



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

Report Nos.: 50-338/91-27 and 50-339/91-27

Licensee: Virginia Electric & Power Company
5000 Dominion Boulevard
Glen Allen, VA 23060

Docket Nos.: 50-338 and 50-339

License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: December 8, 1991 - January 11, 1992

Inspectors:	<u><i>M.S. Lesser</i></u>	<u>1-28-92</u>
	M.S. Lesser, Senior Resident Inspector	Date Signed
	<u><i>D.R. Taylor</i></u>	<u>1-28-92</u>
	D.R. Taylor, Resident Inspector	Date Signed
Approved by:	<u><i>P.E. Fredrickson</i></u>	<u>1-30-92</u>
	P.E. Fredrickson, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope:

This routine inspection by the resident inspectors involved the following areas: operations, maintenance, surveillances, fire protection, licensee event report followup, and action on previous inspection findings. Inspections of licensee backshift activities were conducted on the following days: December 23, 1991 and January 8, 1992.

Results:

In the area of maintenance, an apparent poor maintenance practice was identified when 1-SI-MOV-1885A failed to open during the Safety Injection Functional Test. The failure was caused by a broken electrical wire inside of a limit switch cover (para 4.c).

In the area of operations, 2000 gallons was inadvertently allowed to gravity flow from the RWST to the RCS. Operations personnel incorrectly positioned 1-SI-MOV-1864A and B, following type C penetration testing, which subsequently provided a gravity drain flow path to the RCS. The PT inappropriately allowed positioning of valves as directed by the shift supervisor. A weakness was also noted with filling and venting of the system following testing (para 3).

In the area of quality verification, the licensee's audits of the fire protection program were found to be in depth with sufficient detail to provide extensive review of the area being examined (para 6.a).

In the area of engineering/technical support an unresolved item was identified concerning the a high failure rate of Appendix R, Emergency Lighting. Failures of the associated batteries appear to be a recurring problem, however, corrective action has not been timely (para 6.b).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- L. Edmonds, Superintendent, Nuclear Training
- R. Enfinger, Assistant Station Manager, Operations and Maintenance
- *L. Hartz, Manager, Nuclear Quality Assurance
- J. Hayes, Superintendent of Operations
- D. Heacock, Superintendent, Station Engineering
- *G. Kane, Station Manager
- *P. Kemp, Supervisor, Licensing
- W. Matthews, Superintendent, Maintenance
- D. Roberts, Supervisor, Station Nuclear Safety
- *R. Saunders, Assistant Vice President, Nuclear Operations
- D. Schappell, Superintendent, Site Services
- R. Shears, Superintendent, Outage Management
- *J. Smith, Manager, Quality Assurance
- A. Stafford, Superintendent, Radiological Protection
- *J. Stall, Assistant Station Manager, Nuclear Safety and Licensing

Other licensee employees contacted included engineers, technicians, operators, mechanics, security force members, and office personnel.

NRC Resident Inspectors

- *M. Lesser, Senior Resident Inspector
- *D. Taylor, Resident Inspector

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Plant Status

Unit 1 started the inspection period at 100 percent power. On December 23, 1991, TS 3.0.3 was entered as a result of declaring all three steam generators inoperable per TS 3.4.5. The licensee declared an Unusual Event at 4:32 pm based upon a TS required shutdown. The unit was brought to a cold shutdown condition at 7:18 am on December 24, and the Unusual Event was terminated at 7:30 am. The unit remained in a cold shutdown, Mode 5 condition, for the remainder of the inspection period. During the 1991 refueling outage, extensive eddy current inspection was performed on the tubes in each of the three SGs. This included use of bobbin coil, 8x1 probe, and rotating pancake coil. The results of the inspections classified each of the SGs as Category C-3. Category C-3, as defined by TS, is when greater than 1 percent of the inspected tubes are defective. This condition requires all tubes to be inspected, defective

