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

Report Nos. 50-280/81-04 and 50-281/81-04

Licensee: Virginia Electric and Power Company
Richmond, Virginia 23261

Facility Name: Surry Units 1 and 2

Docket Nos. 50-280 and 50-281

License Nos. DPR-32 and DPR-37

Inspection at Surry site near Surry, Virginia

Inspector: Milton B. Shymlock for 3/6/81
D. J. Burke Date Signed

Approved by: DC Dance for 3/12/81
P. J. Kellogg, Section Chief, RONS Branch Date Signed

SUMMARY

Inspection on January 2-30, 1981

Areas Inspected

This routine inspection by the resident inspector involved 90 inspector-hours on site in the areas of plant operations and operating records, plant modifications, maintenance and testing, Licensee Event Reports and plant security.

Results

Of the six areas inspected, no violations were identified in four areas; one violation was found during review of testing (Failure to perform PT 18.6c during shutdown-paragraph 5.c) and one violation was identified in the area of plant operations (TS flow path isolated during operations-paragraph 6.a).

DETAILS

1. Persons Contacted

Licensee Employees

*J. L. Wilson, Station Manager
*G. Kane, Superintendent, Operations
*R. F. Saunders, Acting Superintendent of Technical Services
L. A. Johnson, Superintendent, Maintenance
S. P. Sarver, Health Physics Supervisor
*F. L. Rentz, Resident QC Engineer

Other Licensee employees contacted during this inspection included control room operators, shift supervisors, QC, HP, Plant maintenance, Security, engineering, chemistry, administrative, records, and Contractor personnel.

*Attended Exit Interview.

2. Management Interviews

The inspection scope and findings were summarized on a biweekly basis with those persons indicated in Paragraph 1 above; violations were specifically discussed with the licensee when identified.

3. Licensee Action on Previous Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Unit 1 Steam Generator Replacement Project

The Unit 1 Steam Generator Replacement Project is proceeding as planned. During this reporting period of the SGRP outage, the inspector routinely toured the Unit 1 control room and other plant areas to verify that the plant testing, maintenance, and repairs were being conducted in accordance with the Technical Specifications (TS) and facility procedures. Specific areas of inspection and findings included:

a. Observation of the welding of an upper steam generator moisture separator assembly to the lower section.

b. Observation of maintenance and cleaning being performed on the Unit 1 A recirculation spray heat exchanger. (See open item 280/80-39-02). All tubes in the RS heat exchangers are being cleaned; some scale, mud, and sea growth (seaweed, shells, etc.) were found in the tubes. Eddy-current testing of the tubes has revealed no tube degradation to date. Item 280/80-39-02 remains open pending completion of the

licensee's cleaning and inspection program, and his evaluation of the findings.

c. Review of the defueled Unit 1 BIT isolation valves, MOV-1867 A and C which were found improperly wired during preventative maintenance inspections on December 17, 1980. The BIT inlet and outlet valves A and C stroked closed when the control room switch was held in the open position, and vice-versa; the redundant MOV's (1867 B and D) operated properly. The electrical power leads were apparently switched subsequent to cold shutdown, since the operators injected the BIT into the RCS at shutdown to borate the RCS and prepare the BIT for long term layup; no problems were observed when the BIT was injected by opening MOV's 1867 A thru D. Since documentation of the power lead or wiring change on these safety related valve motors could not be found, the Licensee submitted an LER (80-74) on the apparent lack of administrative control, in accordance with Technical Specification 6.6.2.b(3). On January 29, 1981, the inspector asked the licensee to open certain breaker panels on motor control center (MCC) 1H1-1 and 1J1-1. When opened, the inspector observed that the identification tags or markings on the electrical power leads did not match their terminal board tags in several MCC breaker cubicles, including those for MOV-1867 A and C, indicating that the 480VAC power leads to the valve or component motors had been changed without changing the identification tags on the leads.

