



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

Report Nos.: 50-338/89-30 and 50-339/89-30

Licensee: Virginia Electric and 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: September 26 - October 19, 1989

Inspectors:	<u>P. J. Caldwell</u>	<u>12/5/89</u>
	J. B. Caldwell, Senior Resident Inspector	Date Signed
	<u>P. J. King</u>	<u>12/1/89</u>
	L. P. King, Resident Inspector	Date Signed
	<u>J. P. Munro</u>	<u>12/5/89</u>
	J. P. Munro, Resident Inspector	Date Signed
Approved by:	<u>P. E. Fredrickson</u>	<u>12/5/89</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: plant status, maintenance, surveillance, engineered safety features walkdown, operational safety verification, operating reactor events, licensee event report (LER) followup and licensee action on previous enforcement matters. During the performance of this inspection, the resident inspectors conducted reviews of the licensee's backshift operations on the following days: September 26, 27, 28, October 3, 4, 9, 12, 13, 17, 18, and 19, 1989.

Results:

Within the areas inspected, no violations or deviations were identified.

One unresolved item was identified involving the failure of licensed operators to have biennial medical examinations by a physician as required by 10CFR 55.21 (paragraph 6).

An inspector followup item was identified regarding technical manual and maintenance procedure updates to incorporate a revised method of leakage repair to a LHSI pump (paragraph 3).



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

Report Nos.: 50-338/89-30 and 50-339/89-30

Licensee: Virginia Electric and 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: September 26 - October 19, 1989

Inspectors:

<u>P. J. Caldwell</u>	12/5/89
2 J. Caldwell, Senior Resident Inspector	Date Signed
<u>P. J. King</u>	12/5/89
2 L. King, Resident Inspector	Date Signed
<u>J. P. Munro</u>	12/5/89
2 J. P. Munro, Resident Inspector	Date Signed
<u>P. E. Fredrickson</u>	12/5/89
Approved by: P. E. Fredrickson, Section Chief	Date Signed
Division of Reactor Projects	

SUMMARY

Scope:

This routine inspection by the resident inspectors involved the following areas: plant status, maintenance, surveillance, engineered safety features walkdown, operational safety verification, operating reactor events, licensee event report (LER) followup and licensee action on previous enforcement matters. During the performance of this inspection, the resident inspectors conducted reviews of the licensee's backshift operations on the following days: September 26, 27, 28, October 3, 4, 9, 12, 13, 17, 18, and 19, 1989.

Results:

Within the areas inspected, no violations or deviations were identified.

One unresolved item was identified involving the failure of licensed operators to have biennial medical examinations by a physician as required by 10CFR 55.21 (paragraph 6).

An inspector followup item was identified regarding technical manual and maintenance procedure updates to incorporate a revised method of leakage repair to a LHSI pump (paragraph 3).

An inspector followup item was identified concerning auxiliary feedwater pump packing adjustments and the recirculation flow required for pump testing (paragraph 4).

An inspector followup item was identified concerning the agreement of torque values between the technical manual and the maintenance procedure for Grinnell diaphragm valves (paragraph 7).

An inspector followup item was identified concerning the development of abnormal procedures and an engineering review of breaker size relating to 120 volt AC vital bus power supplies (paragraph 7).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *M. Bowling, Assistant Station Manager
- R. Driscoli, Quality Assurance Manager
- R. Einfinger, Assistant Station Manager
- G. Gordon, Electrical Supervisor
- D. Heacock, Superintendent, Engineering
- *G. Kane, Station Manager
- T. Porter, Nuclear Safety Engineering Supervisor
- *J. Stall, Superintendent, Operations
- *A. Stafford, Superintendent, Health Physics
- *F. Terminella, Quality Assurance Supervisor
- D. Thomas, Mechanical Maintenance Supervisor
- *W. Matthews, Superintendent, Maintenance
- G. Flowers, Configuration Management Supervisor
- *V. West, Superintendent, Outage Management
- *L. Edmonds, Superintendent, Training
- *M. Crist, Supervisor, Training
- *T. Snow, Superintendent, Technical Services

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

NRC management site visit: On October 3, 1989, Mr. S. D. Ebner, Administrator, Region II visited the North Anna Power Station for a station tour and discussion with the licensee concerning items of mutual interest.

