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

Report Nos.: 50-338/84-33 and 50-339/84-33

Licensee: Virginia Electric and Power Company
Richmond, VA 23261

Docket Nos.: 50-338 and 50-339 License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: September 6 - October 5, 1984

Inspection at North Anna site near Mineral, Virginia

Inspector: SElrod for 25 OCT 84
M. W. Branch (SRI) Date Signed

SElrod for 25 OCT 84
J. G. Luehman (RI) Date Signed

Approved by: SElrod 25 OCT 84
S. Elrod, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope: This routine, unannounced inspection entailed 218 inspector-hours in the areas of maintenance, surveillance, refueling activities, licensee event reports, I/E Bulletin followup, review of Unit 2 license conditions, plant startup from refueling, followup of previously identified items and operational safety verification.

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

REPORT DETAILS

1. Licensee Employees Contacted

*E. W. Harrell, Station Manager
G. E. Kane, Assistant Station Manager
*M. L. Bowling, Assistant Station Manager
L. Johnson, Superintendent, Technical Services
J. R. Harper, Superintendent, Maintenance
R. O. Enfinger, Superintendent, Operations
G. Paxton, Superintendent, Administrative Services
A. L. Hogg, Jr., QC Manager
S. B. Eisenhart, Licensing Coordinator
J. R. Hayes, Operations Coordinator
J. P. Smith, Engineering Supervisor
R. C. Sturgill, Engineering Supervisor
D. E. Thomas, Mechanical Maintenance Supervisor
A. H. Stafford, Health Physics Supervisor
E. C. Tuttle, Electrical Supervisor
R. A. Bergquist, Instrument Supervisor
F. P. Miller, QA Supervisor
*F. T. Terminella, QA Supervisor

*Attended exit interview
Other licensee employees contacted included technicians, operators, mechanics, security force members, and office personnel.

2. Exit Interview

The inspection scope and findings were summarized on October 9, 1984, with those persons indicated in paragraph 1 above. The licensee acknowledged the findings.

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. Plant Status

Unit 1

The containment integrated leak rate test and an extensive snubber program review were completed prior to startup. The unit was started up late on the 24th of September. Subsequently, low power physics testing was satisfactorily completed. On September 28, 1984 at 8:28pm a reactor trip due to a Hi-Hi level in B steam generator occurred while preparing to do warm turbine testing. Another trip occurred at 4:15pm on September 30, 1984

on Lo-Lo level in B steam generator. The unit ended the inspection period ramping up following a secondary chemistry hold at 30% power.

Unit 2

The unit continued the scheduled refueling outage during this inspection period.

No violations or deviations were identified in this area

6. Licensee Event Report (LER) Followup

The following LER's were reviewed and closed. The inspector verified that reporting requirements had been met, causes had been identified, corrective actions appeared appropriate, generic applicability had been considered, and the LER forms were complete. Additionally, for those reports identified by asterisk, a more detailed review was performed to verify that the licensee had reviewed the event, corrective action had been taken, no unreviewed safety questions were involved, and violations of regulations or Technical Specification conditions had been identified.

*339/83-20	MOV-RS-255A would not reopen after periodic testing
339/84-06	Fire detection system for Unit 2 emergency switchgear out of service
*339/80-65	Block valve for pressurizer PORV would not open on demand.

Licensee Event Reports (LER)

(Closed) LER 339/83-20, MOV-RS-225A would not reopen after periodic testing. This valve and the corresponding valves for the other three (3) North Anna Outside Recirculation Spray Pumps have been recently replaced to preclude having to shut them manually to get a proper seal.

(Closed) LER 339/80-65, Block valve for pressurizer PORV would not open on demand. The inspector verified this valve was repaired by reviewing the maintenance report. This valve was also discussed in the licensee's response to IE Bulletin 81-02.

No violations or deviations were identified in this area.

7. Followup of Previously Identified Items

(Closed) IFI 338/79-36-01 (I.5.0) Investigate blowing inverter fuses. The condition that was expected to have caused the fuses to blow was repeated a number of times and the system functioned normally during these repeated tests.