When wiring or leads are disconnected, reconnected, or changed, procedures require a functional test of the components to assure operability and proper rotation. The licensee stated that the Unit 1 safety related MCC breaker cubicles would be inspected and maintained to assure that the tags or markings on the electrical leads matched the markings on the terminal strips at their point of attachment (termination). Unit 2 MCC cubicles will be inspected during the next scheduled shutdown. Since MOV-1867 A and C are not adjacent (1867 A and B are), but are both from the H emergency buss, the inspector reviewed certain periodic testing on MOV-1867 A and C to verify operability from the time the MCC 1H1-1 and 1J1-1 power cables were moved to the additional 4160/480V transformer, installed in April, 1979 (DC 79-S18). Periodic tests (PT) verified proper valve operability through February, 1980, when PT 18.6c, CSD Testing of SI MOV's , was last performed. However, the inspector noted that PT 18.6c was not performed during the Unit 1 August 1 to 10, 1980 shutdown for SG tube plugging operations. This is contrary to 10 CFR 50.55a and the ASME, Section XI Code testing requirements which require valve testing exercise each shutdown if not performed quarterly, and is a Severity Level V Violation (280/81-04-01).

6. Unit 2 Operations

Unit 2 operated at power during January, 1981. During this time, the inspector routinely toured the Unit 2 control room and other plant areas to verify that the plant operations, testing, and maintenance were being

conducted in accordance with the facility Technical Specifications (TS) and procedures. Specific areas of inspection and review included the following.

a. The inadvertent isolation, on January 2, 1981, of the CVCS boric acid flow path to the charging pumps, during Unit 2 operation. The Unit 2 valves 2-CH-223 and -226 were closed instead of the (defueled) Unit 1 valves 1-CH-223 and -226, which were identified on the tags and tagging record. Although the Unit 2 emergency borate line was also inoperable (plugged) during the occurrence, the RWST flow path was operable. Following this occurrence, the inspector observed that several CVCS valves, including 1-CH-226 and 2-CH-226, were not properly identified due to missing valve identification tags or boron encrustation and deposits on the valves and tags, complicating the valve identification and tagging process. The isolation of the flow path from the boric acid tanks to the charging pumps during Unit 2 operation, is contrary to Technical Specification 3.2.B.4, and is a Severity Level IV Violation (281/81-04-01).

b. While in the boric acid flat, CVCS area, the inspector observed that the Unit 2 boric acid filter and housing was reading some 4 R/hr on contact. Although the filter was properly posted, the inspector routinely observed pipe insulators working on the CVCS piping. Review of the workers dose records indicated that the insulators are frequently extended above 1,000 mr per quarter to complete work in the boric acid flat area. The HP office routinely stamps "ALARA Evaluation Indicates that shielding would not be practicable for this job", on the Radiation Work Permits, although Hp requests for shielding studies have been submitted to engineering, such as request 79-02 on the boric acid filters. In fact, as part of the implementation of the Surry ALARA radiation protection program for shielding in plant areas outside containment, the HP office submitted some 50 requests for engineering studies in December, 1979, and January, 1980, to determine if shielding could be used on systems in the decon and auxiliary buildings to reduce radiation exposures in those areas. As of January 6, 1981, none of the requests for shielding had been completed. The licensee is, therefore, requested to respond to this matter in the letter attached to this report. (Item 280/81-04-02).

c. While reviewing control room logs, the inspector followed up on the Unit 2 SI accumulator level increases which required some one percent draining of the A and C accumulators once or twice per day to assure the TS 3.3.A.2 borated water volume was not exceeded. Since the accumulator in-leakage was assumed to be lower in boron concentration than the desired 2100 ppm concentration in the RWST and accumulators, the licensee increased the accumulator sampling frequency from monthly to weekly. On January 6, 1981, the accumulator samples were approximately 2070 ppm boron; however, when the accumulators were sampled on January 14, 1981, C was analyzed as being below the TS 3.3.A.2 limits of 1950 ppm by some 7 ppm boron. Recirculating the accumulator volume with the RWST (2114 ppm boron) for some two hours returned the accumulator concentration to 2053 boron (verified by chemical samples and

