U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/92022(DRP)

Docket No. 50-255 License No. DPR-20

Licensee: Consumers Power Company
212 West Michigan Avenue
Jackson, MI 49201

Facility Name: Palisades Nuclear Generating Plant

Inspection At: Palisades Site, Covert, MI

Inspection Conducted: July 14 through August 31, 1992

Inspectors: J. K. Heller
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9-11-92
DATE

Inspection Summary

Inspection from July 14 through August 31, 1992 (Report No. 50-255/92022(DRP))
Areas Inspected: Routine unannounced inspection by resident and region based inspectors of plant operations, reactor trips, surveillance, Temporary Instruction 2515/115, the inservice inspection (ISI) summary report, and NRC Region III requests. No Safety Issues Management System (SIMS) items were reviewed.

Results: Of the six areas inspected, no violations or deviations were identified in five areas. One non-cited violation (NCV) pertaining to system restoration following maintenance on an Emergency Diesel Generator fuel oil transfer pump (paragraph 2.b.1) was identified in the remaining area. Two Unresolved Items were identified relating to potential long-term emergency diesel inoperability (paragraph 2.d) and to potential inadequate administration of design controls (paragraph 3.c).

The strengths, weaknesses, violations and unresolved items are summarized in paragraph 9, "Management Interview."

DETAILS

1. Persons Contacted

Consumers Power Company

G. B. Slade, Plant General Manager
*T. J. Palmisano, Plant Operations Manager
D. J. VandeWalle, Mech/Civil/Structural Engr. Manager
*R. D. Orosz, Nuclear Engineering & Construction Manager
*P. M. Donnelly, Safety & Licensing Director
*K. M. Haas, Radiological Services Manager
J. L. Hanson, Operations Superintendent
R. B. Kasper, Maintenance Manager
*K. E. Osborne, System Engineering Manager
*C. S. Kozup, Technical Engineer
D. G. Malone, Operations Staff Support Supervisor
*W. L. Roberts, Senior Licensing Engineer
R. W. Smedley, Staff Licensing Engineer

Nuclear Regulatory Commission (NRC)

*J. K. Heller, Senior Resident Inspector
*D. G. Passehl, Resident Inspector

* Denotes some of those present at the Management Interview on September 8, 1992.

Other members of the plant staff, and several members of the contract security force, were also contacted during the inspection period.

2. Operational Safety Verification (71707, 71710, 62703, 42700)

Plant startup, steady power operation, plant shutdown, and response to plant transients were observed as conducted in the plant and from the main control room.

The performance of reactor operators and senior reactor operators, shift engineers, and auxiliary equipment operators was observed and evaluated. Included in the review were procedure use and adherence, records and logs documentation, communications, shift/duty turnover, and the degree of professionalism of control room activities.

Observations of the control room monitors, indicators, and recorders were made to verify the operability of emergency systems, radiation monitoring systems, and nuclear reactor protection systems. Reviews of surveillance, equipment condition, and tagout logs were conducted. Proper return to service of selected components was verified.

a. General

The plant started and ended the reporting period at essentially full power. Paragraph 3, "Reactor Trips," discusses the events that removed the plant from service.

b. Walkdown of the Emergency Diesel Generator Fuel Oil Transfer System

The inspector performed a walkdown of the Emergency Diesel Generator (EDG) Fuel Oil Transfer System, including Fuel Oil Transfer Pumps P-18A and P-18B, and found no items that disabled the system but noted the following:

(1) The suction valve (MV-FOS 101) and the discharge valve (MV-FOS 102) for P-18A were open but not sealed open. The similar valves for P-18B were sealed open. The inspector informed the Shift Supervisor of this discrepancy, who verified by review of system checklist 22.2, "Fuel Oil System Checklist," and print 214, "Lube Oil, Fuel Oil & Diesel Generator Systems," that the valves were required to be sealed open. He directed the valves to be properly sealed and documented the discrepancy in corrective action document D-PAL-92-215.