(Closed) IFI 339/79-04-02 (7.A.1) Procedure does not include predicted movement of pressurizer spray or surge lines. This problem was corrected by the addition of updated tables under procedure deviation #2 to 2-PO-48.1.

(Closed) IFI 338/76-15-01 (II.6) Pressurizer safety valve setpoint verification. A review of 1-PO-51 indicates that each safety valve was tested three times under hot conditions.

No violations or deviations were identified in this area.

8. I&E Bulletins

(Open) 338 & 339/84-BU-03 "Refueling Cavity Water Seal." The inspectors have reviewed the licensee's response dated August 31, 1984. Prior to the review the inspectors examined the actual seal ring for one unit, reviewed paragraph 9.1.4.3.1 of the North Anna Power Station Updated Final Safety Analysis Report (UFSAR) and reviewed the new station abnormal procedures 1 & 2-AP-52 which were approved August 31, 1984. The actions taken by the licensee to date have been verified, however, the Bulletin remains open pending further NRC Region II review.

No violations or deviations were identified in this area.

9. Unit 2 License Conditions

The inspector reviewed the status of all Unit 2 License Conditions. The review revealed a number of the License Conditions have been closed in previous inspection reports while others were inspected and closed as part of the TMI Task Action Plan closure effort, time, at the time the license conditions were not specifically referenced. The following is a complete status of License Conditions 2.C(4) to 2.C(21).

(Closed) 2.C(4)a; compliance with requirements of NUREG-0588 "Interim Staff Positions on Environmental Qualification of Safety-Related Electrical Equipment." As required, the license submitted a report dated November 1, 1980 on this subject.

(Closed) 2.C.(4)b: Replacement of Rosemount pressure and differential pressure transmitters.

This item was inspected and closed in IE Inspection Report (IEIR) 339/82-18.

(Closed) 2.C.(4)c; Testing of narrow and wide-range resistance temperature detectors. This item was inspected and closed in IEIR 339/83-13. Replacement of the resistance temperature detectors is being tracked by 339/83-13-01.

(Closed) 2.C.(4)d; Maintain complete and auditable records at a central location. NRR considers this closed as a license condition but it will be considered under 10 CFR 50.49 program.

(Closed) 2.c(4)e; Qualify all safety-related electrical equipment. This item was closed as a license condition in IEIR 339/84-12 based on licensee's May 20, 1983 submittal to the NRC.

(Open) 2.c.(5); Development of a surveillance program for fiberglass spray pond piping. NRR letter dated August 22, 1980 considered the requirements

of this item to have been met. The inspectors are carrying this item as open based on the concerns identified in IEIR 338 & 339/84-27-04.

(Closed) 2.c.(6); Performance of secondary flow stability tests. This item is closed based on a NRR letter dated October 17, 1980, and IEIR 339/80-31.

(Closed) 2.c.(7) Verification of Actual Transformer tap settings. This item is closed based on NRR letter dated October 17, 1980 and IEIR 339/80-33.

(Closed) 2.c.(8); Verify operability of feedwater system hydraulic snubbers. This item is closed based on NRR letter dated October 17, 1980 and IEIR 339/80-33.

(Closed) 2.c.(9): Performance of steam generator moisture carryover tests. This item was inspected in IEIR 339/80-3. As a result of that inspection 339/80-33-03 was opened. This item was closed in IEIR 339/84-30.

(Closed) 2.c.(10) Design and installation of the backup overcurrent protection system. This item was closed in IEIR 339/83-11, with the exception of 339/83-11-02 which was closed in IEIR 339/84-30.

(Open) 2.c.(11): Implement the fire protection modifications of February 1979 SER. One inspector concern (80-39-04) remains open. This item will be closed in final review of 10 CFR 50 Appendix R modifications.

(Closed) 2.c.(12); Implementation of modifications related to IE Bulletin 79-27. This item was inspected in IEIR 339/80-36 and one inspector followup item remained open (80-36-08). This item was closed in IEIR 339/84-01 and closes part (a). Part (b) was closed as documented by the inspection of IE circular in IEIR 339/84-06. Part (c) was closed by inspection documented in IEIRs 339/84-01 and 339/82-14.