analysis). TS 3.3.B.1 permits one accumulator to be isolated (inoperable) for up to four hours during unit operation. Accumulators A and B were within specifications when sampled; however, the licensee recirculated the A accumulator with the RWST for some 70 minutes prior to sampling. Operating procedure 7.1, section 5.4, "Circulating the SI Accumulator(s) with the RWST", details the accumulator sampling techniques, "after completing the desired circulating time". Although this circulating time is normally 30 minutes, specific times are not defined and extended recirculation may mask previous boron dilutions in the accumulators.

Periodic Test 38.10, "Chemistry Sampling-Accumulators", references OP-12 for drawing local accumulator samples, and not OP7.1 which is normally used. The licensee stated that PT 38.10 and OP 7.1 will be reviewed and revised to address the above discrepancies. While reviewing OP-12, "Sampling System", the inspector noted that OP-12 for Unit 1 had recently been revised and listed some 54 sample system procedures, while OP-12 for Unit 2 had not been revised since 1975, and contained only 20 sample procedures; the sampling procedure for the accumulators was, for instance, not in the Unit 2 OP-12. The licensee performs annual reviews of Emergency, Operating and Annunciator Procedures as part of the operating staff training program; however, each OP may not be periodically reviewed by appropriate personnel in accordance with the interest of Section 5.4 of ANSI N18.7-1972. Adequacy of the above procedures and the licensee's program for periodic Operating Procedure review will be designated Open Item (281/81-04-03).

d. The inspector reviewed the Unit 2A reactor trip breaker failure to open during periodic testing on January 7, 1981. The redundant (series) B trip breaker was verified operable. The breaker was replaced and inspected by the licensee to determine the cause of failure. The failure to open was determined to be mechanical binding of the undervoltage relay due to the loss of a small C-type spring clip which retains the UV relay bushing; the loose bushing apparently led to the binding of the mechanism. The remaining reactor trip and bypass breakers were inspected and tested to verify that the clips were in place and the breakers operable. Procedures are being revised to verify that the small clips are in place to retain the relay bushings.

e. The inspector reviewed the status of the auxiliary building ventilation modifications to assure that the old and new plant ventilation discharge stacks were properly monitored. The new fan (F-59), filter and charcoal banks deliver area ventilation exhaust to the previously installed monitored stack while the previously installed fan, filters and charcoal banks currently exhaust the safeguards and fuel building to the new stack, which is monitored by the ventilation-vent sampler. The safeguards will soon exhaust to the new fan and filters. The licensee stated that training and updated documents would be provided to the shift teams to assure that the status and knowledge of the modified systems are maintained. In addition, abnormal procedures

addressing the new operating systems will be provided to operations personnel. (281/81-04-04).

7. Review of Reportable Occurrences

The inspector reviewed the Reportable Occurrence (RO) reports listed below to ascertain that NRC reporting requirements were being met and to determine the appropriateness of corrective action taken and planned. Certain Licensee Event Reports (LER) were reviewed in greater detail to verify corrective action and determine compliance with the Technical Specifications and other regulatory requirements. The review included examination of log books, internal correspondence and records, review of SNSOC meeting minutes, and discussions with various staff members.

Within the areas inspected, no violations were identified.

LER 280/80-51 concerned the discharge tunnel radiation monitor being out of service during a release of "A" Liquid Waste Test Tank due to a defective circuit card. The monitor was repaired. The liquid waste radiation monitor was operational during the release, and the tank had been sampled prior to the release with all isotopes falling within specifications for release. This LER is closed.

LER 280/80-53 concerned a recirculation valve on Outside Recirculation Spray Pump "B" being found open. The valve was closed; subsequent investigation was unable to determine when the valve was opened. Independent valve and equipment verifications have been implemented. This LER is closed.