The inspector reviewed the Work Order (WO) history for P-18A to determine how long the valves had been unsealed, and found that they were unsealed since May 6, 1992. According to a Switching and Tagging Order, the valves had been closed on May 4, 1992, for pump maintenance (WOs 24200930 and 24201525). The inspector found that the May 6, 1992, Switching and Tagging Order correctly required the Operator to position the valves open but did not require installation of a seal. The System checklist 22.2 and drawing 214 correctly identified the valves as normally sealed open. Additionally, System Operating Procedure (SOP) 22, "Emergency Diesel Generators," at paragraph 8.5.2, provided the instruction to return the fuel oil pump back to service and was a reference for the May 6 Switching and Tagging Order. SOP 22 instructions were incomplete since they did not require placement of a seal. The lack of a seal did not compromise system integrity but the failure to mention the seal in SOP 22 was considered a procedure weakness.

The failure to install a sealing device was contrary to checklist 22.2 and drawing 214. The inspector performed an evaluation of this item for potential enforcements: the valves were in the correct position, and the valves were sealed when the discrepancy was identified; a corrective action document was written to evaluate and implement long term corrective actions; the safety significance was minor, so this would normally be classified as a Severity Level V

violation. The matter met the conditions of the NRC Enforcement Policy (10 CFR Part 2, Appendix C, Sections V.A and V.G) for which enforcement action will not normally be taken, so no Notice of Violation will be issued on this finding.

(2) The inspector's walkdown of P-18B found a degraded rubber insert for a Chicago fitting installed on the check valve at the discharge of the pump. The EDG System Engineer was informed and initiated a work request.

c. Plant Tours

(1) The inspector made routine tours of the control room. During these tours, the inspector observed that manning requirements were always met, that the operators were cognizant of changing plant conditions, the equipment status board and LCO board were maintained up-to-date, and the operators were performing assigned tasks in accordance with plant procedures. Several of the activities observed were:

(a) Control rod movement per SOP 6.
(b) Several mode changes from hot shutdown to critical per GOP 3.
(c) Several power escalations after synchronization per GOP 5.
(d) Post Trip Actions per EOP 1.
(e) Reactor Trip Recovery per EOP 2 and EOP 9.
(f) Starting and loading of the Diesel Generator per SOP 22.

(2) The inspector accompanied an Auxiliary Operator (AO) on a comprehensive tour of the Turbine Building, Auxiliary Feedwater Pump Room, Service Water Pump Room, and Exterior Switchyard areas during one of the AO's assigned tours. Several dozen instrument readings were observed and recorded for the Steam, Feed, and Condensate systems.

The data sheets used to record the various readings were legible and well formatted. They listed acceptance criteria for each parameter, the noun name of the component, and the identifier number of the associated instrument. All recorded parameters were within specifications, except for a reheater drain tank level that was temporarily slightly low.

The general plant and equipment condition appeared good. Exterior switchyard areas were free of potential missile hazards. The AO was knowledgeable in the physical plant layout and systems operation. The AO observed that a plant air compressor was operating with its relief valve lifting and notified maintenance personnel, who responded and repaired the compressor.

d. Diesel Generator 1-1 Inoperability

On August 2, 1992, the results of surveillance test MO-7A-1, "Diesel Generator (DG) 1-1" identified that the full load exhaust temperature from cylinder 8R was significantly below the normal operating temperature by approximately 700 degrees F; and below the minimum full load operability administrative limit by approximately 300 degrees F. The licensee properly declared the DG INOPERABLE. Their investigation found that the fuel rack was not injecting fuel to cylinder 8R because the latching mechanism was engaged and holding the fuel rack for cylinder 8R at the "no fuel" or "lock out" position. The latching mechanism is used to facilitate maintenance. The latching mechanism was disengaged and the surveillance completed satisfactorily. The DG was declared OPERABLE and an internal corrective action document was written.