(Closed) 2.c.(13); Complete piping reanalysis of seismic amplified response spectra identified in VEPCO's letter June 6, 1980. Closed based on NRR letter May 29, 1981.

(Closed) 2.c.(14); Validate Main Steam and Feedwater Line Break analyses. This item is closed based on licensee's submittals of March 6, 1981, and March 8, 1982.

(Closed) 2.c.(15); Items to be completed prior to resuming power following first refueling outage (except as noted).

a. Closed by NRR letter March 21, 1982
b. Closed by NRR letter April 22, 1982 and IEIR 82-14
c. Closed by IEIR 339/82-14
d. Closed by IEIR 339/82-14
e. Closed by IEIR 339/82-08, with the exception of 339/82-08-14 which was subsequently closed in IEIR 339/82-13
f. Closed by NRR letter dated April 22, 1982
g. Closed by IEIR 339/82-14

h. (1) The inspector verified this training was completed
(2) Closed by IEIR 339/83-11
(3) Closed by NRR letter dated May 6, 1982 and IEIR 339/80-31
(4) Partially closed by IEIR 83-11. Outstanding item 339/83-11-03 closed in IEIR 339/84-30.
(5) Closed in IEIR 339/82-14
(6) Closed in IEIR 339/82-14

(Closed) 2.c.(16); Schedule for bringing the facility into compliance with Regulatory Guide 1.97. In a submittal dated January 31, 1984 the licensee submitted a study to the NRC to show their compliance with this guide. This in only the latest part of an ongoing effort in this area.

(Closed) 2.c.(17); Inservice inspection of the low pressure turbines prior to resuming operations following second refueling outage. This item was closed in IEIR 339/83-11.

(Open) 2.c.(18); Demonstrate that examination techniques provide a reliable means of detection and evaluation of individual reactor vessel clad cracks. The licensee's commitment date for this item is August 21, 1985.

(Open) 2.c.(19); Performance of radiation-thermal testing of the encapsulated saddle material used for shielding. The licensee's commitment date for this item is August 21, 1985.

(Open) 2.c.(2)a; Control Room Design Review, TMI item I.D.1. This item remains open and the licensee due date commitment is being tracked as part of NUREG-0737 Supplement 1 resolution.

(Closed) 2.c.(20).b; Training During Low-Power Testing, TMI item I.G.1. NRR accepted the licensee program in a May 4, 1982, letter from NRR to VEPCO. Additionally, this item was inspected and addressed in IEIR 339/80-29.

(Closed) 2.c.(20).c; Auxiliary Feedwater System Reliability Evaluation, TMI item II.E.1.1. This item was inspected and closed in paragraph 15 of IEIR 339/80-29 and paragraph 7.b(2) of IEIR 339/81-07.

(Closed) 2.c.(20).d; Upgrade Emergency Preparedness TMI item III.A.1.1. All requirements of this license condition were completed by VEPCO and inspected and documented by IEIR 339/82-04. However, upgrade of the facilities continue and schedular commitments will be tracked as part of the followup to licensee's commitment to Supplement 1 of NREG-0737 and Generic Letter 82-10.

(Closed) 2.c.(21).a; Shift Technical Advisor, TMI item I.A.1.1. This item was considered closed by NRR in their January 6, 1982 letter. Additionally, this item was inspected and closed by IEIR's 339/80-36 and 339/82-04.

(Closed) 2.c.(21).b; Administration of Training Programs for licensee Operators, TMI item I.A.2.3. This item was inspected and closed by the following Inspection Reports: IEIR 339/80-31, IEIR 339/80-36; IEIR 339/83-11; and IEIR 339/84-01.

(Open) 2.c.(21).c; Reactor Coolant System Vents, TMI item II.B.1. The reactor coolant system vents are installed, tested and operational however, this item remains open pending resolution of items discussed in IEIR 339/84-06.