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

*Attended exit interview

2. Plant Status

On September 26, at the beginning of the inspection period, Unit 1 was operating at 100% power, day 69 of continuous on-line operation. On September 27, an unplanned release occurred shortly after placing a deborating ion-exchanger in service (see paragraph 7 for details). The release was determined to be well within TS limits, however a four-hour report was made in accordance with 10 CFR 50.72(b)(2)(vi) due to the licensee's notification of State Officials. The inspection period concluded on October 19 with the unit at 100% power and on-line for 93 days of continuous operation.

At the beginning of the inspection period, Unit 2 was operating at 100% power, day 141 of continuous on-line operation. The inspection period concluded with the unit at 100% power and on-line for 165 days of continuous operation.

3. Maintenance (62703)

Station maintenance activities affecting safety-related systems and components 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.

On October 2, 1989, during the performance of a surveillance test on the Unit 1 LHSI Pump 1-S1-P-1A, two problems occurred which required maintenance to be performed. The first problem involved a leak which developed around the pump casing and the second problem involved a discharge relief valve which lifted and failed to reseal. Neither of these problems prevented pump performance from meeting the TS acceptance criteria.

The LHSI pump is a vertical pump with a shaft and casing of approximately 45 feet in length. Due to its length, male and female wedges are installed along the shaft to position it within the casing. The leak developed around the male wedge adjustment screw at the point where it penetrated the casing. A review of the maintenance history indicated a similar leak had developed around the female thread on May 29, 1989. A maintenance crew commenced work on the present leak at 1900 on October 2. At 0530 on October 3, the leak still existed and the pump had to be isolated.

Following the pump isolation the licensee was able to repair the leak and had also completed bench testing the problem discharge relief valve. At 1145 on October 3, the inspector witnessed an operational test of the LHSI pump. The test demonstrated that the casing leak had been repaired, however the discharge relief valve which had lifted and failed to reseal earlier and an additional discharge relief both lifted and failed to reseal during the test performance. The licensee verified that the lift setpoints for the discharge reliefs had been adjusted properly and concluded that the reliefs were lifting due to the pressure spike in the LHSI discharge piping following the pump start. The problem still existed with the failure of the relief valves to reseal following the pressure spike. Further investigation revealed that the relief valve blowdown had not been adjusted properly. The licensee readjusted each valve's blowdown ring and both valves performed satisfactorily on the next run of the pump.

Following the leak repair and successful operational test of the LHSI pump the inspector reviewed the LHSI pump technical manual and noted that the repair procedure suggested for fixing the casing leak was not used. The licensee had instead used a procedure which had been generated in a June 23, 1988, EWR. This EWR (88-18) documented the repair that had previously been performed on March 25, 1988, under work order No. 5900072585. The

EWR had not been placed in the technical manual or the maintenance procedure and the maintenance crew was not originally aware of its existence. A review of the EWR indicated that the maintenance procedure was supposed to be updated to incorporate the leak repair procedure. The EWR stated that no work would be performed under the EWR, but it would provide instructions for revising MMP-C-S1-1, Mechanical Maintenance Procedure for Low Head Safety Injection Pump Inspection, Repair and Seal Replacement. The inspector obtained the latest copy of MMP-C-S1-1 dated May 31, 1988, and noted that it had not been revised and that write-in steps had been used for the repairs on May 29, 1989, and at present. The licensee stated that the maintenance procedure and technical manual would be updated to incorporate the revised method of repairing leaks on the pump. This is identified as IFI 338,339/89-30-01.

The inspector also inspected the seal package on 1-SI-P-1B, LHSI Pump 1B, and noted it was leaking around the seal. The inspector reviewed the technical manual, page 29, concerning operating checks. It stated in step one "to check the mechanical seal over for visible signs of leakage. If leakage is present there is a malfunction within the seal and it must be repaired". The inspector notified the Assistant Shift Supervisor who also inspected the seal and subsequently wrote a work request. An inspection of the Unit 2 pump seals indicated no leakage.

During the course of the inspection period the inspector observed that several components which are safety related or important to safety continued to have maintenance problems. The licensee has either been unable to determine the root cause of the problems or has been slow in completing the corrective action. Examples of these components include the Unit 2 vital bus backup sola transformers which have been out of service since March 23, 1989, several of the RSHX radiation monitor sample pumps (see Inspection Report 338,339/89-22), the rad waste discharge sample pump (LW-P-28) which has not been fully operable for several years, and the hydrogen/oxygen analyzer for the waste gas decay tanks which was newly installed over a month ago to correct a previous chronic problem but still not operable. The licensee is meeting the regulatory requirements for these out-of-service components. The inspectors will continue to monitor the licensee actions concerning the corrective actions associated with these and other long-standing maintenance problems.