The inspector reviewed the shift's response and determined that their immediate action to declare DG 1-1 inoperable was appropriate. However, the shift supervisor decided not to immediately start and load the opposite DG (DG 1-2) to confirm that the problem was not common to DG 1-2. As a result of a technical discussion the following morning at the Corrective Action Review Board meeting, the licensee performed a visual inspection of the fuel racks for both DGs and started DG 1-2 to verify no problems existed. These activities were satisfactorily completed approximately 12 hours after the initial test was completed.

The inspector interviewed several shift supervisors and the operations superintendent to determine what action would be implemented if a DG was in service for extended periods of time. All stated that an auxiliary operator would be stationed to monitor DG performance. Included in the monitoring was an expectation that the auxiliary operator would check cylinder exhaust temperatures. The interviews also revealed that there was no written guidance or instruction to verify cylinder exhaust temperatures during prolonged use.

The inspector reviewed the associated Technical Specification to determine whether the licensee properly implemented the stated requirements. The Action Statement of Technical Specification 3.7.2.i requires a start of the opposite DG when a DG is found INOPERABLE. However, the Technical Specification does not specify when this action is to be performed. Performing the start test 12 hours after the first problem was resolved was considered acceptable in this case, though a more timely start would usually be preferrable.

The inspector reviewed the licensee's operability investigation of DG 1-1 and found that the licensee could not determine when DG 1-1 became inoperable. As a conservative measure, inoperability was temporarily back dated 33 days to the last time test MO-7A-1 was

satisfactorily completed. The cylinder latching mechanisms were used during that previous performance of surveillance test MO-7A-1, to facilitate a cylinder compression test done every 6 months. The compression test was done on June 30 while DG 1-1 was fully loaded. The records for MO-7A-1, however, confirmed by indication of cylinder exhaust temperatures after the compression test that the fuel racks were not left in the "lock out" position.

The licensee's root cause investigation was aggressive and thorough and revealed that the latching mechanism for cylinder 8R could stick in a position other than the normal storage position. In this intermediate position, normal engine vibration could cause the latching mechanism to fall and touch the fuel rack. Subsequent movement of the fuel rack could engage the latching mechanism in the "lock out" position. This may have occurred upon engine shutdown on June 30.

The licensee contacted the DG vendor to determine how the DG would function with fuel oil isolated to one cylinder. The vendor concluded that the DG would not support overload conditions, and that long term operation (greater than 10 hours) could cause damage due to vibratory torques.

This event will be undergo additional review following issuance of the Licensee Event Report. This is considered an unresolved item until the inspector determines whether the DG was INOPERABLE for a time greater than the seven days which Technical Specification 3.7.2 Limiting Conditions for Operation allows. (Unresolved Item 255/92022-01(DRP))

e. Interpretation of Technical Specification 3.7 "Electrical System"

On August 25, one of the four preferred ac buses became inoperable due to a failure of two SOLA transformers. This failure resulted in a plant trip that is discussed later in the report (paragraph 3.c, "Plant Trips"). The licensee questioned the wording of Technical Specification 3.7, "Electrical System".

One interpretation of 3.7 would indicate that there was no Limiting Condition for Operation (LCO) and that the restrictive shutdown requirements of Technical Specification 3.0 3 applied. If this were the case, the licensee would require a Temporary Waiver of Compliance to keep the plant in HOT SHUTDOWN while repairs were made to the SOLA transformers.

A second interpretation considered the preferred ac buses inoperable at the time of the trip which would provide an LCO time of 56 hours before the plant must be in cold shutdown. A conference call on August 25 between NRC (site, Region III and NRR) and the licensee concluded that the second interpretation was correct and that an LCO time of 56 hours was appropriate.

One unresolved item and one non cited violation were identified. No deviations or open items were identified.

3. Reactor Trips (93702)

a. Turbine trip and subsequent reactor trip from a loss of load.

On July 24, at 10:07 a.m, the unit tripped from 100 percent power, due to a turbine trip and a subsequent loss of load signal to the Reactor Protective System. The turbine tripped when the turbine monitoring and control computers malfunctioned. A rapid voltage transient caused the digital Electrohydraulic (DEH) computers - two main computers and two automatic computers - to drop off line. This action tripped the turbine and generated the loss of load signal. The D. C. Cook resident inspector, providing backup site coverage, was in the control room at the time of the trip. He did not observe any problems with command and control of the event and he verified that all safety systems responded as designed.