(Closed) 2.c.(21).d; Plant Shielding, TMI item II.B.1. This item was inspected and closed in IEIR 339/83-22.

(Closed) 2.c.(21).e; Post-Accident Sampling, TMI item II.B.2. This item was inspected and closed in IEIR 339/83-30.

(Open) 2.c.(21).f; Relief and Safety Valve Test Requirements, TMI item II.D.1. As documented in VEPCO letters dated July 1 and September 1, 1982 testing was completed on the safety relief and block valves. However, in a February 8, 1984, letter NRR raised additional questions that need resolving prior to considering this item closed.

(Closed) 2.c.(21).g; Auxiliary Feedwater Initiation and Indication, TMI item II.E.1.2. This item was evaluated and accepted by NRR in the Supplement 11 to the North Anna SER NUREG-0053. Additionally, this item was inspected and closed in IEIR 339/80-17.

(Closed) 2.c.(21).h; Containment Dedicated Penetrations, TMI item II.E.4.1. This item was inspected and closed in IEIR 339/80-36 and 339/82-04.

(Closed) 2.c.(21).i(i); Additional Accident Monitoring Instrumentation for Containment Pressure, TMI item II.F.1(4). This item was inspected and closed in IEIR 339/84-06.

(Closed) 2.c.(21).i(ii); Additional Accident Monitoring Instrumentation for Containment Sump Water Level, TMI item II.F.1.5. This item was inspected and closed in IEIR 339/84-06.

(Closed) 2.c.(21).i(iii); Additional Accident Monitoring Instrumentation for Containment H_2 Concentration, TMI, item II.F.1.6. This item was inspected and closed in IEIR 339/84-06 and 339/84-09.

(Closed) 2.c.(21).i(iv); Additional Accident Monitoring Instrumentation for Containment High Radiation, TMI II.F.1.3. This item was inspected and closed in IEIR 339/84-07.

(Open) 2.c.(21).i(v); Additional Accident Monitoring Instrumentation for Noble Gas, TMI item II.F.1. This item was inspected and left open by IEIR 339/83-22. Numerous problems were discovered by the inspector and transmitted to the licensee for corrective action.

(Closed) 2.c.(21).j; Inadequate Core Cooling Instrument, TMI item II.F.2. This item was inspected and closed in IEIR 339/81-03.

No violations or deviations were identified in this area.

10. Plant Startup from Refueling (71711)

In preparation for Unit 1 startup following refueling the inspectors reviewed 1-PT-94.0 "Refueling Nuclear Design Check" (The controlling document for the performance of physics testing) and its associated tests 1-PT-94.1-.9. Additionally, the inspectors randomly verified that as mode changes were made leading to startup the various required surveillances were completed. The inspectors witnessed portions of various performance tests in the control room and locally at the test locations.

The tests observed included:

1-PT-66.3 "Containment Depressurization Actuation Functional Test"

1-PT-83.1 "Simulated Blackout and SI-H Bus"

1-PT-57.4 "Safety Injection Functional Test"

1-PT-64.2B "Outside Recirculation Spray Pump, 1-RS-P-2B"

The planning and organization of the observed tests was poor. Numerous procedure deviations were written as tests progressed-indicating that test personnel had not thoroughly reviewed plant conditions. 1-PT-57.4 had nine procedure deviations attached to the procedure prior to reaching the action setpoints. The inspectors also noted a number of test personnel being briefed as to their test duties just as the step where they were required was reached, leaving them no time to review the requirements. During the performance of 1-PT-66.3, a required valve closure in the casing cooling system did not occur apparently because a flow element had been valved out. The procedure did allow for retest of individual components that failed however, the retest of the valve closure was more complex than allowed for by the procedure retest steps. The test engineer wrote a small procedure to retest this valve individually and got it approved for use on a procedure deviation. Station administrative procedure ADM 5.8 "Temporary Changes/ Procedure Deviations" paragraph 1.1 states that "When absolutely necessary, temporary changes or proceure deviations may be used... "This example and the others provided of the frequent use of proceaure deviations indicate that the system provided by the administrative procedure is being abused by using deviations to compensate for inadequate preparation.

