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

Report Nos.: 50-269/87-32, 50-270/87-32, and 50-287/87-32

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: August 4-7, 1987

Inspector: _____ 8/19/87
N. E. Economos Date Signed

Approved by: _____ 8/19/87
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection was in the areas of licensee action on previous open items, Unit 1 inservice inspection (ISI) work observation; licensee action on Temporary Instruction (TI) 2515/84; and IE Bulletin 83-07; Replacement of feedwater spray nozzle heads.

Results: One violation was identified - Violation 269, 270, 287/87-32-01, Failure to provide storage access control - Warehouse #6, Paragraph 8.

REPORT DETAILS

1. Licensee Employees Contacted

*M. S. Tuckman, Station Manager
R. J. Brackett, Senior Quality Assurance (QA) Engineer
J. T. Hamrick, Maintenance Services
K. G. Rhode, Nuclear Production Engineer
*C. Baldwin, Technical Support Supervisor
J. W. Setger, Level II NDE Examiner
W. R. Hunt, ISI Coordinator, Oconee
*T. Matthews, Regulatory Compliance Specialist

NRC Resident Inspector

*J. C. Bryant, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 7, 1987, 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.

- Violation 269,270,287/87-32-01, Failure to provide storage access control - Warehouse #6, Paragraph 8.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector 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 this inspection.

5. Followup on IE Bulletins (92703)

(Closed) IE Bulletin 83-07: Apparently Fraudulent Products Sold by Ray Miller, Inc.

Power reactor facilities were informed in January 1983, by Information Notice IEN 83-01 that fraudulent products may have been sold to nuclear industry companies by Ray Miller, Inc. An updated and comprehensive list of Ray Miller, Inc., customers for the years 1975-1979 was provided to power reactor licensees in Supplement 1 to the aforementioned IEN dated April 15, 1983. When information regarding specific purchase orders for which materials were apparently substituted, the Commission issued the subject Bulletin and requested that licensees determine where suspect material had been installed in plants. In addition, licensees were requested to evaluate its safety significance and tag or dispose of the suspect material not yet installed.

By memorandum dated March 22, 1984, the licensee communicated its response to the subject bulletin. The response indicated that according to their records, the material in question had not been used in safety-related applications at Oconee, and therefore, response items 1 through 3 of the bulletin were not applicable.

A review of the records, including internal memos on file, showed that the only material used on site was in the water treatment room for drinking water piping. This material was purchased from POE Corporation of Greenville, SC under purchase order number B-8983C-8206 dated May 17, 1978. This bulletin is considered closed.

6. Temporary Instructions (TI) Units 1, 2, and 3 (25584)

TI 2515/84, Verification of Compliance With Order for Modification of Licensee Primary Coolant System Pressure Isolation (Event) Valves The Reactor Safety Study (RSS), WASH-1400, identified in a PWR an intersystem loss of coolant accident (LOCA) that a significant contributor to risk of core melt accidents (Event V). The design examined in the RSS contained in-series check valves isolating the high pressure primary coolant system (PCS) from the low pressure injection system (LPIS) piping. The scenario which leads to the Event V accident is initiated by the failure of these check valves to function as a pressure isolation barrier against reactor coolant system (RCS) pressure. This causes an overpressurization and rupture of the LPIS low pressure piping which results in a LOCA that bypasses containment.

To better define the Event V concern, all light water reactor licensees were requested by letter dated February 23, 1980, to provide specific information on such valve configurations in accordance with 10 CFR 50.54(f).

In addition, licensees were asked to perform individual check valve leak testing before plant startup after the next scheduled outage.

Based on licensee responses and the ongoing unsatisfactory operational experience at several plants, the NRC staff concluded that a valve configuration of concern existed; meaning that, when pressure isolation was provided by two check valves in-series, and when failure of one valve in the pair can go undetected for a substantial length of time, verification of valve integrity was required. The staff concluded that, since these valves are safety-related, they needed to be tested periodically to ensure low probability of gross failure, AS a result, the staff determined that periodic examination of check valves was required to be undertaken by the licensees to verify that each valve was seated properly and functioning as a pressure isolation device. Such testing was intended to reduce the overall risk of an inter-system LOCA.

On April 20, 1987, the Commission issued an Order for Modification of License Concerning Primary Coolant System Pressure Isolation Valves, to specified PWR and BWR plants requiring that the above described testing be implemented. This Order included a Safety Evaluation Report (SER) and Technical Specification insert pages to require leak rate testing of Event V pressure isolation valves.

TI 2515/56 was issued on June 1, 1981, for followup inspection of implementation of the Event V orders. It expired December 1983. The present TI, 2515/84, is intended to verify satisfactory completion of licensee actions to implement the periodic testing of Event V valves as required by the aforementioned Order.

Within these areas, the inspector selected the two pairs of check valves, one pair in Branch A and one pair in Branch B of the Low Pressure Injection System in each of the three units.

These valves are identified as: CF-12/LP-47 in Branch A and CF-14/LP-48 in Branch B. They appear in the Technical Evaluation Report, listed as Attachment 3 to the subject Order.