The licensee's investigation found that the turbine monitoring and control computer malfunctioned during a plant-wide voltage transient caused by the performance of an unrelated surveillance test. The licensee stated that they were previously unaware that the DEH computers were sensitive to rapid voltage transients. Other plant systems sensitive to voltage transients are powered with a stable uninterruptable power supply. Prior to returning the unit to service, the licensee added a stable uninterruptable power supply (approximately 30 minutes) to the DEH computers.

The post trip review report documented that all critical systems responded as designed. Several components, that did not affect the operator's ability to respond, required corrective maintenance prior to returning the plant to service. The inspector interviewed the onshift crew during the trip and was informed that the equipment response was satisfactory.

An identical trip had previously occurred when the turbine monitoring and control computers malfunctioned on July 1, 1992. The inspector's evaluation of that event was documented in Inspection Report 255/92018(DRP). At that time, there appeared to be sufficient evidence to conclude that the trip was caused by voltage spikes from loose computer circuit board connections. The licensee now believes that a rapid voltage transient, from an external line ground fault that preceded the trip caused the malfunction and was the root cause. Previously, the licensee had analyzed the fault and concluded that it had cleared prior to the trip.

On July 28, at 7:02 p.m., the reactor was made critical and returned to service at 6:32 a.m. on July 29.

b. Reactor trip from low steam generator water level

The reactor automatically tripped from 100 percent power on August 14, 1992, due to low water level in the "A" Steam Generator (SG). An unanticipated reduction to approximately 40 percent of normal feed flow to the SG occurred when the associated Feed Regulating Valve (CV-0701) failed partially closed. The plant responded normally following the trip, and no significant anomalies were noted.

The cause of the trip was a failed air line supplying the opening actuator to CV-0701. The licensee found the air line sheared off at a compression fitting, and believed the fitting may have been over tightened. The licensee's corrective and preventive actions included replacing the air lines on both SGs and verifying the integrity of air lines for other valves in the turbine building.

The plant remained in HOT SHUTDOWN/HOT STANDBY for approximately three days for repair and troubleshooting of the Feedwater system, and for various forced outage planned activities. The Plant was taken CRITICAL at 1:30 p.m. on August 16, 1992, and the Plant was on-line the next day following some emergent Turbine Digital Electrohydraulic Control Valve calibrations.

c. Reactor trip due to a failed power supply to a reactor protective logic matrix

The reactor tripped from 100 percent power on August 24, 1992, due to a inverter failure and blown fuse that combined to deactivate the control rod clutch power supplies. The plant responded normally following the trip, and no significant anomalies were noted.

The reactor protective system logic matrix consists of six "ladders". Each ladder has two power supplies. Either power supply can provide power to the control rod clutch power supplies. Normally, a valid trip signal will deactivate at least one ladder, disrupt both power supplies, and cause a trip.

Apparently, a fuse in the "B-C" matrix ladder power supply from inverter Y-30 blew at an unknown time. This condition was not detectable either visually or by surveillance testing. At the time of the trip, invertor Y-20 (the other power supply to the "B-C" matrix ladder) failed because of degraded transformers. The trip resulted because both power supplies to the "B-C" matrix ladder had failed, one because of the blown fuse and the other because of the inverter failure.

Prior to returning the unit to service the licensee replaced the fuse, verified that the correct fuses were in the other power

supplies, and replaced the transformers for inverter Y-20. The reactor was made critical at 10:00 p.m. (EDT) on August 26, 1992, and returned to service on August 27 at 4:17 a.m.