At another point during the performance of 1-PT-66.3 some confusion was caused by step 4.8.3. The step requires that test personnel "Verify that valves listed in Attachment 6.1 actuated to the post CDA position and cannot be opened or closed as appropriate." With the CDA actuation, instrument air is lost to a number of isolation valves in containment, with no motive force it is not possible to verify that the CDA logic cannot be overridden.

Just prior to the Unit 1 start-up the inspectors observed portions of instrument calibration procedure 1CP-RP-RPI "Rod Position Indication." The procedure was being performed at a time when problems were being experienced with maintaining containment temperature. Consequently, as fast as the technician calibrated some of the channels the temperature sensitive equipment would start to drift. The inspectors discussed all the above menticned observations with license management in the monthly exit interview.

Prior to the Unit 1 startup the inspectors independently verified the valve position of critical valves in Auxiliary Feedwater system (using 1-OP-31.2A) and SI accumulators (using 1-OP-7.3A). In the Auxiliary Feedwater system the labels for 1-FW-251 and 1-FW-250 appear to be revised and 1-FW-280 (a pressure indicator root valve) is included on the lineup while the corresponding valves on the other two pumps are not. On the SI accumulators numerous valves do not have labels. These valve labeling problems are identified as inspector followup 338/84-33-01.

Review of the Estimated Critical Position (1-OP-1C) revealed that numerous steps were marked not applicable and a boron concentration of 1845 ppm was indicated. In both cases no explanation was provided. Clearly the steps were marked not applicable because this was the initial startup of the cycle and the 1845 ppm boron concentration was the hot zero power all rods out boron concentration calculated for startup but some explanation/ justification was required.

On September 24, 1984 Unit 1 was started up and subsequently the inspectors observed portions of the following physics tests:

1-PT-94.3 "Boron Endpoint Concentration"

1-PT-94.4 "Isothermal Temperature Coefficient Measurement at Hot Zero Power."

1-PT-21.1 "Reactor Core Flux Mapping"

The results of 1-PT-94.4 indicated that slightly positive temperature coefficient existed. The inspectors verified that the licensee carried out the immediate actions required by Technical Specification 3.1.1.4. A special report in accordance with 3.1.1.4 Action a.3, will be submitted and the corrective actions will be reviewed by the Region II Test Programs Section.

Finally, during the performance of physics testing the inspectors observed licensee chemistry personnel analyze a primary coolant boron sample.

No violations or dievations were identified in this area.

11. Service Water Problems at North Anna

The Service Water System at North Anna has been degraded by the aggressive Lake Anna Water. Excerpts from LER 338/83-48 revision 1, are provided below to better understand the nature and magnitude of the problems with the Service Water System.

The Service Water System at North Anna is an open loop system with a spray pond (reservoir) used for heat rejection. The system piping is mainly carbon steel ranging from 1/4 to 36 inches in diameter. Over the years of operation, corrosion has been evident in the system piping and in 1981, the Energy Research Center of Lehigh University was tasked with determining the cause of the corrosion as well as to provide adequate treatment procedures. This study revealed that the corrosion was caused by aggressive Lake Anna water which is used as the make-up source to the system. A contributing

factor to the corrosion problem was the existence of both sulfate producing and ensheathed iron bacteria which are known to cause accelerated corrosion. These bacteria were first discovered in 1977 when the system was not yet in service. Consequently chemical treatments were implemented in an effort to control the biological corrosion process as well as inhibit deposit build-up in the piping. These treatments were basically ineffective in reducing corrosion. The treatment program provided by Lehigh University was implemented in 1982 and included regular chlorination to eliminate the corrosion causing bacteria as well as chemicals to release and disperse deposits in the piping. This program was suspended in the fall of 1983 as it was believed that clay particles from the reservoir's clay liner were becoming suspended in the service water. Regular chlorination of the service water system was continued however.