tubes plugged, and NRC approval for restart. This approval was granted with the stipulation that the licensee either implement a mid-cycle inspection of the SG tubes or provide additional information necessary to justify a full cycle of operation. The licensee provided additional information and review of the analysis by the NRC has been ongoing. On December 3, 1991, the licensee initiated review of eddy current data on a sample of tubes which were previously inspected. As a result of this re-evaluation, several additional intersections for the 8x1 probe and the RPC were considered pluggable by the licensee. These included both axial and circumferential indications. This information was presented to NRC, management on December 19. Based on further discussion with the NRC, the licensee decided to initiate the shutdown. The resident inspectors monitored the shutdown. A 62 day outage is anticipated to conduct the necessary SG inspections. Inspection Report 50-338, 339/92-02 further discusses this issue.

Unit 2 operated the entire inspection period at or about 100 percent power.

3. Operational Safety Verification (71707)

The inspectors conducted frequent visits to the control room to verify proper staffing, operator attentiveness and adherence to approved procedures. The inspectors attended plant status meetings and reviewed operator logs on a daily basis to verify operational safety and compliance with TS and to maintain awareness of the overall operation of the facility. Instrumentation and ECCS lineups were periodically reviewed from control room indications to assess operability. Frequent plant tours were conducted to observe equipment status, fire protection programs, radiological work practices, plant security programs and housekeeping. Deviation Reports were reviewed to assure that potential safety concerns were properly addressed and reported. Selected reports were followed to ensure that appropriate management attention and corrective action was applied.

a. Inadvertent Transfer of Water to the RCS

On December 27, 1991, the licensee reported an event pursuant to 10 CFR 50.72 involving an inadvertent transfer of approximately 2000 gallons of water from the Unit 1 RWST to the RCS. The unit was in mode 5 at the time and the transfer took place by gravity flow over a 7.5 minute period when the RCS pressure was reduced below the static head of the RWST. The licensee had completed a Type C local leak rate test on penetration 62 in accordance with 1-PT-61.3, Containment Type C Test. Penetration 62 is associated with LHSI flow to the RCS cold legs. This test requires RCS pressure greater than 100 psig prior to draining the penetration. A source of 45 psig air pressure is then applied downstream of each containment isolation valve (three parallel check valves inside containment in this case) and air leakage is monitored from upstream vent valves. Prior to the test, the LHSI system had been isolated from the RCS in accordance with

1-OP-3.4, Unit Shutdown from 200°F to 140°F, by shutting 1-SI-MOV-1864A and B. This step is intended to prevent a gravity drain of the RWST through the LHSI system into the RCS.

Following completion of the test, step 35 of 1-PT-61.3 requires all valves to be returned to their initial condition or as directed by the Shift Supervisor. The Shift Supervisor incorrectly directed 1-SI-MOV-1864A and B to be opened in order to refill the penetration with water and to place the LHSI in a standby mode. Over the next several hours, the RCS was slowly depressurized in preparation for venting the system. As RCS pressure dropped below the static head of the RWST, the gravity flow initiated. The operators recognized the sharp rise in pressurizer level from 50-80 percent, and identified and corrected the condition by shutting 1-SI-MOV-1864A and B.

The inspectors reviewed the event and identified the following weaknesses:

- 1) Personnel involved did not understand the basis for the as-found closed positions of 1-SI-MOV-1864A and B.
- 2) The PT was inappropriately used to control the status of valves. Allowing the Shift Supervisor to direct the position of valves in this method appears to bypass established licensee controls such as operating procedures and tagouts.
- 3) Methods for filling and venting are not controlled and do not assure that the system is filled solid. This was further exemplified on December 30 when 250 gallons of water was unexpectedly charged into the RCS from the LHSI system. This occurred following operation of the system in recirculation for a period which pressurized the piping. Following pump shutdown and discharge check valve seating, a residual pressure remained in the piping. This, along with an apparent pocket of compressed air in the piping, provided the motive force when a discharge MOV was cycled for testing.