On October 18, 1989, the inspector noticed that the alarm was clear for the Unit 1 RSHX radiation monitoring pumps even though the "D" sample pump for the D RSHX was still out of service. This is a common alarm and will light if any of the sample pumps are out of service. The Unit 2 alarm was lit due to problems on the B and C recirculation heat exchanger sample pumps. The inspector was concerned that the licensee was not maintaining consistency between the two units. The licensee informed the inspectors that the annunciator for the Unit 1 D RSHX sample pump had been jumpered because repairs for that pump would not be performed in the near future and they felt that it was better operationally to have the annunciator out than to be lit continuously. The Unit 2 annunciator was not jumpered because maintenance to correct the problems associated with the B and C

sample pumps was imminent. The inspectors will continue to monitor the licensee's progress concerning the corrective actions and will periodically check to see if the operators are cognizant of the annunciators which are out of service due to jumpers.

4. Surveillance (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 LCOs were met and that any deficiencies identified were properly reviewed and resolved.

The inspectors witnessed the performance of the following tests on the specified dates:

1. ECCS Subsystem - LHSI Pump (1-SI-P-1A), 1-PT-57.1A on October 2. See Paragraph 3 for details of the maintenance completed subsequent to the performance of 1-PT-57.1A.
2. Auxiliary Feedwater Pump (1-FW-P-3A) and Valve Test, 1-PT-71.2 on October 3.
3. Recirculation Spray Subsystem - B Pump, 1-PT-64.1B on October 16.

The tests were satisfactorily conducted in accordance with the procedures. The test data was reviewed and met the acceptance criteria.

On October 17, 1989, the inspectors witnessed 1-PT-71.30, Auxiliary Feedwater Pump (1-FW-P-3B) Test. Steps were added to the procedure by a plant deviation to allow verification of the flow limiting capability of the recirculation flow orifice 1-FW-RO-100C. The pump was started with the discharge valve of the flow orifice fully open. The measured flow was 72 gpm. The valve was then throttled and locked at 1/4 turn open to obtain 20 gpm flow. During operation of the pump, the inboard packing gland was observed to be leaking excessively and sprayed water onto the motor casing. A work request was written to adjust the packing. A review by the inspector of previous work history showed that the pump was repaired in May 1988, and the packing readjusted in September 1989. A review of the technical manual for the AFW pumps gives no guidance on the amount of recirculation flow required or the type of packing required. A review of work on the pump indicated that in May 1988, the pump had to be repacked with Garlock 98 packing after the Chesterton packing it was originally packed with during the overhaul burned out. A review of the procedure (MMP-C-GP-1) used for adjustment of packing showed that it was not specific to the AFW pump, but rather was a general procedure for inspection and repair of safety-related pumps, and thus relied heavily on the knowledge of the mechanics.

The licensee will review the following issues regarding the AFW pump.

1. The need for specific instructions on future adjustment of packing.

2. Determination of required recirculation flow.
3. How the type of packing is determined and verification that the lantern ring is installed in the proper position.
4. The need for coordination of packing with adjustment of flushing water to the glands of the pumps.

This will be identified as IFI 338,339/89-30-02

No violations or deviations were identified.

5. ESF System Walkdown: (71710)

On October 17, the inspector walked down the accessible portions of the casing cooling system on Unit 1. The valve checkoff list 1-OP-7.10A and drawing number 11715-FM-918 Rev. 5 were reviewed. No problems were identified.

No violations or deviations were identified.

6. Operational Safety Verification (71707)

By observations during the inspection period, the inspectors verified that the CR manning requirements were being met. In addition, the inspectors observed shift turnover to verify that continuity of system status was maintained. The inspectors periodically questioned shift personnel relative to their awareness of plant conditions. Through log review and plant tours, the inspectors verified compliance with selected TSs and LCOs.

In the course of the monthly activities, the inspectors included a review of the licensee's physical security program. The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital areas access controls, searching of personnel, packages and vehicles; badge issuance and retrieval; escorting of visitors; patrols; and compensatory posts. On a regular basis, RWPs were reviewed and the specific work activity was monitored to assure that the activities were being conducted per the RWPs.

