(DCS Numbers - see attached sheet)

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report Nos. 50-272/83-16
50-311/83-15

Docket Nos. 50-272
50-311

License Nos. DPR-70
DPR-75

Licensee: Public Service Electric and Gas Company

80 Park Plaza

Newark, New Jersey 07101

Facility Name: Salem Nuclear Generating Station - Units 1 and 2

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: May 11, 1983 - June 8, 1983

Inspectors: L. J. Norrholm, Senior Resident Inspector — 6/15/83 date

R. J. Summers, Resident Reactor Inspector — 6/15/83 date

Approved By: S. J. Collins, Acting Chief, Reactor Projects Section No. 1D, Projects Branch No. 1, DPRP — 6/24/83 date

Inspection Summary:
Inspections on May 11, 1983 - June 8, 1983 (Combined Report Numbers 50-272/83-16 and 50-311/83-15)
Unit 1 Areas Inspected: Routine inspections of plant operations including: tours of the facility, conformance with Technical Specifications and operating parameters, log and record reviews, reviews of licensee events, and followup on previous inspection items. The inspection involved 112 inspector hours by the resident NRC inspectors.
Results: One violation was identified (Failure to follow procedures - Paragraph 5C).
Unit 2 Areas Inspected: Routine inspections of plant operations including: tours of the facility, conformance with Technical Specifications and operating parameters, log and record reviews, reviews of licensee events, and followup on previous inspection items. The inspection involved 85 inspector hours by the resident NRC inspectors.
Results: Two violations were identified (Failure to perform surveillance test - Paragraph 5A; Failure to establish containment integrity when required - Paragraph 7B).

Report Nos. 50-272/83-16 and 50-311/83-15 DCS Numbers:

050272-830~~83~~22	050311-830218
050272-830315	050311-830407
050272-830513	050311-830408
050272-830520	050311-830409
050272-830527	050311-830413
050272-830528	050311-830418
050272-830602	050311-830428
	050311-830523
	050311-830525
	050311-830529
	050311-830530
	050311-830603

DETAILS

1. Persons Contacted

J. Driscoll, Assistant General Manager - Salem Operations
L. Fry, Operations Manager
J. Gallagher, Maintenance Manager
D. Perkins, Station QA Engineer
J. Gueller, Operating Engineer
J. Hagan, Maintenance Engineer
J. Jackson, Technical Engineer
L. Miller, Technical Manager
J. O'Connor, Radiation Protection Engineer
J. Zupko, Jr., General Manager - Salem Operations

The inspector also interviewed other licensee personnel during the course of the inspections including management, clerical, maintenance, operations, performance and quality assurance personnel.

2. Status of Previous Inspection Items

(Closed) Violation (272/82-10-01) Failure to make 10 CFR 50.72 report. Repeated failures to make these reports are documented in NRC enforcement correspondence dated May 5, 1982. This item is closed and the overall corrective actions will be reviewed in following up the later violations.

(Closed) Unresolved Item (272/82-19-04) Accuracy of plant vent monitor in quantifying releases. This issue is addressed in detail in NRC Inspection Report 50-272/82-28. Adequacy of corrective actions will be reviewed during followup on an apparent violation identified in that report.

(Closed) Follow Item (311/81-27-03) Full flow throttle valve test for Charging-Safety Injection Pump 22. This test was completed May 16, 1983 using surveillance procedure SP(O)4.5.2H. Test data met Technical Specification acceptance criteria for maximum and minimum flows from the charging and safety injection pumps. New throttle positions for the SJ16, SJ138 and SJ143 valves were determined. The new positions were recorded in plant operating procedures.

(Closed) Follow Item (311/82-13-06) Reactor Coolant System leak rate surveillance. By letter dated October 5, 1982, the licensee submitted a proposed change to the Technical Specifications which will give the same allowance for steady state conditions in performing the water inventory balance as currently exists in Unit 1 Technical Specifications. This item is closed.

(Closed) Unresolved Item (311/82-14-01) Operation of one Main Steam Isolation Valve (MSIV) control system in single port. By letter dated October 5, 1982, the licensee requested a change to the Technical Specifications which will more clearly define the operability of MSIV's with the control system of one out of the four valves selected to single port operation. The licensee's analysis concludes that, with only one valve so selected, single failure criteria is not violated. The inspector had no further questions on this item.