LER 280/80-54 concerned a motor operated valve, MOV-SW-102B, Service Water to CCW Heat Exchangers, which failed to cycle during performance of a periodic test. The motor was replaced and the valve cycled normally. This LER is closed.

LER 280/80-56 concerned heat tracing tape which was damaged during mechanical work nearby. The redundant circuit was verified operable. The damaged tape was replaced and verified operable. This LER is closed.

LER's 280/80-57 and 280/80-69 concern heat tracing failures due to excessive heat. In both cases, the redundant circuit remained operable. The failed tape was replaced and verified operable. A design change has been prepared to replace existing heat tracing circuitry. Implementation of this design change should eliminate the heat tracing failures currently being experienced. These LER's are closed.

LER 280/80-58 concerned the volume in the RWST specified in the Architect--Engineer's accident reanalysis being greater than that assumed in the Order for Modification of License of June, 1978. The RWST was filled to the correct volume and the level transmitters were respanned to reflect proper level. This LER is closed.

LER 280/80-60 concerned a low flow alarm for process vent radiation monitor RM-GW-101/102 caused by a broken vacuum pump drive belt. The belt was replaced. No discharges were in progress at the time of the failure and the system was isolated upon indication of the alarm. This LER is closed.

LER 280/80-61 concerned an unplanned liquid waste release in which 3% of the contents of "A" LWTT were released prematurely while the operators were waiting for health physics to complete the isotope analysis of the tank. The operators had performed a preliminary valve lineup in preparation for release. HCV-LW-104A had been left open from a previous release. The discharge tunnel and liquid waste radiation monitors were operating during the release and the actual release rate was less than the maximum specified on the release form subsequently received from health physics. The operators involved were reinstructed. This LER is closed.

LER 280/80-62 concerned a radiation monitor, RM-CC-105/106 with alarm setpoints greater than twice background. Reduced background radiation had resulted from Unit 1 defueling. The alarm setpoints were reduced. The licensee was requested to change the system code on the LER form.

LER 280/80-64 concerned charcoal filters 3A and 3B in the Auxiliary Building failing DOP and Freon testing due to the settling of the charcoal in the filters causing voids, and due to a bent support rod in the HEPA filter housing. The bent rod was repaired and the charcoal replaced. This LER is closed.

LER 280/80-65 concerned the failure of MOV-SW-103B to operate electrically during a flush of the Recirc Spray heat exchangers. The three redundant valves operated properly. Marine growth is the probable cause. The valve was cycled manually and then operated successfully electrically. The valve was disassembled and cleaned. This LER is closed.

LER 280/80-66 concerned the failure of fuel transfer on No. 1 Diesel Generator during the monthly operational test. The Base Tank level control switch was found to be sticking. The switch was repaired and level control restored. This LER is closed.

LER 280/80-75 concerned radiation monitor setpoints being less than twice background on RM-CC-105/106 due to reduced background radiation from Unit 1 defueling. A Tech Specs change has been submitted to the NRC to eliminate references to setpoints for RM-CC-105/106. The setpoints were reduced to less than twice background. This LER is closed.

LER 281/80-12 concerned a missing pipe support on charging pump 2-CH-P-1B. The installation of this support was neglected due to a typographical error which was made in determining which supports were required to be installed prior to unit operation. The missing support was installed. The licensee was requested to provide additional corrective action. This LER remains open.

LER 281/80-13 concerned excessive boric acid concentration in the Boron Injection Tank caused by operator error in pumping the Boron Evaporator Bottoms Tank into the Boric Acid Storage tank without sampling. The reactor was taken subcritical and the tanks were diluted. Operators were reinstructed to use approved procedures and administrative controls were established to minimize recurrence. This LER is closed.

LER 281/80-14 concerned low levels in the RWST and CAT. Makeup to "B" Accumulator caused the level in the RWST to drift below the recently revised Tech. Spec. minimum level of 96%. Surveillance test (PT-36) had not been changed to reflect new RWST and CAT level requirements, although the new limits were contained in the shift order book. Reactor shutdown was commenced while RWST and CAT levels were returned to within Tech Spec limits. Control room data has been updated and operators cautioned about the new tank limits. (See IE Inspection Report 281/80-37). This LER is closed.