The licensee's LER on the event will detail proposed corrective action.

No violations or deviations were identified.

4. Maintenance Observation (62703)

Station maintenance activities were observed/reviewed to ascertain that the activities were conducted in accordance with approved procedures, regulatory guides and industry codes or standards, and in conformance with TS requirements.

a. Fuel Transfer Gate Seal

The inspectors witnessed PM on the fuel transfer canal gate seal using M-20-FH/RI, Inspect Seal on Spent Fuel Pool Gate. The PM requires visual inspection of the seal for indications of cuts, cracks, pinches or blisters which could adversely effect the sealing function. After gate installation, 20 psig service air pressure is applied for two hours to the seal while the system is inspected for leaks. A condition is specified that the service air pressure not change by more than five psig. The inspector noted that the procedure was not clear in that it did not state to isolate the service air after 20 psig is applied. It was not clear whether the two hour inspection period was intended to be a pressure decay test (air isolated) or simply to provide a fluctuation band on service air pressure (air not isolated). This was discussed with the operator who had also identified the concern and was in the process of obtaining further guidance. The inspectors discussed the issue with the licensee who stated that the procedure would be clarified to isolate air for the two hour test.

b. Turbine Valve Actuator Preventive Maintenance

On January 8, 1991, the inspectors observed PM activities using 0-MCM-1410-02, Main Turbine EHC Actuator and Solenoid Trip Valve Testing. An EH Valve System Analyzer is used to check operation and identify hydraulic leakage for the turbine throttle and governor valve actuators. The procedure also flushes the system. Section 6.5.2 of the procedure performs an internal leakage test of the Emergency Trip Control Block by measuring the rate of pressure drop across the overspeed protection controller and emergency trip solenoid valves. The failure of corresponding solenoid valves at another station was the subject of IN 91-83, Solenoid Operated Valve Failures Resulted in Turbine Overspeed. The inspectors noted that no checks were performed on these solenoid valves in order to identify failure modes, that is, failure to open as described in the IN. The inspectors discussed this with the licensee who referenced a test done during plant startup in which the overspeed circuits are tested, however, not independently. The licensee indicated their desire to verify that the solenoid valves function properly and would initiate such action.

c. Failure During Testing, 1-SI-MOV-1885A

The inspectors reviewed DR 91-2033 which documented the failure of 1-SI-MOV-1885A, SI Recirculation Line Isolation Valve, to close during the performance of 1-PT-57.4, Safety Injection Functional Test. The valve is designed to shut if the following conditions are met: 1) An SI signal is present, 2) RWST level is low, and 3) 1-SI-MOV-1863A has opened. A second valve, 1-SI-MOV-1885C, located in series with 1-SI-MOV-1885A provides redundancy. Together the two valves are important because their failure to close would allow

radioactive gases from the containment sump water to be released to the atmosphere through the RWST vent in the event of a design basis accident.

The inspectors discussed the valve failure with electricians and were initially informed that the valve had actually shut and that the problem was most likely a result of LS settings for position indication. This conclusion was based on the fact that 1-SI-MOV-1860A, Isolation From Containment Sump Valve, had opened since one of the interlocks for 1-SI-MOV-1860A to open is for the LHSI pump recirculation valves to shut. Upon a closer review of the electrical prints, it was determined that 1-SI-MOV-1885A or 1885C would satisfy this interlock. 1-SI-MOV-1885C properly shut during the test. The electricians performed additional troubleshooting and identified a broken electrical wire on contact LS-9 inside the limit switch cover for 1-SI-MOV-1863A. This contact provides the 1-SI-MOV-1863A open interlock for 1-SI-MOV-1885A.