The inspectors kept informed, on a daily basis, of overall status of both units and of any significant safety matter related to plant operations. Discussions were held with plant management and various members of the operations staff on a regular basis. Selected portions of operating logs and data sheets were reviewed daily. The inspectors conducted various plant tours and made frequent visits to the control room. Observations included: witnessing work activities in progress; verifying the status of operating and standby safety systems and equipment; confirming valve positions, instrument and recorder readings, and annunciator alarms; and observing housekeeping.

On October 11, 1989, the inspector noted that two temporary demineralizers were being installed to clean up water from the Unit 2 RWST. The RWST sample showed 500 ppb of Na in the tank and the chemistry specification recommends 100 ppb, but has no action level. The licensee informed the inspector that the MOVs isolating the RWST from the sodium hydroxide tank were possibly leaking through and causing the problem.

The inspector is concerned because water from the RWST is lined up through the low pressure injection system to the RCS thus creating the potential for excess Na to be injected into the RCS. A check with the chemistry department indicated that Na sampling of the RWST is done once a month. The three concerns in this area are the following: 1. Potentially leaking sodium hydroxide tank MOVs; 2. Loading up the primary system letdown demineralizers with Na; and 3. Creating an excess of Na in the primary system. The inspectors will continue to monitor the licensee's actions concerning the Na leak into the RWST.

On October 12, 1989, the inspector reviewed the areas addressed by the licensee's biennial medical examination for licensed operators against the specific minimum capacities required for medical qualifications detailed in Section 5.4 of ANSI/ANS 3.4-1983, Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants. The licensee's examination covers all minimum capacities detailed by Section 5.4 in all but one area. The licensee does not routinely administer a normal ECG. The licensee's corporate physician indicated that an ECG test is administered in those cases where evidence indicates the potential for cardiovascular abnormality as required by Section 5.4.7.

The inspector reviewed the medical records of 5 licensed ROs and SROs and concluded that the licensee's certification, documented on NRC Form 396, was appropriate for these individuals. The inspector's reviews identified a licensed SRO who had not received the biennial medical examination by a physician as required in September, 1989. This SRO subsequently assumed licensed duties as the Unit 1 Shift Supervisor for 7 shifts from October 1 through October 7, 1989. Upon notification, the licensee removed the SRO from further licensed duties pending completion of a medical examination by a physician. This operator is currently scheduled to receive a medical examination by October 25, 1989. The licensee reviewed the currency of all licensed operators with respect to the medical examinations required by 10 CFR 55.21. This review identified four additional licensed ROs and SROs who had not been administered a biennial medical examination. These operators were also removed from licensed duties pending completion of medical examinations. One of these operators assumed licensed duties as the Unit 2 Control Room RO for 7 shifts from October 5 through October 11, 1989. This operator and three other operators identified as overdue for a biennial medical examination have received an examination by October 18, 1989. The results of these examinations have been forwarded to the licensee's corporate health department for review. Reviews done by on-site medical personnel indicate the results to be satisfactory. The failure to perform a timely biennial medical examination on these 5 licensed operators is mitigated, in that, these operators received a

partial medical examination in the intervening year. This medical examination should identify any significant medical concerns. These examinations, however, are not conducted by a physician.

10 CFR 55.21 requires a licensed operator or senior operator to have a medical examination by a physician every two years. 10 CFR 50.54(k) requires that an operator or senior operator licensed pursuant to 10 CFR 55 be present at the controls at all times during the operation of the facility. 10 CFR 50.54(l) requires the licensee designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to 10 CFR 55. The failure of two licensed operators to receive a biennial medical examination by a physician and their subsequent assumption of licensed duties is identified as Unresolved Item 338.339/89-30-03, pending further NRC review.

7. Operational Reactor Events (93702)

The inspectors reviewed activities associated with the below listed reactor events. The review included determination of cause, safety significance, performance of personnel and systems, and corrective action. The inspectors examined instrument recordings, computer printouts, operations journal entries, scram reports and had discussions with operations, maintenance and engineering support personnel as appropriate.

On September 27, 1989, at 0615, an unplanned gaseous release occurred on vent stack "A", which caused a high-high radiation monitor alarm. The Kaman monitor trace was evaluated by HP and an unplanned gaseous release form was filled out to show that the release was well within the TS limits. The inspector investigated the causes for the release and found that demineralizer discharge valve 1-CH-45 had leaked when it was opened to put demineralizer 1-CH-I-3A in service. The valve is a normally opened valve, but had been closed off because of suspected back-leakage through the demineralizer. When the valve was opened, there was a noticeable drop in the VCT level and the high-high radiation alarm came in. The inspector was present in the CR at the time. The operators transferred hand control valve HCV-1244 to the VCT position and the level stabilized. Action was then taken to place the auxiliary building ventilation through the charcoal filters.