(Closed) Unresolved Item (272/82-19-02) Corrective actions to preclude exhausting Air Particle Detector (APD) filter paper (LER 82-43). The inspector's review of station operating instructions confirmed that use of the fast paper mode to clear the APD is no longer specified by procedure. No recurrence of this event has been identified.

(Closed) Follow Item (272/81-04-05) Program to eliminate continuous overhead annunciators. The licensee has instituted Operations Log #13, which provides a mechanism for recording and tracking inoperable instrumentation and alarms. In addition to the record, the log documents corrective actions initiated (work order or design change request) and documents authorization to block nuisance alarms until the problem is corrected.

(Closed) Follow Item (272/82-14-02) Main Steamline Noble Gas Monitor. By inspection of the monitors and review of calibration procedures, the inspector confirmed that the steam line monitors were installed during the recent outage. Four inline monitors with a detection range to 3×10^{3} μCi/cc are available with recorders in the control room. A fifth monitor measures a composite sample from all four main steam lines.

3. Review of Periodic and Special Reports

Upon receipt, periodic and special reports submitted by the licensee pursuant to Technical Specifications 6.9.1 and 6.9.2 were reviewed by the inspector. The reports were reviewed to determine that the report included the required information; that test results and/or supporting information were consistent with design predictions and performance specifications; that planned corrective action was adequate for resolution of identified problems; and, whether any information in the report should be classified as an abnormal occurrence.

The following periodic and special reports were reviewed:

-- Unit 1 Monthly Operating Report - April 1983

-- Unit 2 Monthly Operating Report - April 1983

The above reports were found acceptable.

4. Licensee Events

a. In Office Review of Licensee Event Reports

The inspector reviewed LERs submitted to the NRC:RI office to verify that details of the event were clearly reported, including the accuracy of the description of cause and adequacy of corrective action. The inspector determined whether further information was required from the licensee, whether generic implications were involved, and whether the event warranted onsite followup. The following LERs were reviewed:

UNIT 1

*	83-18/03L	Reactivity Control Systems - Boric Acid Storage System - Inoperable
	83-19/03L	Fire Suppression Systems - No. 2 Diesel Fire Pump - Inoperable

UNIT 2

*	83-06/04L	Gaseous Waste Effluent Monitors - Waste Gas Discharge Line Automatic Isolation Feature - Inoperable
*	83-07/01T	Plant Systems - Steam Generator Snubbers - Inoperable
*	83-13/03L	Reactivity Control Systems - No. 22 Charging Pump - Inoperable
*	83-14/03L	Reactor Coolant System - Residual Heat Removal Loops - Loss of Operating Loop
*	83-15/03L	Plant Systems - Mechanical Snubbers - Inoperable
*	83-16/04L	Unplanned Releases of Low-Level Liquid Radioactive Waste to Owner-controlled Area
*	83-17/01T	Reactor Coolant System - Loss of Vent Path
	83-18/04L	Plant Systems - Fuel Handling Area Ventilation System - Normal Filter Train - Inoperable

b. Onsite Licensee Event Followup

For those LERs selected for onsite followup (denoted by asterisks in detail paragraph 4a), the inspector verified the reporting requirements of Technical Specifications and Regulatory Guide 1.16 had been met, that appropriate corrective action had been taken, that the event was reviewed by the licensee as required by AP-4 and-6, and that continued operation of the facility was conducted in accordance with Technical Specification limits. The following findings relate to the LERs reviewed on site:

UNIT 1

-- 83-18/03L A revised procedure to more closely control refilling the Boron Injection Tank and to require more frequent sampling has been prepared and was undergoing review during this inspection. The final issued procedure will be reviewed by the inspector in a subsequent inspection (272/83-16-01).

UNIT 2

-- 83-06/04L This report details a loss in sensitivity of Plant Vent Noble Gas Monitor R41C due to dilution by inleakage to the sample line. The inspector confirmed that Inspection Orders have been established and are being issued to pressure test all monitor sample lines during outages.

-- 83-07/01T This report details surveillance test failures for 1000 Kip hydraulic snubbers used for Steam Generator support. A similar occurrence was discovered during testing of like Unit 1 snubbers. At that time, November 1982, an engineering evaluation determined that for a worst-case loading transient, excessive strain of the hot leg would occur but would not result in a LOCA. For Unit 2, a total of 6 out of 16 snubbers were tested with failure data consistent with that found on Unit 1. Ten snubbers were examined and the failure mode was the same as Unit 1 snubbers. Since the Unit 2 test data was consistent with the November 1982 evaluation, additional "as found" testing was stopped and repairs and successful post-maintenance testing was completed for all 16 snubbers in use. Long term corrective actions, such as a different type of piston seal, are being investigated.