The inspectors discussed with the maintenance engineer the broken wire, and were informed that the most likely cause for the break was poor maintenance practices when landing the lead. It appeared that the wire was twisted and left under tension when torquing the lug during installation. The inspectors reviewed the maintenance history for valves 1-SI-MOV-1863A and 1-SI-MOV-1885A from the last performance of the SI functional test to see if it could be determined when the wire was broken. EWR 90-233A, performed January 16, 1991, provided a LS wiring modification for 1-SI-MOV-1863A. This modification did not rewire the interlock to 1-SI-MOV-1885A, however, the work was performed in the vicinity of the interlock. The only other maintenance which could have affected the wire was PM E-14-MOV/R-4, Limitorque Motor Operated Valve Inspection and Service. Based on the review of the maintenance activities, it could not be determined when or how long the wire had been broken.

The inspectors reviewed the January 1991 SI functional test procedure and noted that 1-SI-MOV-1885A operated properly. However, 1-SI-MOV-1867B, Boron Injection Tank Inlet Valve, failed to open on its first attempt. The valve's failure was caused by a broken wire in the circuitry. The wire was repaired under a work order, however, a DR was not written as required by station procedures. The inspectors were concerned with this matter because without a DR, the proper level of attention necessary to evaluate safety related equipment failures is bypassed. Failure to write station DRs has been identified as a concern by the NRC on two other occasions. Both resulted in the issuance of violations (reference violations 50-338/91-14-02; 50-338, 339/91-17). The failure to write a DR for the 1-SI-MOV-1867B problem is not being cited as a violation because it occurred prior to corrective actions being implemented for the other two referenced violations. Further inspection of this issue

will be accomplished during review of corrective action for the above referenced violations.

To document the failure of 1-SI-MOV-1867B and the failure to initiate a DR, the licensee initiated DR 92-12. Additionally, a written description of the 1-SI-MOV-1863A broken wire event was provided to all electrical maintenance personnel emphasizing proper maintenance practices when tightening electrical fasteners and re-installing LS covers.

No violations or deviations were identified.

5. Surveillance Observation (61726)

The inspectors observed/reviewed TS required testing and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that LCO's were met and that any deficiencies identified were properly reviewed and resolved.

a. Electrical Penetration Testing

On January 7, 1992, the inspectors observed testing on Unit 1 electrical penetrations using 1-PT-61.2.1, Containment Type B Electrical Penetration Test. The procedure applies 45 psig of dry nitrogen to the penetration via a test rig. Makeup flow to maintain the pressure is monitored for five minutes by observing and counting the flow of bubbles through a solution of glycerin. The number is converted to a leak rate value in SCFH. The inspectors discussed the procedure with the technicians who demonstrated adequate knowledge of the equipment and procedures. The inspectors noted several cases where the flow exceeded the acceptance criteria of 30 bubbles in five minutes. It should be noted that this acceptance criteria is extremely conservative with respect to the TS limits. The procedure allows repairs to be conducted and then the penetration to be retested. Discussion with personnel indicated that leakage typically is identified at connections in permanently installed leakage monitoring tubing. However, one leak was identified during this outage at an electrical cable connection nut. No documentation as to the location of the leakage or corrective action taken to lower the leakage below the 30 bubbles in five minutes criteria is required. The inspectors discussed the concern with the licensee in that significant penetration leaks might not be identified to management for assurance of adequate corrective action. The licensee initiated DR 92-43 to document the failures for further review. Additionally, a log describing corrective action taken was initiated.

b. Reactor Protection and ESF Logic Train B

On December 19, the inspectors observed the performance of 1-PT-36.1B, Reactor Protection and ESF Logic Test Train B. The procedure is performed once per 62 days to test reactor trip breaker B and to

verify the operability of the reactor trip system automatic trip logic and ESF system automatic actuation logic. The inspectors noted that the technicians performing the test appeared knowledgeable and familiar with the procedure. No performance problems were identified, however, the inspectors did note the procedure, which incorporated PAR PC-6, had steps which were hand written and difficult to read.