The inspectors reviewed past licensee activities which may have contributed to the event. In 1984, one of the three Y-20 inverter single winding transformer failed. Since inverter Y-20 carried approximately 50 percent more load than any of the other three inverters (Y-10, Y-30, and Y-40), the licensee concluded that the higher output current caused the failure. The licensee replaced the failed transformer with a two winding transformer and properly connected the windings in parallel. The licensee, however, did not update vendor drawing No. 950 VEN E 11 (Sheet 1, Revision 6) to reflect the as-built conditions for a two winding transformer. In order to produce a more balanced output load, the licensee changed the remaining two transformers in 1986. The licensee considered the change a "like for like" replacement. However, the electricians connected the primary sides to a single transformer winding instead of connecting the two windings in parallel. Consequently, the two new transformers were connected such that the single winding carried twice the normal current. This probably caused the two transformers to fail prematurely. However, the licensee had not been aware of this fact until after post maintenance testing which took place on August 27, 1992.

On August 25, 1992, the licensee issued a work order to replace all three transformers on Y-20. During post maintenance testing, electricians measured an incorrect output of approximately 95 volts. The transformers were reconnected, however, the inverter output breaker tripped. The transformers were worked on again, but the output voltage was measured to be approximately 60 volts when the RPS loads were connected. The licensee then decided to refer to the vendor manual. A review of the vendor manual revealed to the licensee that the transformer replacements in inverter Y-20 had <u>four</u> primary windings. The primary windings were subsequently connected in accordance with the vendor manual and post maintenance testing was successful.

Pending further NRC review, the licensee's failure to adequately review the vendor change from a one, two, and four winding transformer and failure to update the vendor drawing is considered an Unresolved Item (255/92022-02(DRP)).

The inspector also reviewed the loss of the "C" channel RPS 118V ac power supply, which was due to a blown 0.5 ampere fuse. It should be noted that indication still showed the power supply to be energized. The licensee determined that the required fuse size should have been 1.0 ampere. The inspectors were informed that the normal supply current to the RPS matrix was in the range of 0.62 to 0.78 amperes. The licensee stated that the power supply assembly containing the undersized fuse was part of a system upgrade and was installed and tested in June 1992. The power

assemblies were vendor-supplied by Combustion Engineering as a package; consequently, the licensee would not have been required to verify fuse sizes. The licensee issued deviation reports to verify all power supply fuses and to investigate root cause. The licensee found no additional problems.

The inspectors further investigated a possible design deficiency with the power supplies. As mentioned above, at the time the licensee discovered that the 0.5 ampere fuse was blown, light indication showed that power was being supplied to the RPS matrix. Since two redundant power supplies feed the RPS logic through an auctioneered circuit, the licensee cannot easily determine which power supply is keeping the RPS logic energized. The more significant problem is that the light indication is in parallel and is the first circuit downstream of the power supply. Consequently, the light indication would not show that a fuse had blown or whether power was being supplied to the RPS matrix. Due to this design deficiency, the licensee could not state whether the power supply was available after it was tested in June or whether it had failed just prior to the August 25 reactor trip. This issue will be further investigated for generic applicability to other Combustion Engineering plants.

The inspector has no additional questions at this time. Additional evaluations are pending issuance of the Licensee Event Report.

d. Turbine trip without a reactor trip

On the evening of August 17, 1992, with the unit operating at approximately 25 percent power, an auxiliary operator on tour in the turbine building reported the existence of a large EHC fluid leak from CV-0548, "Stop valve for the E-9C moisture separator reheater." An EHC reservoir low level alarm was also received in the control room and the operators began an emergency power reduction. The turbine was manually tripped at 13 percent power, below the automatic reactor trip setpoint of 15 percent. Following the turbine trip, the EHC pumps were secured and personnel were dispatched to the scene of the leak. Approximately 50 gallons of EHC fluid was spilled from the system with about 1-2 gallons reaching the turbine building sump.