The first leak in the Service Water System piping occurred in April 1981 in one of the 3-inch supply lines to the Unit 1 and 2 Charging (HHSI) Pump lube oil coolers. The Lehigh University study concluded that this leak appeared to have developed due to pitting caused by bacteria assisted attack. Through December 1982, four additional "pinhole" leaks developed in both the 3-inch and 4-inch supply and return lines to the Charging Pumps and Instrument Air Compressors.

In 1982, a study was undertaken to assess the effect of the corrosion on the service water system piping. During June of that year, 131 locations on the system piping were measured for wall thickness using ultrasonic methods. The piping surveyed ranged from 3/4 to 36 inches in diameter. The data collected indicated that the 3-inch supply and return lines to the Charging Pump lube oil coolers were in the worst condition with respect to remaining wall thickness. The 4-inch piping which supplies the above 3-inch piping as well as the instrument air compressors was also severely affected. Although pitting and general corrosion were found to exist throughout the system, it was not as widespread and extensive in lines above 4-inches in diameter.

In October of 1983 and again in February of 1984, follow-up surveys were conducted using ultrasonic methods. The corrosion rates estimated using the UT survey data were consistent with those indicated by scientific equipment developed specifically to determine corrosion rates. The service water system corrosion rates range from 8 to 14 mils per year. The most recent UT survey indicated that several locations on the 4-inch piping have an average wall thickness below the minimum allowable procured thickness as defined by ASTM A106. An engineering operability review was performed which demonstrated acceptability of this piping for continued operation under both normal operation and a Design Basis seismic event until it could be replaced.

The corrosion process in the service water system has also resulted in partial flow blockages in the smaller diameter lines due to corrosion product build-up. The Containment Penetration Coolers were the most severely affected as they are supplied by 1/2-inch lines which reduce to 1/4-inch prior to entry into the cooler. The charging pump lube oil coolers and instrument air compressors were also affected to a lesser extent. In addition to the above, the service water reservoir spray array supports are corroding; however, the rate of deterioration is less than that in the

system piping. The most recent inservice inspection results, upon evaluation, indicated the amount of corrosion damage to individual support members does not impair operability.

CORRECTIVE ACTION

The Unit 1 containment penetration coolers affected by corrosion products were cleaned in the late 1982 using hydrolasing techniques in order to restore flow to the coolers. It is planned to supply all piping penetration coolers with Component Cooling water, utilizing service water as a back-up supply. The coolers will be high volume flushed and chemically cleaned concurrent with the piping modification. This is scheduled to be completed prior to the end of the 1984 unit 2 refueling outage. This outage is scheduled to begin in August, 1984.

The 3-inch piping to the charging pump lube oil coolers has been replaced with stainless steel piping. The 4-inch piping to the instrument air compressors and remaining charging pump coolers is currently being replaced and is scheduled to be completed by September 1984. Based on trending of corrosion rates and stress calculation, the 4-inch replacement will be accomplished prior to the end of the projected service life. The remaining service water system piping will be inspected on a periodic basis in order to project the remaining service life of piping subsystems to enable any required corrective actions to be taken in a timely manner.

A chemical treatment program for the service water system utilizing molybdates has been developed with the assistance of Calgon Corporation and will be implemented upon approval from the State Water Control Board. This treatment program will help protect the remaining carbon steel piping against corrosion. The current chlorination program will remain in effect. Tests involving the new chemical treatment program have shown no adverse effect on the reservoir liner.

A Design Change Package to replace the existing spray arrays is currently in the engineering stages with preliminary construction work scheduled to begin in 1985.

VEPCO's engineering evaluations of the service water system indicate that no unreviewed safety concern exists at the present time. However, if the comprehensive program is not aggressively pursued a safety concern may develop.

Followup of the North Anna Service Water problem is identified as (IFI 338-339/84-33-02.)

On October 2, 1984, the inspectors attended a meeting between representatives of VEPCO and members of the Office of NRR staff. The meeting was held in Bethesda and the topics discussed were the proposed upgrades of the service water systems.

No violations or deviations were identified in this area.