The backlog of PARs along with the written quality of PARs was previously identified as a weakness. The inspectors discussed this with the licensee and noted that the backlog of PARs has been on the decline and that an effort is ongoing to generate PARs with computers instead of hand written. The inspectors were also informed the procedure in question was being updated.

6. Fire Protection/Prevention Program (64704)

Portions of the licensee's fire protection program were inspected to verify proper installation and operation of systems and equipment and to evaluate adequacy of QA assessments of the program.

a. Halon System Testing

On December 19, 1991, the inspectors observed testing of the control room halon system using 1-PT-107.2, Fire Protection-Halon 1301 System Unit 1 Control Room. The test requires the system to be disabled while heat is applied to each of the 8 heat detectors located beneath the control room floor. Proper alarms are then verified. Additionally, a system actuation signal is simulated and control room ventilation fans are verified to stop, the main halon bank pilot solenoid valve is observed to energize and the supplementary bank solenoid is observed to energize after a five minute time delay.

The test failed in that the time delay exceeded the acceptance criteria by about two minutes. The technicians properly documented the failure and initiated a work request to adjust the timing circuit. Through discussions with the technicians, the inspectors determined that the similar circuit on Unit 2 also failed the previous day. The timers were adjusted and the licensee reviewed data from the previous two tests for each unit. A recurring problem was not identified.

While observing the test, the inspectors conducted a walkdown of the halon system. It was noted that a cylinder of halon in the reserve bank was removed from service. The licensee was aware of this and stated that the cylinder had been sent back to the vendor for charging several weeks ago and was later rejected upon receipt due to an inadequate charge. The halon system remained operable because the primary bank cylinders were in service. The licensee expected the reserve cylinder to be returned in a charged condition shortly.

b. TS Audits of the Fire Protection Program

The inspectors reviewed the results of the biennial Fire Protection Audit (91-05, April 22, 1991) and the annual Fire Protection and Loss Prevention Audit (91-15, December 18, 1991). The audits were performed as required by TS 6.5.2.8.h and i. The findings of the audits included the following:

- | | |
|------------|---|
| 91-05-03N | Valves for the high pressure CO2 system of the fuel oil pump house were not labelled by mark number |
| 91-15-02NS | Appendix R emergency lighting units which failed their eight hour discharge test have not been retested |
| 91-15-03NS | Controlled drawings do not reflect actual installed emergency lighting configurations |

The audits were in depth with sufficient detail to provide extensive review of the areas being examined. Several additional observations and enhancement recommendations were also identified.

Planned or completed corrective actions to the findings were reviewed and appeared to be acceptable.

c. Appendix R Emergency Lights Deficiencies

On December 18, 1991, the inspectors noted that the licensee had declared 13 Appendix R emergency lights in the Unit 2 Main Steam Valve House inoperable. This left 23 out of a total of 37 lights operable. ADM 16.2, Written Reports, requires the licensee to return at least 27 out of 37 lights to an operable status within 14 days or submit a special report to the NRC. The lights were determined inoperable during routine checks of the batteries when 5 of 12 batteries were rejected during the inspection (a battery may be associated with more than one light). The inspectors noted that the licensee quickly replaced the batteries with new ones to restore the lighting to an acceptable level.

The 6 volt maintenance free batteries were rejected due to indications of electrolyte leakage and external corrosion. The most recent inspection of the corresponding Unit 1 emergency lights resulted in the replacement of 3 out of 12 batteries. The inspectors were concerned that a 33 percent failure rate on a quarterly PM appeared to be excessive.

The inspectors determined that pre-mature failures of emergency lights was identified by the licensee in 1988 (DR 88-1122) as a recurring problem due to the location of the batteries in high ambient temperature environments. Numerous failures were identified

through the work history program. Additional areas of concern included the Auxiliary Building and Cable Tunnel/Spread Rooms. The response to the DR stated that "the Exide Type LEC-36 battery is rated at 71°F and designed to be used in a moderate environment". However, ambient temperatures may exceed 140°F in the Main Steam Valve House and cause electrolyte spillage and subsequent corrosion. The response further stated that "pre-mature failures in some areas are so high that replacement is required within a few months or even weeks after putting them in service."