LER 281/80-15 concerned high level on accumulator tank 2-SI-TK-B during startup testing at low power. The indicated level of the accumulator increased when the tank was pressurized. After pressurization level indicators read 61%, exceeding the Tech Spec wax of 58.3%. The cause of the higher reading was condensation in the dry reference legs. Water was drained to lower the accumulator level. Subsequently, the reference legs were drained of condensation. This LER is closed.

LER 281/80-16 concerned a malfunction of trip valve TV-SS-201B (pressurizer vapor space sample line isolation valve). The trip valve would not stay closed when closed from the control room. The inside trip valve TV-55-201A was operable. Inspection of TV-SS-201B, limit switches and associated components did not reveal any problems. The valve was successfully cycled and the malfunction could not be repeated. The valve has been returned to service. This LER is closed.

LER 281/80-17 concerned the failure of main steam flow transmitter (FT-2495) to function during Unit 2 startup. The equalizing valve for the transmitter was not fully closed. The redundant steam line flow transmitter was operating. Immediate action was to place channel 4 high steam flow and channel 4 steam flow greater than feed flow Bi-stable switches to the trip mode. Subsequent action was to close the equalizing valve for the transmitter. This LER is closed.

LER 281/80-18 concerned the failure of charging pump service water pump 2-SW-P-10A to develop proper discharge pressure. The cause was sediment and suspended material accumulation in the suction side of the pump. The "B" pump was operable. The pump suction strainer was cleaned and the pump was disassembled, cleaned and inspected and verified operable. This LER is closed.

LER 281/80-19 concerned the failure of trip valve TV-SS-206B to remain closed when actuated from the control room due to a misadjusted limit

switch. The trip valve was isolated by a downstream manual valve and the position limit switch was readjusted. This LER is closed.

LER 281/80-20 concerned excessive boric acid concentration in BAST "C" and BIT 2-SI-TK-2. The cause was transferring the batch tank to an inservice BAST. Redundant systems were operable. Reactor shutdown was initiated and the tanks were diluted to within specifications. Procedures were changed to require all transfers of boric acid to an inservice tank to be made from tanks of known concentration. This LER is closed.

LER 281/80-21 concerned pressure on "B" accumulator being reduced below allowable limits while attempting to pressurize with the normal nitrogen supply. The other two accumulators remained operable. The low accumulator pressure was caused by a leak and low pressure in the nitrogen fill header. The accumulator was declared inoperable. Additional nitrogen supply pressure was added and the accumulator repressurized. The leaking fittings on the fill header were repaired. This LER is closed.

LER 281/80-22 concerned the Channel III flow computer for "A" steam generator steam flow, FC-2474, failing causing a low flow indication. The protection bistable was placed in the tripped mode. The redundant steam flow channel for "A" loop was operational. The affected circuitry was repaired, the unit calibrated, and returned to service. This LER is closed.

LER 281/80-23 concerned BIT discharge piping and valve MOV-2867D being declared inoperable due to mechanical damage to heat tracing tape from scaffolding being erected in the area. The redundant discharge line was operable. The damaged heat tracing tapes were replaced and MOV-2867D was tested to verify operability. Construction personnel were instructed to exercise more care with scaffolding construction. This LER is closed.

LER 281/80-24 concerned trip valve TV-SS-200B failing to remain closed when the control switch was released. The redundant valve TV-SS-200A was operable. The close limit switch had failed and was replaced. This LER is closed.

LER 281/80-25 concerned failed heat tracing tape on the BIT inlet line. The redundant circuit was operable. The tape was damaged by scaffolding work nearby. The damaged tape was replaced. This LER is closed.