The cause of the EHC fluid leak was a failed O-ring on the solenoid-operated test valve in the actuator of CV-0548. The licensee's examination of the failed O-ring verified that it was of the proper type for use in the highly corrosive conditions present in the EHC system. Following part replacement and testing of CV-0548, the unit was returned to service on the morning of August 17. The reactor was maintained in the hot standby condition until repairs and testing were complete.

e. Startup Plant Review Committee (PRC) activities

The inspector attended several post trip management meetings and the startup PRC meeting for the three reactor trips discussed above. The cause of each trip, equipment problems, and corrective actions were presented by knowledgeable individuals. The PRC membership discussed the problems and the technical merit of the solutions. The inspector verified that the PRC composition met Technical Specification requirements and a voting quorum was present.

One unresolved item was identified. No open items, violations or deviations were identified.

4. Surveillance (61726, 62703, 42700)

The inspector reviewed Technical Specifications required surveillance testing as described below and verified that testing was performed in accordance with adequate procedures. Additionally, test instrumentation was calibrated, Limiting Conditions for Operation were met, removal and restoration of the affected components were properly accomplished, and test results conformed with Technical Specifications and procedure requirements. The results were reviewed by personnel other than the individual directing the test and deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The following activities were inspected:

a. MO-7C, "Fuel Oil Transfer Pumps"

The August 4 performance of MO-7C identified that the pump discharge pressure, as read on Pressure Indicator PI-1400, was out of specification low. Discharge pressure was a new acceptance criterion for this test. The inspector discussed resolution of the problem with the system engineer, reviewed the Work Order (WO) and Work Request (WR) history, and reviewed the completed surveillance file. The inspectors observations are discussed below.

(1) The acceptance criteria for a previous test performed on July 2, pertained to the pumps ability to transfer fuel oil from the underground storage tank to the day tanks. At that time, the test did not specify an acceptance criterion for the discharge pressure. Page 2 of MO-7C, acceptance criteria and operability sheet for the July 2 test, documented that the reading on PI-1400 would not meet proposed pump discharge acceptance criteria. A WR was written to recalibrate the gauge, but it had not been processed prior to the August 4 performance of MO-7C. In

fact, at the time the WR was written, a separate work order (WO) was already planned, with a completion of December 1992 to recalibrate PI-1400.

(2) The August 4 performance of MO-7C, did not result in an upper tier corrective action document when the acceptance criterion was not met. This was identified to the licensee, who issued a Deviation Report on August 10.

(3) The WO history identified several WOs pertaining to calibration of PI-1400. The revision of MO-7C, to include an acceptance criterion for the pump discharge pressure, was appropriate. However, the inspector questioned if adequate research was performed to determine if PI-1400 could provide the needed information.

The inspector concluded that the problem resulted from failure to correct a known deficiency with test equipment prior to using it for a test. These matters were discussed with the licensee at the management interview.

b. MO-7A-1, "Emergency Diesel Generator 1-1"

c. RI-86-13, "Spent Fuel Pool Area Radiation Monitor"

d. MI-2, "Reactor Protective Trip Units"

e. QO-17, "Inservice test of the Charging Pumps"

f. RI-62A, "Power Range Safety Channel Alignment"

No violations, deviations, unresolved or open items were identified.

5. Plant Records Verification (2515/115)

(Closed) Temporary Instruction (TI) 2515/115: Verification of Plant Records

TI 2515/115 was issued May 29, 1992, and provided guidance for performing a comparative analysis between areas requiring key card access and documentation of an activity on a auxiliary operator log sheet. Consequently, the inspector examined recorded log entries for a randomly selected group of auxiliary operators against the licensee's security computer records. Examination of both records confirmed that in each case, the auxiliary operator entered the areas necessary to perform expected duties with no indications of record falsification.

In the absence of a formal self-monitoring program, NRC Inspectors were requested to compare a representative sample of required room entries against security access records. The licensee had not implemented a formal self-monitoring program to detect plant personnel who falsify

plant logs. However, the Quality Assurance department recently performed a Quality Assurance audit (PA-92-09) in response to the NRC Information Notice (IN 92-30) that alerted licensees to the same subject. No cases of impropriety were discovered during the Palisades audit.