Corrective action to the DR included increasing the PM to a 3 month frequency and assigned Station Engineering to develop a feasible solution. The licensee has been slow in completing corrective action as a solution has not been developed. SNS identified significant negative trends in emergency lighting equipment performance through its DR reviews in 1991. (10 DR's in the second quarter and 11 DR's in the third quarter). The licensee indicated they would consider again increasing the PM frequency. Pending further review of the licensee's engineering study and licensee actions to adequately address the failures, this is identified as Unresolved Item 50-338/91-27-01: High Failure Rate of Emergency Lights.

7. LER Followup (92700)

The following LERs were reviewed and closed. The inspector verified that reporting requirements had been met, that causes had been identified, that corrective actions appeared appropriate and that generic applicability had been considered. Additionally, the inspectors confirmed that no unreviewed safety questions were involved and that violations of regulations or TS conditions had been identified.

- a. (Closed) LER 50-338/91-01: Hot Leg Safety Injection Branch Flow Above Technical Specification Requirements due to Inherent Errors in Flow Measurement Techniques

The licensee identified incorrect positioning of branch line throttle valves due to flow rate measuring inaccuracies. Improved flow measurement techniques and controls over the throttle valves should prevent recurrence. The licensee is also performing an analysis to support a TS change which would allow a larger acceptance band for flow rates.

- b. (Closed) LER 50-338/91-03: Steam Generator Tube Defects

The licensee performed 100 percent inspection of the inservice tubes during the 1991 refueling outage which resulted in greater than one percent of the tubes inspected in each SG requiring plugging. In correspondence, dated March 7, 1991, permission was granted by the NRC for reactor startup due to an adequate technical basis which would allow for up to 10 calendar months of operation (until January

9, 1991). In subsequent correspondence the licensee presented an analysis to justify operation for a full cycle, however, revised its next refueling date to commence on April 18, 1992. On December 23, 1991, Unit 1 shutdown after a review of previous eddy current data determined that several tubes with defects were not plugged. Special inspection report 50-338, 339/92-02 further discusses this issue.

- c. (Closed) LER 50-339/91-05: Degraded Voltage Relay Time Delay Setpoint Outside TS Limits

The NRC identified inadequate surveillance procedures for calibrating the time delay relays resulting in as-left conditions which were outside the requirements of TS. The relays were recalibrated correctly and the procedures were revised. This was the subject of a violation in NRC Inspection Report 50-338, 339/91-17 and continued followup of licensee response will be conducted.

- d. (Closed) LER 50-338/91-15: Inadvertent Reactor Protection System Trip Signal Caused by Control Power Bus Short During Process Control Cabinet Maintenance

To prevent recurrence of this event, the licensee revised Instrument Maintenance Procedure IMP-C-PROC-08, Replacing Process Cabinet Main and Backup Power Supplies. The revision provided a precaution to be aware of the AC control power wire during maintenance. The licensee also provided training on this matter to instrument technicians. The inspectors verified these actions had been implemented.

8. Action on Previous Inspection Items (92701, 92702)

- a. (Closed) IFI 50-339/90-18-02: Review of EDG Loading During Loss of Offsite Power Followed by Postulated Accident Scenario

The inspectors completed review of the licensee's analysis to address loading of the diesel EDG for the given scenario and reviewed over-current relay trip settings to ensure that the trips were not approached. The licensee additionally revised AP-10, Loss of Electrical Power, to run the high head safety injection, component cooling and service water pumps on the bus carried by the running EDG to minimize the total starting current on the opposite EDG during a subsequent postulated accident. This issue was further reviewed in detail during the Electrical Distribution System Functional Inspection (Report 50-338, 339/91-17) and is included in Finding 91-17-08.