-- 83-13/03L During this inspection, extensive cleaning of the service water system was underway to clear biofouling. Implementation of the design change to move the isolation valve and reduce the size of the dead leg pipe to the auxiliary feedwater alternate supply will be reviewed during a subsequent inspection (311/83-15-01).

-- 83-14/03L On two occasions, RHR flow was lost for less than one minute when the 2A vital bus loads were tripped by apparent spurious operation of the Safeguards Equipment Cabinet (SEC). Due to the unique symptoms observed, the licensee believes these events are unrelated to problems of electrical noise in the SEC which have been addressed by the addition of noise suppression devices. Licensee evaluation is continuing. This item is unresolved pending review of the licensee's analysis, corrective action, and supplemental report (311/83-15-02).

-- 83-15/03L During testing of mechanical snubbers, a number of failures were found in the smaller (¼ and ½ Kip) sizes. Of 85 installed snubbers, 47 have been tested with 9 failures found. No failures occured in the 1, 3 and 10 Kip sizes, 25 of which were tested. All 19 of the ¼ Kip snubbers were tested with 8 failures found. All 3 of the ½ Kip snubbers were tested and one failed. The failed snubbers are being repaired or replaced. Defining snubber "type" to include definition by size, the licensee has met the sample size requirements of the Technical Specifications. An engineering evaluation of the supported piping is being completed. The evaluation will be reviewed by the inspector prior to startup from this refueling outage (311/83-15-03).

-- 83-16/04L These events are discussed in NRC Inspection Report 50-311/83-13.

-- 83-17/01T This event is discussed in NRC Special Inspection Report 50-311/83-18.

Except as noted above, the reports were found acceptable.

5. Review of Plant Operations

A. Daily Inspection

The inspector toured the control room area to verify proper manning, access control, adherence to approved procedures, and compliance with LCOs. Instrumentation and recorder traces were observed. Status of control room annunciators was reviewed. Nuclear instrument panels and other reactor protective systems were examined. Effluent monitors were reviewed for indications of releases. Panel indications for onsite/offsite emergency power sources were examined for automatic operability. During entry to and egress from the protected area, the inspector observed access control, security boundary integrity, search activities, escorting, badging, and availability of radiation monitoring equipment.

The inspector reviewed shift supervisor, control room, and field operator logs covering the entire inspection period. Sampling reviews were made of tagging requests, night orders, the jumper/bypass log, incident reports, and QA nonconformance reports. The inspector also observed several shift turnovers during the period.

The above daily inspections, which included back shifts, were made on May 11, 12, 16-20, 23-27, 31, June 1-3, and 6-8, 1983.

The licensee identified on May 12, 1983 and brought to the attention of the resident inspector, Unit 2 incident report 83-083, which documents the licensee's failure to perform a Technical Specification Surveillance Requirement. Surveillance Requirement 4.7.6.1 d.3 is a test of the Unit 2 Control Room Emergency Air Conditioning System, which is required at least once per 18 months. The test verifies that the system maintains the control room atmosphere at least ¼ inch water gauge positive pressure relative to the outside atmosphere during operation under emergency alignment mode. The licensee determined that a test of the Control Room Emergency Air Conditioning System had not been conducted since October 9, 1979, during startup testing of Unit 2 prior to commercial operation. This test was performed prior to issuance of the license and Technical Specifications. Results met the startup test procedural acceptance criteria, although the results did not meet the subsequently issued Technical Specification surveillance acceptance criteria for assuring positive pressure. The licensee failed to recognize that this test was a Unit 2 surveillance requirement; Unit 1 has no similar requirement. Technical Specification 4.0.2 requires surveillances be performed within the specified interval plus a maximum allowable 25%. This requirement was exceeded by 21 months. This is a violation (50-311/83-15-04

Following identification of the missed surveillance, the licensee declared the Control Room Emergenncy Air Conditioning System inoperable, and restricted plant operations which would involve core alterations or positive reactivity changes, in accordance with the applicable Technical Specification action statement.

On June 7, 1983 the licensee performed a test in accordance with Surveillance Requirement 4.7.6.1d.3. At that time the licensee determined that they could meet the acceptance criteria as specified in the Technical Specification, as long as Fire Door No. 420 was maintained closed. This door, which is located outside of the control room area, apparently helps maintain the control room pressure boundary. This matter will be considered open until administrative controls, as needed, are established for Fire Door No. 420 (normally closed) to assure Control Room Emergency Air Conditioning System operability (50-311/83-15-05).

