exit Interview

The inspection scope and results were summarized on July 1, 1988, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspector during this inspection.

Licensee management was informed that the deviation discussed in Paragraph 3 would remain open. The inspector also informed the licensee that the LER discussed in Paragraph 4 would be closed.