12. Fire Protection

On September 4, 1984 licensee personnel conducted performance testing on the motor driven fire pump (1-FP-P-1) which is located on the circulating water intake structure. During the testing the pump failed to develop any discharge pressure. The pump was declared inoperable and an investigation into the problem was initiated. The problem was throught to be either a piping rupture or an improper valve lineup, however, when followup of these ideas failed to solve the problem the pump itself was investigated. On October 3, 1984, after no significant problems with pump could be found the root cause was determined to be a missing disc on valve 1-FP-35. This valve is a butterfly valve that normally has a carbon steel disc and its function is to isolate the pump discharge from the circulating water screenwell. The licensee has had a similar valve failure (1-FP-36) and attributes these failures to corrosion of the carbon steel by the lake water (much like problems being experienced in the Service Water System). Similar valves exist in other place in the fire protection water system, most importantly a similar valve arrangement exists on the discharge of the diesel driven fire pump (1-FP-P-2) located at the Service Water reservoir.

Because the fire pump was inoperable greater than seven (7) days the licensee will be submitting a special report to the NRC in accordance with the requirements of Technical Specification 3.7.14.1 and this report will outline proposed corrective actions.

No violations or deviations were identified in this area.

13. Reactor Coolant System Vents

On September 16, 1984 the licensee performed testing of the RCS vents flow paths. The system consists of two sets of two parallel pairs of solenoid operated valves (SOV) with one set tapping off the pressurizer and the other off the reactor head. Upon cycling SOV-RC-102B-1, (The upstream valve in one train of the pressurizer) the downstream valve SOV-RC-102B-2 momentarily indicated open. Further cycling of individual valves initiated similar momentary open indications of other valves.

Initially, the licensee personnel thought there was an electrical problem in the system. However, investigations revealed this was not the case. Westinghouse documentation describing similar events at the H. B. Robinson plant showed that the system functioned as designed. Target Rock pilot - operated globe valves with interval orifices were used in the system. When these valves are subjected to a sudden large ΔP (such as that seen by the downstream valve when the upstream valve is opened) the orifice in the valve cannot instantaneously equalize the pressure which causes the valve to lift and then reseat.

The observed response is a documented condition that is evidently generic to the Westinghouse and Combustion Engineering RSC vents. Besides the fact that the licensee was unaware of this condition, the inspectors were concerned that the licensee had committed in the Inservice Testing Program for Pump and Valves to exercise these valves every three months. Discussion with the engineer in charge of the Inservice Testing Program revealed that

another NRC inspector had recently pointed out that testing on such a frequency was inconsistent with the requirements of NRR's September 9, 1983 letter and attached Safety Evaluation which called for only exercising these valves during cold shutdown or each refueling outage. Although the testing program submittal to the NRC needs updating, the actual performance test for these valves has been changed to meet the requirements for cycling during cold shutdown or each refueling.

No violations or deviations were identified in this area.

14. Refueling Activities (60710)

During this inspection period, portions of the Unit 2 refueling were witnessed. Initially, the uncoupling of 24 of the control rod drive mechanisms (CRDM) was observed. The movement of elements S-21 and S-40 was observed on September 19 and the movement of elements R-08, T-13, R-30, S-26 and T-36 on September 20. In addition to witnessing actual fuel movements the inspectors verified refueling communications and manning requirements, access control to the refueling area, refueling area housekeeping and control of potentially loose foreign objects. On a periodic basis during the refueling, the inspectors checked that the requirements of selected Technical Specifications from section 3/4.9 "Refueling Operations" were being met.

No violations or deviations were identified in this area.

15. Nuclear Overview Committee

On September 6, 1984, the inspectors attended the quarterly meeting of the VEPCO Nuclear Overview Committee (NOC). The NOC is composed of senior licensee executives who, at regularly scheduled meetings, review significant problems at the utility's two nuclear power stations.

The meeting agenda was published well in advance and the schedule allowed time for the discussion of current issues as well as followup of old items. Besides reports from the various licensee departments involved in station operations, reports were heard from independent consultants retained to give the committee members an outside opinion on station status in selected areas.

The overall exchange of information at the meeting was considered candid and very comprehensive.

No violations or deviations were identified in this area.