B. Plant Tours

The inspector toured accessible areas of the plant at least once per week. The tours included the control rooms, relay rooms, switchgear rooms, penetration areas, auxiliary building (elevations 122', 100', 84', 64', 55'), fuel handling building, turbine building, service water intake structure, plant perimeter and containment. During these tours, observations were made relative to equipment condition, fire hazards, fire protection, adherence to procedures, radiological controls and conditions, housekeeping, security, tagging of equipment, ongoing maintenance and surveillance, and availability of redundant equipment.

Current tagouts of selected components were verified in effect as specified. Records of current surveillance for tank boron concentrations, shutdown margin and pump testing were reviewed.

The following Limiting Conditions for Operation, not directly verifiable in the control room, were confirmed by field inspection or record review: service water availability to Auxiliary Feedwater (3.7.1.3), Fire barriers (3.7.11), and CARDOX system availability (3.7.10.3).

C. ESF System Walkdown

The inspector conducted a system walkdown for the Unit 1 Auxiliary Feedwater System. This was conducted to verify operability of the selected system. The inspector utilized system descriptions, the licensee's system lineup procedure, "as-built" system drawings including any modification descriptions not yet incorporated into the system drawing, and the Technical Specifications.

During this walkdown, the inspector identified two valves, 11AF923 and 12AF923, that were recently added to the system as a modification completed during the last refueling outage. The valves are in a cross-connect line at the discharge of the two motor driven Auxiliary Feedwater pumps. This permits alignment of either pump to feed either set of two steam generators. Each motor driven pump is normally aligned to feed only two steam generators such that both pumps are required to feed all four steam generators. The valves were found in the closed position which agreed with both the "as-built" drawing normal position and the Operating Instruction checklist for normal valve lineup. The inspector reviewed documentation of the system lineup conducted April 16, 1983 in accordance with Operating Instruction OI III-10.3.1 and determined that the two valves were not included in the lineup at that time. A change had been made to the OI checklist to include position requirements for these valves; however, the checklist was not used to perform the lineup. A computer generated worksheet was used for the lineup and the necessary updating of that system had not been completed.

Technical Specification 6.8.1 requires written procedures be established, implemented and maintained for applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November, 1972, which includes Administrative Procedures for equipment control and procedure adherence. Station Administrative Procedure No. 5, "Operating Practices Program" requires all operations conducted by the Operating Department shall be in accordance with approved procedures and that check-off sheets shall be completed as specified by the applicable Operating Instruction. Operating Instruction III-10.3.1 requires that check-off sheet 4.3 be completed for system alignment. This check-off sheet was not completed as required and further the worksheet used in lieu of the check-off sheet was not accurate in that it failed to list 11AF923 and 12AF923. This is a violation (50-272/83-16-02).

Except for the items noted in subparagraphs A and C the review of plant operations was found acceptable.

6. Monthly Surveillance and Maintenance Observation

A. Surveillance Activities

The inspector observed the performance of surveillance tests to confirm the following: testing was performed in accordance with adequate procedures; test instrumentation was calibrated; limiting conditions for operations were met; removal and restoration of the affected components were properly accomplished; test results conformed with Technical Specification and procedural requirements and were reviewed by personnel other than the individual performing the test; deficiencies noted were reviewed and appropriately resolved; personnel performing the surveillance activities were knowledgeable of the systems and the test procedures and were qualified to perform the tests.

These observations included:

-- 1IC-18.1.010 SSPS Train A, Reactor Trip Breaker UV Coil *

-- 1IC-18.1.011 SSPS Train B, Reactor Trip Breaker UV Coil *

-- 1IC-18.1.007 SSPS Reactor Trip Breaker and Permissive P-4 Test Prior to Startup - Train B *

-- 1IC-18.1.006 SSPS Reactor Trip Breaker and Permissive P-4 Test Prior to Startup - Train A *

*(Conducted May 20, 1983 within 24 hours of Salem Unit 1 Startup)

-- Review of Documentation for Operability Verification as per Unit 1 Technical Specifications for:

4.7.4.1a Service Water System
4.7.1.2a Auxiliary Feedwater System
4.7.7.1a Auxiliary Building Exhaust Air Filtration System

-- Unit 2 Technical Specification 4.7.6.1 d.3 Control Room Emergency Air Conditioning System Positive Pressure Test

-- Unit 2 Undervoltage Trip Attachment "force" testing

B. Maintenance Activities

The inspector observed portions of maintenance activities to determine that the work was conducted in accordance with approved procedures, regulatory guides, Technical Specifications, and industry codes or standards. The following items were considered during this review: limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing was performed prior to declaring that particular component as operable; activities were accomplished by qualified personnel; radiological controls were implemented; and fire prevention controls were implemented.