HP personnel surveyed the area and found that the floor in the demineralizer alley had been contaminated by leakage. Testing with demineralized water verified the leak was from 1-CH-45. A priority one work request was issued and an operator was sent to torque the valve bonnet nuts without a procedure, which would have provided guidance concerning the required torque values. A review of the maintenance history indicated that the valve had been worked on in June 1987 and the bonnet had been removed and a new diaphragm installed. A review of the procedure and work order showed that the procedure did not require the bolts to be torqued if leakage did not develop around the diaphragm. A review of procedure, Post-Maintenance Checkout, MMP-C-GV-3, Rev. 7.

indicated that the Shift Supervisor, in step 8.7, decided that testing was not required. The inspector reviewed the technical manual for Grinnell diaphragm valves which indicated a different set of torque values than are present in MMP-C-GV-3. The licensee stated that the torque values in the technical manual and the new procedure would be reviewed for consistency and also that equipment potentially torqued incorrectly would be reviewed. This will be identified as IFI 338 339/89-30-04.

A review of the work history on several of the diaphragm valves indicated that the diaphragms had not been replaced since 1982 and 1983. The inspector's review of the computer work tracking system did not indicate that they were scheduled to be changed. The manufacturer recommends changeout every five years. Licensee management stated that they did not intend to replace all Grinnell valve diaphragms and "O" rings, but would select certain valves for this replacement. The inspector will review the licensee criteria for selective preventive maintenance on the Grinnell diaphragm valves and continue to follow the replacement program.

On October 16, at 2349 the Unit 1 CR received a "PCC Cabinet Power Supply Failure" alarm. A check of the cabinet indicated that the primary power supply to the cabinet failed, and that power was being supplied by the backup power supply. Both the primary and the backup power supplies are located in the back of primary process rack 3 cabinet 1-E1-CB-53. These power supplies are both fed from 120 volt AC vital bus III through a single 30 amp breaker. As a precaution, at 0820 on October 17, channel IV instrumentation was selected for feedwater flow, steam flow and first stage pressure instead of channel III which is powered by vital bus III. The SG level control signal however is non-selectable.

On October 17, 1989, at 0937, Unit 1 CR had indication of a failure of power to the primary process rack 3 cabinet. This caused several alarms and picked up the trip bistables for the channel III protection channel. The licensee followed the abnormal procedures for failure of the individual channels. It was determined that breaker three of the vital power supply had tripped. This caused failure of the power supply to the primary process rack 3 cabinets. The feedwater regulating valves were put in the manual position to prevent a trip on SG high level due to the failure of the channel III SG level control signal. The inspector was present in the CR and noted the alarms lit. At 1005, all channel III bistables fed by PCC Cabinet III were verified to be illuminated and considered to be in trip. Breaker 3 was red tagged open for trouble shooting. After trouble shooting, it appeared that the failure was caused by a problem in the normal power supply circuit. The normal power supply was tagged open and breaker 3 closed. The cabinet loads were then energized one at a time. All channels were restored by 1144 and the main feedwater valve controls were returned to automatic by 1150 hours. The inspector verified that the conditions of Table 3.3-1 of the TSs were met since the inoperable channels were verified in the trip condition within an hour.

The inspector's review of the actions determined that the operators did an excellent job in avoiding a reactor trip. Since no instrument technicians were available on the midnight-to-eight shift, the operators had to perform the investigation into the failure in the process rack. The abnormal procedures did not address the actions required for a complete loss of power to the PCC cabinet and the operators used the load list to determine what would happen. The operators had the time necessary to develop the actions needed to be taken before a complete loss of power occurred. The licensee is investigating a possible design problem because the feeder breaker from the vital bus is 30 amps and the breakers in the cabinet are 35 amps. This caused the feeder breaker to trip before the normal breaker in the cabinet. If the feeder breaker and the individual breakers were 30 amps, the fault would have been isolated and the backup power supply would have prevented a reactor trip. The licensee stated that the abnormal procedure would have provided the operators better guidance and that engineering would be providing the breakers. This will be identified as a design problem.

No violations or deviations were identified.