- b. (Closed) Violation 50-339/91-06-04: Failure to Develop Procedures to Adequately Test the Circuitry for PORV 2-RC-PC-2455C; and LER 50-339/91-01: PORV Control Circuitry Missed Surveillance.

Both of these items resulted from inadequate testing of the high pressure portion of the Unit 2 PORV RC-PC-2455C. Specifically

contacts and associated wiring were not functionally tested. The licensee revised procedures to ensure the contacts and wiring in the PORV control circuitry are tested.

c. (Closed) IFI 50-339/91-26-02: Jumpered Cell for 1H EDG Battery

During the last inspection period the inspectors voiced a concern regarding the apparent declining performance of the 1H EDG battery. Cell number 19 of the battery was jumpered because of the low cell voltage and other cells appeared to be degrading. The inspectors considered the safety evaluation for the jumpered cell to be non-conservative; however, because of increased surveillance activities, no immediate operability concerns were raised.

On December 20, a second cell was identified below the TS limits. A revised safety evaluation was initiated and the cell satisfactorily jumpered. The inspector's review of the safety evaluation raised similar concerns as the previous evaluation. Specifically, the evaluation was partially based on the results of a capacity test that was performed greater than two years ago and did not consider battery degradation since that time. The licensee contacted the vendor on this matter and was informed by the vendor that they would not expect the batteries to have deteriorated from that condition. The inspectors did not agree; however, continued increased surveillances relieved any operability concerns. Approximately two hours after declaring the EDG operable, following the second cell jumpering, a third cell was identified with degraded individual cell voltage. As a result, on December 20, at 1:00 pm, the 1H EDG was declared inoperable and a decision was made to replace the battery. The licensee had developed a contingency for battery replacement in the event of continued degradation. A battery was already on site, charged and ready for installation with the exception of a seismic qualification (shaker) test. Because of the abrupt failure, the licensee decided to forgo the shaker test and qualify the battery per the SQUG process.

The inspectors attended several of the licensee's action plan meetings and followed the battery replacement. The battery replacement was completed, the battery tested, and the EDG declared operable on December 21.

The inspectors considered the level of management involvement, increased surveillance on the old battery and the expedient manner in which the battery was replaced to be good. After the replacement the inspectors were informed that increased surveillances on the other diesel batteries would continue.

9. Exit (30703)

The inspection scope and findings were summarized on January 13, 1992, with those persons indicated in paragraph 1. The inspectors described the

areas inspected and discussed in detail the inspection results listed below. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection. Dissenting comments were not received from the licensee.

<u>Item Number</u>	<u>Description and Reference</u>
URI 5U-338/91-27-01	High Failure Rate of Emergency Lights (para 6.c)

10. Acronyms and Initialisms

AC	Alternative Current
CO2	Carbon Dioxide
DR	Deviation Report
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EH	Electric-Hydraulic
EHC	Electric-Hydraulic Control
ESF	Engineered Safety Feature
EWR	Engineering Work Request
IFI	Inspector Followup Item
IN	Information Notice
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LHSI	Low Head Safety Injection
LS	Limit Switch
MOV	Motor-Operated Valve
NRC	Nuclear Regulatory Commission
PAR	Procedure Action Request
PM	Preventive Maintenance
PORV	Power Operated Relief Valve
PSIG	Pounds per Square Inch Gage
PT	Periodic Test
QA	Quality Assurance
URI	Unresolved Item
RCS	Reactor Coolant System
RPC	Rotating Pancake Coil
RWST	Refueling Water Storage Tank
SCFH	Standard Cubit Feet per Hour
SG	Steam Generator
SI	Safety Injection
SNS	Station Nuclear Safety
SQUG	Seismic Qualification Utilities Group
TS	Technical Specification