Activities observed included:

-- Troubleshooting and repair of 14 Service Water Pump 4KV Breaker.

-- Troubleshooting spurious alarm indications on the Unit 1 "First Out" Panel.

- -- Replacement of Unit 2 Reactor Trip Breaker Undervoltage Trip Attachments (UTA) with new UTAs obtained from Westinghouse.

  -- Units 1 and 2 Service Water Pipe inspection and repairs due to biofouling.

The monthly surveillance and maintenance activities observed were performed in accordance with applicable requirements and found acceptable.

7. Operating Events

A. Unit 1

i. On May 13, 1983 at about 12:45 a.m., approximately 350 gallons of contaminated water was released from the Auxiliary Building to the site yard in between the Auxiliary Building and the Unit 1 Fuel Handling Building. The radioactivity was confined to a 20' x 25' area, at least 200' from the nearest site boundary. Water samples from the nearest storm drains were analyzed for contamination, with negative results. The ground was covered with herculite and sand, immediately after spill discovery. The contaminated soil was removed later on May 13. Total estimated release to the yard was 131.7 μCi, with the principal contaminant Co 60.

The source of water was from the service water system, a portion of which had been drained into a contaminated penetration area prior to planned inspection of a control valve for evidence of biofouling. A temporary pump had been set up in the area previously to remove service water drained from the system. The suction from this pump was from the contaminated penetration area sump. The pump was placed in service by contractor employees when the sump started to fill with service water. An HP technician discovered the ongoing pumping operation and promptly terminated the release.

ii. At 6:46 p.m. on May 20, 1983 Salem Unit 1 went critical for the first time since February 25, 1983. After delays caused by secondary plant problems, the unit was in Mode 1 at 6:32 p.m. on May 21 and synchronized with the grid at 7:32 p.m. Resident inspectors observed the reactor startup and the required reactor trip breaker testing completed within 24 hours of startup. Power ascension to 100% was attained on May 27, after completing tests in accordance with the post-refueling startup test schedule. These startup tests were in progress at the time of the Salem ATWS Event on February 22, 1983 (Reference NRC Inspection Report 50-272/83-06, NUREG-0977 and NUREG-1000).

iii. At 1:50 p.m. on May 27, 1983, and again at 3:10 a.m. on May 28 a spurious alarm on the "First Out" panel occurred. The First Out panel is a part of the overhead annunciator system. In each case, the alarm was the No. 11 Steam Generator high-high level turbine trip. By procedure, the operators verified that the Solid State Protection System (SSPS) logic mimic was not demanding a trip. Therefore, they determined the alarm to be spurious. Troubleshooting was underway during the second occurrence and proved that no alarm signal was generated from the SSPS. At 8:47 a.m. on May 28, the entire "First Out" panel alarmed. Once again operators verified no reactor nor turbine trip demands were evident on the SSPS logic mimic. A number of circuit cards were found faulted in the overhead annunciator system which may have caused the First Out panel problems. The cards were replaced and no spurious alarms have occurred since. The licensee and the vendor are continuing to investigate these problems. The inspector will review the results of the investigation when they are available (50-272/83-16-03).

iv. On June 2, 1983, the licensee was informed by the fuel vendor of a potential unreviewed safety question concerning return to full power following extended reduced power operation at less than 85% full power. This type of operation results in increased power peaking at the bottom of the core and at worst case may result in transient or accident analyses as described in Technical Specification bases that could have permitted reactor operation in a manner less conservative than assumed in the analyses. The licensee plans to establish administrative controls to prevent operation as above. These administrative controls will be reviewed during a future inspection.