8. Licensee Event Report (LER) Follow-up (90/000)

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, that generic applicability had been considered, and that the LER forms were complete. Additionally, the inspectors confirmed that no unreviewed safety questions were involved and that violations of regulations or TSs conditions had been identified.

(CLOSED) LER 339/89-008, Inadvertent ESF Actuation During SSPS Testing. The licensee has revised the applicable test procedures to deenergize the affected ESF valves in the normal open position during future testing. The procedures will also verify power is restored and valve position remains open on completion of testing.

(CLOSED) LER 339/89-007, Loss of Component Cooling to the RHR Heat Exchangers. This incident was caused by accidental closing of instrument air to the component cooling water valves. A locking device has been installed on the valve to prevent recurrence.

9. Licensee Action on Previous Enforcement Matters (92702)

(CLOSED) Violation 339/89-26-01, Inadequate SSPS Slave Relay Test Procedures. This violation involved three examples of inadequate procedures. The inspector reviewed the licensee's corrective actions taken for each example of the violation and concluded that the steps taken to prevent recurrence were adequate.

(CLOSED) Violation 339/87-38-01, Failure to Perform Adequate Post-Maintenance Testing on Unit 2A Steam Flow Transmitter. The inspector reviewed changes to the procedures and licensee evaluation of the incident.

and believes the changes should prevent future problems for the steam flow transmitters.

(OPEN) Unresolved Item 338,339/89-22-01, Determination of the Performance of a Safety Evaluation for the Installation of a Jumper on a Radition Monitor. The licensee had been requested to review the issue and determine whether or not a proper safety evaluation was performed and to evaluate the process of making sure that operations and health physics are made aware of any radiation monitor problems. On October 18, 1989, while reviewing the backboard operators' log, the inspector noted that an entry was made that the instrument technicians jumpered out 1-RMS-111 at 1450. There was no further entry to indicate if the jumper had been removed. The operators and supervisors were not aware of the status of the jumper however the radiation monitor had been placed in the LCO action statement indicating being inoperable and the actions required by TS were being complied with. The inspector will review this event with respect to the licensee's application.

(CLOSED) Violation 339/87-38-02, Violation of Technical Specifications 3.3.1.1 and 3.3.2.1. This violation was a result of the steam flow transmitters being inoperable and the licensee not taking corrective action in a timely fashion. The inspector reviewed the new licensee procedures and actions that require the STA to monitor parameters during startup and is satisfied that these changes should prevent reoccurrence of the problem.

10. Exit

The inspection scope and findings were summarized on October 20, 1989, 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>
338,339/89-30-01	Inspector Followup Item: Technical manual and maintenance procedure updates to incorporate a revised method of leakage repair to a LHSJ pump (paragraph 3).
338,339/89-30-02	Inspector Followup Item: Auxiliary feedwater pump packing adjustments and the recirculation flow required for pump testing (paragraph 4).
338,339/89-30-03	Unresolved Item: Potential violation concerning failure of licensed operators to have biennial medical examinations by a physician as required by 10 CFR 55.21 (paragraph 6).

- 338,339/89-30-04 Inspector Followup Item: Agreement of torque values between the technical manual and the maintenance procedure for Grinell diaphragm valves (paragraph 7).
- 338,339/89-30-05 Inspector Followup Item: Development of abnormal procedures and an engineering review of breaker size relating to 120 volt AC vital bus power supplies (paragraph 7).

11. Acronyms and Initialisms

AC	Alternating Current
AFW	Auxiliary Feed Water
ANS	American Nuclear Society
ANSI	American National Standards Institute
CR	Control Room
CRO	Control Room Operator
ECCS	Emergency Core Cooling System
ECG	Electrocardiogram
ESF	Engineered Safety Feature
EWR	Engineering Work Requests
GPM	Gallons Per Minute
HP	Health Physics
IFI	Inspector Follow-up Item
IR	inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LHSI	Low Head Safety Injection
MOV	Motor Operated Valve
Na	Sodium
NRC	Nuclear Regulatory Commission
PCC	Protection Control Cabinet
RO	Reactor Operator
RSHX	Recirculation Spray Heat Exchanger
RTD	Resistance Temperature Detector
RWP	Radiation Work Permit
RWST	Refueling Water Storage Tank
SG	Steam Generator
SRO	Senior Reactor Operator
SSPS	Solid State Protection System
TS	Technical Specification
URI	Unresolved Item
VCT	Volume Control Tank