LER 281/80-26 concerned failure to confirm operability of a low head safety injection pump. Prior to tagging out "B" low head SI pump, the redundant pump was demonstrated operable. The oncoming shift failed to demonstrate operability eight hours later. The error was discovered and the periodic test initiated approximately eight hours and forty minutes after the "B" pump was tagged out. All licensed personnel were reinstructed on the necessity of a more complete review of tech spec limitations when a safety system is operating in a degraded mode. This LER is closed.

LER 281/80-27 concerned heat tracing failure of circuit 6a (boric acid to blender) due to excessive heat. The redundant circuit was operable. The failed circuit was replaced. This LER is closed.

LER 281/80-28 concerned an inoperable check valve, 2-SW-113, noted when a reduction in service water pressure to the charging pumps was experienced. The discharge check valve on the non-operating redundant pump was found to have the internals removed. Documentation of this modification was not performed. The discharge valve was closed which allowed the operating service water pump to function as designed. Check valve 2-SW-113 was replaced and tested. Operation and maintenance personnel were reinstructed in the proper method of performance of work on safety-related systems. The licensee was requested to correct the system code, cause code, and cause subcode on the LER form. This LER remains open.

LER 281/80-29 concerns low discharge pressure on charging pump service water pump 2-SW-P-10A caused by an eel lodged in the pump's impeller. The redundant pump started and returned system pressure to normal. The pump was disassembled and the eel removed from the impeller. The pump was subsequently proven operable. A design change is in progress to improve seismic stress, system pressures, and improve the filtration capabilities of the system. This LER is closed.

LER 281/80-30 concerned a heat tracing circuit failure on circuit 6A (boric acid to the blender) due to mechanical damage from scaffolding installation. The redundant circuit was functioning. The affected heat tape was replaced. Construction personnel were formally advised on the importance of safety related heat tracing and the consequences associated with damaging it. An individual was assigned to provide interface between the station staff and construction personnel to aid in avoiding similar problems. This LER is closed.

LER 281/80-31 concerned an improperly installed pipe support in the alternate charging system (4-CH-387, FC-1298A). The final as-built review of supports installed as a result of IE Bulletin 79-14 showed the pipe support to be overstressed. The alternate charging header was isolated and the pipe supports were modified. The header was then returned to service. This LER is closed.

LER 281/80-32 concerned heat tracing on #2 BIT inlet damaged by personnel working pipe support modifications nearby. Redundant heat tracing circuit was operable. Damaged tape was replaced and verified operable. Administrative and organizational changes referenced in LER 281/80-30 should prevent recurrence. This LER is closed.

LER 281/80-33 concerned excessive control room air leakage during check of the control room emergency ventilation system. The doors from the emergency switchgear room to the turbine building would not close properly and the door seals on the instrument shop, turbine building #3 machinery room and cable tunnel doors had deteriorated with use. The emergency ventilation system was verified functional and the defective doors were repaired.

Routine periodic inspections of the doors has been implemented. This LER is closed.

LER 281/80-34 concerned the failure to operate of the outlet butterfly valve for "A" water box, MOV-CW-200A. The inlet butterfly valve was operable. The torque switch on MOV-CW-200A was found to be corroded and stuck in the open position. An operator in radio contact with the control room was stationed to close the valve if required. The torque switch was replaced and the valve tested operable. This LER is closed.

LER 281/80-35 concerned the momentary loss of the Unit 1 "H" emergency bus and the Unit 2 "J" emergency bus when a jackhammer breached the reserve station service duct bank and came in contact with an energized conductor. For further discussion of this event, see Inspection Report 281/80-47. This LER is closed.

LER 281/80-36 concerned auxiliary feed valve, MOV-FW-251B, failure to respond to control switch position. The limitorque cover was found not to be placed and three control wires broken. The reason for this condition could not be determined. The broken wires were repaired and the cover replaced. The MOV was then tested satisfactorily. This LER is closed.