B. Unit 2

i. At 9:13 a.m., May 23, 1983, Salem 2 completed a periodic Containment Integrated Leak Rate Test. Calculated leak rate was 0.054 weight percent per day. The acceptance criterion is 0.075 weight percent per day.

ii. At 8:25 p.m. on May 25, 1983, the Technical Specification Limiting Condition for Operation regarding a minimum of two complete operable AC electrical bus trains (Technical Specification 3.8.2.2) was exceeded. At the time, 2A Diesel Generator was out of service for extensive outage maintenance and 2C Vital Instrument Bus Inverter had also been taken out of service for modification work expected to last about three hours based on previous experience. This condition rendered two AC bus trains inoperable which is permissible provided that containment integrity is established within eight hours. After about four hours, attempts to restore the 2C Vital Instrument Inverter to service were unsuccessful and steps to establish containment integrity were initiated. The lack of available time and delays encountered in clearing the air lock door resulted in contai ment integrity being established at 9:27 p.m., exceeding the Action Statement time by about one hour.

Also, at 8:43 a.m. on May 30, 1983, the Technical Specification Limiting Condition for Operation regarding a minimum of two complete Operable AC electrical bus trains (Technical Specification 3.8.2.2) was again

exceeded. At the time 2A Diesel Generator was out of service for outage maintenance and 2C vital instrument bus was powered by its backup supply (Solatron); this was due to failure of its normal supply at 12:43 a.m. Since the 2C backup supply is from a different vital bus, the instrument bus was declared inoperable even though energized. The Limiting Condition required that containment integrity be established within eight hours. Since secondary side manways were open on two out of four steam generators, containment integrity included a requirement that several secondary plant valves be verified closed. It was not realized until about 7:30 a.m. that existing valve lineups were not current and would have to be reconfirmed. As a result, containment integrity was not established until 11:45 a.m., exceeding the Action Statement time by about 3 hours. The 2C vital instrument bus was declared operable at 8:24 p.m., after corrective maintenance and post maintenance testing.

In each of the above cases, although certain components of emergency power trains were not operable, sources of emergency power were always available to the equipment required in this mode of operation. However, contingent preparations were not properly accomplished to assure that containment integrity could be established within the required 8 hours in the event that the electrical trains required by Technical Specifications could not be returned to service in time. Consequently, the two above occurrences are considered in violation of the Unit 2 Technical Specifications (50-311/83-15-06).

iii. At approximately 6:00 a.m. on May 29, 1983, about 100 gallons of diesel fuel overflowed through a vent pipe while filling Unit 2 Diesel Fuel Storage Tanks. The oil spilled into the yard area between the Unit 2 Fuel Handling Building and Auxiliary Building. Before the oil could be contained, much of it entered the site storm drain system and discharged to the Delaware River. The licensee declared an Unusual Event and notified state and Coast Guard authorities in addition to the NRC Operations Center. Booms were used in the river to contain and collect the spilled oil.

iv. All three diesel generators were declared inoperable at 4:30 p.m. on June 3, 1983 with the plant in Mode 5 (Cold Shutdown). This action was taken following a determination that service water header No. 22 overboard piping apparently contains a restriction such that sufficient cooling water flow is not available to support operation of more than one diesel under load. At the time, service water header No. 21 piping was isolated and drained for biofouling and silt inspection and cleaning. Each diesel service water system can be discharged to either header and is normally aligned with discharge valves to both open. The two operable diesel generators had successfully passed several surveillance tests under load. The licensee postulated that sufficient leakage and drain flow existed to the drained header to provide cooling for one engine. In accordance with Technical Specifications, no reactivity additions were made and containment integrity was established within five hours.

- At the next available low tide, the service water header 21 discharge was made available. Two diesel generators were tested under load, simultaneously, and declared operable at 2:00 p.m. on June 4. On June 7, the licensee ran 2C Diesel Generator loaded for two one hour periods, first aligned with service water discharging to one service water header and next, aligned with service water discharging to the other header. In both cases, no temperature problems were encountered, indicating that adequate service water flow was available, with no blockage evident. This test supports one possible explanation for the problems encountered on June 3; the service water return from the diesel generators which joins the main service water discharge headers underground may, in fact, be reversed from the configuration shown on plant system and arrangement drawings. This possibility is being pursued by the licensee. Inspection of the No. 22 service water header is still planned following completion of No. 21 header inspection and cleaning still in progress. If this reversed condition does exist, it would fully account for the conditions observed on June 3. The inspector will continue to follow this issue until the problem is resolved (50-311/83-15-07).

8. Unresolved Items

Areas for which more information is required to determine acceptability are considered unresolved. Unresolved items are contained in Paragraph 4.

9. Exit Interview

At periodic intervals during the course of this inspection, meetings were held with senior facility management to discuss inspection scope and findings.