This inspection effort included review of: the plant's Technical Specification (TS) 4.5.1.2.3, check valves; and 3.1.6.10, allowable leakage rates and limiting conditions for operation; a copy of the licensee's Event V Order and the original SER, procedure changes and records of hardware modifications as applicable.

The procedure for this leak test is PT/O/A/01050/15D Intersystem LOCA Leak Test. This procedure was reviewed to verify that it is consistent with TS requirements including:

a. An acceptable test method is used. This would include a direct volumetric leakage rate measurement or other equivalent means capable of demonstrating that leakage rate limits given in the TS are not exceeded.

b. The test procedure ensures that leakage rates obtained are for individual valves rather than for combined components.

c. The test procedure requires that leakage rates received at test pressures less than the maximum potential pressure differential across the valve be adjusted by assuming leakage to be directly proportional to the pressure differential to the one-half power as noted in the SER which accompanies the Order.

d. Acceptance criteria stated in the test procedure are in accordance with the TS.

e. Verify that the procedure identifies required corrective actions in event leakage rate results are unacceptable.

For the valves listed above, the inspector reviewed records of test completed during previous outages for each of the three (3) units as listed below.

Valve	Unit 1	Unit 2	Unit 3
*CF-11	10/16/85		10/04/85
CF-12	4/28-29/86	10/14/86	10/20/86
*CF-13			
CF-14	08/15/86		03/27-28/87
*LP-46			
LP-47			
LP-48			

*These valves were not included in the Technical Evaluation Report, but are listed in the same manner.

The records showed that valve LP-46 in Unit 1 failed the leak test performed on 04/29/86 as it exceeded TS acceptable leak rate limit of 1.0 gpm. The valve was isolated and work request 91145C dated 04/29/86 was issued for its repair. Following the repair, the valve was retested on 5/26/86 and returned to service. In addition, test data was reviewed to verify that:

a. Test records contain major test data including upstream and downstream pressures, leak volume per unit time (or equivalent), leakage rate adjustment calculations when required, and leakage rate acceptance criteria based on trending from previous tests where applicable.

b. Recorded test frequency is in accordance with TS.

c. As found leakage (i.e., prior to valve stroking, modification, adjustments, etc.) is recorded.

d. Leakage rates trending has been documented and adequately evaluated by the licensee in accordance with the TS requirement.

e. No test data anomalies exist which indicate improper or inaccurate testing.

f. Adequate corrective actions were taken for valves not meeting the acceptance criteria.

7. Inservice Inspection (ISI) - Observation of Work Activities, Unit 1 (73753)

Liquid Penetrant (PT) Examination

The inspector observed the liquid penetrant examination indicated below. The observation was compared with the applicable procedures and the Code in the following areas: specified method, penetrant materials identified; penetrant materials analyzed for halogens and sulfur; acceptable pre-examination surface; drying time; method of penetration application; penetration time; surface temperature; solvent removal; dry surface prior to developing; type of developer; examination technique; evaluation technique; and reporting of examination results. The applicable code for the ISI is ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition, with Addenda through the winter of 1980.

Item No.	Description	Weld No.
C05.031.006	LPI, 53B Pipe to Collar	1-53B-2-33

The inspector reviewed the below listed liquid penetrant materials certification records to ascertain if the sulfur and halogen content of the material was within acceptable content limits.

Materials	Batch Number	Type
Liquid Penetrant	84H015	SKL-HF/S
Cleaner/Remover	85M056	SKC-S
Developer	85C055	SKC-D

Within the areas of inspection, no deviations or violations were identified.

8. Once Through Steam Generator (OTSG) Main Feedwater Spray Nozzle Head Replacement, Unit 1 (37700)

Preparations are underway to replace the main feedwater spray head nozzles during the upcoming Unit 1 outage. The replacement has been prompted because erosion/corrosion degraded the perforated carbon steel nozzle spray heads to the extent that the desired spray pattern is no longer there.

Discussions with cognizant licensee and contractor, Babcock and Wilcox (B&W), personnel disclosed that the replacement nozzle heads will be made of inconel material. B&W will be in charge of the modification; however, welding will be done in accordance with DPC qualified welding procedures. The licensee is in charge of QA/QC activities.

The modification will be done in accordance with Oconee maintenance procedure MP/O/A/1130/37 and Drawing No. OM-201-2272. Because the aforementioned procedure had not yet been approved, no effort was made to review it at this time. The inspector checked the replacement nozzles which were in storage at Warehouse No. 6. A number of nozzles were checked for workmanship, cleanliness, and overall appearance/condition. Receipt inspections had been performed on August 4, 1987, and QA tag number 53222 issued. At this time, the inspector toured the warehouse to ascertain whether storage conditions were consistent with regulatory requirements and applicable site procedures. Within these areas, the inspector noted that each of the roll-up type doors located on opposite ends of the warehouse were fully open. There were no guards posted or any type of physical barrier in either of the two entry ways that would prevent access to the warehouse by unauthorized personnel. This condition was discussed with site management who stated that the matter would be investigated immediately. The inspector stated that this failure to maintain access control over this area was in violation of 10 CFR Appendix B, Criterion V. This apparent violation was identified as 269, 270, 287/87-32-01, Failure to Provide Storage Access Control - Warehouse #6.