The inspector obtained the log sheets used by the operators during their rounds and selected areas which required key card access. The log sheets included the following:

-Turbine Building Data Sheet Nos. 1 and 2
-Auxiliary Building Data Sheet - Primary side
-Control Room Ventilation and Feedwater Purity Building Data Sheet
-Volume Reduction System Data Sheet

The inspector compared security records and operator log sheets for nine separate shifts and found no discrepancies.

No violations, deviations, unresolved or open items were identified.

6. Review of Inservice Inspection (ISI) Summary Report (73051)

The NRC inspection of the ISI activities at the Palisades Plant was documented in NRC Inspection Report No. 50-255/92012(DRS). The NRC specialist inspector reviewed 1992 ISI Summary Report 2-6 for activities performed from February 10, 1992 through April 18, 1992 and determined that the observations made by the NRC inspector during the above inspection were consistent with the data presented in the ISI summary report.

No violations, deviations, unresolved or open items were identified.

7. Region III Requests (92705)

The licensee was provided a description of a July 6, 1992, loss of emergency power event at another Combustion Engineering plant - Millstone Unit 2. The event had identified a significant design flaw in the load shed logic. The licensee was asked to review the event and determine if the problem was applicable to Palisades. A preliminary review concluded that the system designs are different and that the problem does not exist at Palisades. This information was provided to Region III for review by electrical specialists.

No violations, deviations, unresolved or open items were identified.

8. Unresolved Items

Unresolved Items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. Unresolved Items are discussed in Paragraphs 2.d and 3.c.

9. Management Interview (71707)

The inspectors met with licensee representatives - denoted in Paragraph 1 - on August 8, 1992, to discuss the scope and findings of the inspection. In addition, the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection was also discussed. The licensee did not identify any such documents or processes as proprietary.

Highlights of the exit interview are discussed below:

a. Strengths noted:

(1) Format of data sheets used to document the auxiliary operator rounds (paragraph 2.c.2, "Operations - Plant Tours).

(2) Technical discussion at the Corrective Action Review Board pertaining to DG 1-1 inoperability and the need to verify operability of DG 1-2 (paragraph 2.d, "Operation-DG 1-1 Inoperability").

(3) Root cause analysis for DG 1-1 inoperability (paragraph 2.d, "Operation-DG 1 1 Inoperability").

(4) Interviews with the operators indicated that the response to the plant trips were uncomplicated because of the material condition of the equipment important to safety (paragraph 3, "Plants Trips").

b. Weaknesses noted:

(1) Failure to install the seal for the suction and discharge valves to a fuel oil transfer pump following pump maintenance (paragraph 2.b.1, "Operation - Walkdown of the DG fuel oil transfer system").

(2) A shift supervisor did not recognize the need to test start a DG when the opposite DG was found inoperable (paragraph 2.d, "Operation - DG 1-1 Inoperability").

(3) Failure to resolve a known deficiency with test equipment prior to performance of a test (paragraph 4.a "Surveillance - MO 7C "Fuel oil transfer pump").

c. A non-cited violation pertaining to restoration of a fuel oil pump following maintenance was identified and discussed (paragraph 2.b.1, "Operation - Walkdown of the DG fuel oil transfer system").

d. The inspector indicated that the Unresolved Item pertaining to DG 1-1 inoperability could be a candidate for enforcement action because a Technical Specification Limiting Condition for Operation

may have been violated. This topic was also discussed with the Plant Manager and the Director of Safety and Licensing prior to the management interview. Both stated that it was not clear what type of analysis (if any) could be performed to quantify the safety consequences. Additionally, they restated the fact that a post operability test was satisfactorily performed following the last known time the fuel rack was locked out (paragraph 2.d, "Operation - DG 1-1 Inoperability").

e. The inspector discussed the three reactor trips and asked the licensee to consider these events, and the trip documented in the previous report, to determine if there is any common denominator. This may be a topic during the next quarterly management meeting. The licensee acknowledged the comments (paragraph 4, "Reactor Trips").

f. The consequences of falsifying [illegible] t records and the need to discuss this topic with the plan[illegible]aff was discussed (paragraph 5, "Plant Records Verification").