LER 281/80-37 concerned a high temperature on "A" charging pump due to low service water flow to the pump. Service water pump 2-SW-P-10B indicated a low discharge pressure. The low discharge pressure switch sensing line was clogged. The redundant pump, 2-SW-P-10A, was operable and when started, returned charging pump temperatures to normal. The cause of the low discharge pressure was a clogged pump suction strainer. The suction strainer and sensing line for the discharge pressure switch were cleaned. A design change is in progress to improve seismic stress, system pressures, and improve the filtration capabilities of the service water system. This LER is closed.

LER 281/80-38 concerned an improper valve lineup resulting from clearing tags which caused the dilution of "B" and "C" Boric Acid Storage Tanks with primary grade water. A power reduction was commenced and batching to the storage tanks to increase boron concentration was initiated. The importance of correct tagging reports was re-emphasized to the individuals involved. Some valve identifications have been changed from a "CH" to a "PG" designation to identify the type of fluid being controlled. This LER is closed.

LER 281/80-39 concerned the inability to establish a satisfactory control room pressure differential during the control room and relay room operational pressure test. Damper MOV-VS-104B was not fully closed due to slippage of the clamp holding the damper's operating arm. The control room emergency ventilation system was functional. The damper was adjusted to insure full closure and the test repeated satisfactorily. This LER is closed.

LER 281/80-40 concerned low discharge pressure on charging pump service water pump 2-SW-P-10A due to material entrained in the water and being deposited on the pump's impeller. The redundant pump functioned as

designed. The suction strainer was cleaned and the affected pump was disassembled and cleaned. The pump was tested and returned to service. A design change in progress, as a result of the pipe stress analysis program, will improve the filtration capabilities of the system. This LER is closed.

LER 281/80-41 concerned snubber 2-WFPD-HSS-18 being declared inoperable due to a bent rod-eye. The rod-eye was deformed due to the improper alignment of the pipe clamp to snubber. The snubber was declared inoperable and replaced. This LER is closed.

LER 281/80-42 concerned the failure of #3 emergency diesel generator to start on a manual start signal from the control room. The manual start circuit was in the "Preferred Start #1" mode. The "Preferred Start #2" circuit was selected and the diesel started. The starting air motor vanes were found to be worn beyond acceptable limits thereby preventing the motor from rotating. The air motor was repaired and its operability proven. This LER is closed.

LER 281/80-43 concerned a failed Control Room leakage test due to excessive leakage from the door to 2B battery room. The emergency ventilation system was proven operable. The door was repaired and the test repeated satisfactorily. This LER is closed.

LER 281/80-44 concerned low head safety injection pump 2-SI-P-1A being declared inoperable due to a ground caused by rainwater leaking from a roof hatch dripping into the electrical motor connection box. The redundant pump was verified operable. Water was removed from the connection box and heat was applied. When the motor connection box dried, the pump and motor were verified operable and returned to service. The leaking roof hatch was repaired. (See IE Inspection Report 281/80-47). This LER is closed.

LER 281/80-45 concerned inoperable containment vacuum pumps due to a broken lug on relay CV-010 A-8. A jumper was installed to allow a vacuum pump to operate. The broken lug was replaced and the jumper removed. A design change was initiated to allow manual operation of the vacuum pump with a failure of the control circuit. This LER is closed.

LER 281/80-46 concerned the inadvertent opening of the circuit breaker to MOV-CW-200C (condenser circ. water outlet valve). The respective waterbox inlet MOV was operable and would have closed if necessary to preserve water in the intake canal. A construction worker had hung his coat on the operating arm of the circuit breaker which opened the breaker and de-energized the valve. The breaker was closed and the MOV cycled to verify operability. Construction workers were instructed not to hang anything on circuit breakers. This LER is closed.

8. Plant Physical Protection

The inspector verified the following by observation:

a. Gates and doors in protected and vital area barriers were closed and locked when not attended.

b. Isolation zones described in the physical security plans were not compromised or obstructed.

c. Personnel were properly identified, searched, authorized, badged and escorted as necessary for plant access control.