U. S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 50-255/91004(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: January 12 through February 18, 1991

Inspectors: J. K. Heller
J. A. Hopkins
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Approved By: B. L. Jorgensen, Chief
Reactor Projects Section 2A

3/4/91
Date

Inspection Summary

Inspection on January 12 through February 18, 1991 (Report No. 50-255/91004(DRP))
Areas Inspected: Routine unannounced inspection by the resident inspectors of plant operations, maintenance, surveillance, refueling activities, and security; and, special unannounced inspection by an NRC contractor of design changes. No Safety Issues Management System (SIMS) items were closed.
Results: No violations, deviations, unresolved or open items were identified. The strengths, weaknesses and Open Items are discussed in paragraph 8, "Management Interview."

DETAILS

1. Persons Contacted

Consumers Power Company

G. B. Slade, Plant General Manager
*R. M. Rice, Plant Operations Manager
*D. J. VandeWalle, Technical Director
R. D. Orosz, Engineering and Maintenance Manager
K. M. Haas, Radiological Services Manager
J. L. Hanson, Operations Superintendent
R. B. Kasper, Mechanical Maintenance Superintendent
*K. E. Osborne, System Engineering Superintendent
C. S. Kozup, Technical Engineer
*K. A. Toner, Plant Projects Superintendent

Nuclear Regulatory Commission (NRC)

*J. K. Heller, Senior Resident Inspector
*J. A. Hopkins, Resident Inspector

Parameter, Inc.

*D. L. Waters, Consultant to NRC

*Denotes some of those present at the Exit Interview on February 22, 1991.

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, 42700)

Refueling and plant operations, at cold shutdown, were observed as conducted in the plant and from the control room. The performance of Reactor Operators, 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, communications, shift/duty turnover, and the degree of professionalism of control room activities.

a. General

The plant began this reporting period in a refueling shutdown condition with the vessel defueled and all fuel in the spent fuel pool. The inspector verified by observation, discussion with the control room operators, and review of checksheets that the spent fuel pool cooling system was operable. This included verification that the fuel pool temperature was maintained, spent fuel ventilation was operable during spent fuel pool activities, cooling water was available to the spent fuel pool heat exchangers, and emergency power was available.

b. Major Outage Milestones Completed During This Report Period

(1) Commenced refueling - January 20.

(2) Completed main condenser construction and static hydrostatic pressure test - January 25.

(3) Completed refueling the reactor - January 27 (see paragraph 5, "Refueling" for the inspector's observations).

(4) Completed Steam Generator Hydrostatic pressure test - February 11 (see paragraph 7, "Design Changes" for the inspector's observations).

(5) Completed containment full pressure structural integrity test - February 16 (see inspection report 255/91003(DRS) for the inspector's observations).

(6) Completed containment integrated leak rate test - February 17 (see inspection report 255/91003(DRS) for the inspector's observations).

c. Technical Specification 3.17.1

On January 25, the licensee determined that Table 3.17.1 of Technical Specification 3.17, "Instrumentation and Control Systems" was unclear and could be misinterpreted. Technical Specification Amendment 130 (issued March 23, 1990) added a requirement that portions of the reactor protective system be operable when the control rod clutch power supply is energized. The licensee needed to energize the power supplies to lower the control rod drive extensions from the head to permit latching of the control rods. The reactor protective system would not be operable for a number of days. The licensee performed a safety evaluation and determined that the requirement did not apply when the reactor was in cold shutdown with the primary coolant at refueling boron concentration. This appeared consistent with the action statements of Technical Specification 3.17. The inspector discussed this evaluation with Region III and the NRR project manager-all agreed with the safety evaluation. The licensee will be revising Table 3.17.1 and will include this item in the revision.

d. 10 CFR 50.72 Notification

On January 25, 1991, a left channel containment isolation was initiated while preparing work on refueling isolation radiation monitor RIA-2316. All operable components responded as required. The planning of the work order that deenergized RIA-2316, did not identify that removal of the power supply for RIA-2316 also deenergized RIA-1805. This caused a left channel containment isolation. The inspector interviewed the planner and found that the wiring diagram showed an incorrect configuration. The licensee corrective action for this event addressed the wiring diagram error. This subject will be revisited when the 10 CFR 50.73 Licensee Event Report is issued.

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

3. Maintenance (62703, 42700)

Maintenance activities were routinely inspected. The focus of the inspection was to ensure that the maintenance activities reviewed were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and were in conformance with Technical Specifications. The following items were considered during this review: Limiting Conditions for Operation were met while components or systems were removed from service, approvals were obtained prior to initiating the work, activities were accomplished using approved procedures, and post maintenance testing was performed as applicable.

The following activities were inspected:

a. Primary Coolant Pump P-50A,B,C and D Lube Oil System Modification (Facility Change 860).

b. Containment Air Cooler, VHX-4, Modification (Specification Change 89-130).

VHX-4 copper cooling coils and pipe manifolds were replaced due to a history of leakage. The new coils have a modified configuration to relieve pipe joint stresses and use thicker walled pipe. The licensee will monitor the performance of the new coils and determine if the modifications will be done to the other containment air coolers during a subsequent outage.

c. Component Cooling Water Heat Exchanger Maintenance, CCS-M-2.

Component Cooling Water Heat Exchanger, E-54B, tubes (service water side) were cleaned and inspected using eddy current testing. There was no indication of biological fouling or sediment build-up.

d. Service Water Check Valve Replacement (Work Order (WO) No's. 24006571, 24006585, 24006586, 24006587).

While isolating the service water (SW) header inside containment for this maintenance, SW return header containment isolation valve, CV-0824, failed to close properly. Investigation discovered parts from the upstream containment air cooler SW check valves wedged in CV-0824. Three of the four check valves were disassembled. The valve discs were detached from the swing arms and significant corrosion and metal degradation of the valve body interiors were identified. The licensee determined that inadequate flow velocity and upstream flow disturbances induced vibrations and hammering actions which may have caused fatigue failure of the valve internals. All four check valves were replaced. (The fourth check valve was not inspected based on the condition of the other three.)

A visual inspection of the interior of the SW piping from the check valves, downstream to CV-0824, did not locate any of the missing valve parts. The licensee believes that the parts were corroded to the point that they were swept out of the SW system and into the discharge tunnel. Additionally, CV-0824 was refurbished due to normal system wear. Post maintenance hydrostatic testing of the SW system was completed satisfactorily.

During the maintenance activity to replace the check valves, contract personnel "tack welded" clamps to the SW piping to assist in the alignment of two valves. This is a commonly accepted practice for alignment of valves but was not authorized by the work order. The clamps were removed and non-destructive examination was performed on the SW piping. No defects were identified. The licensee reviewed the incident with the appropriate work groups. The inspector had no additional concerns.

e. Escape Airlock Inner Door Viewing Port Gasket Leak (WO No. 24100098).

During the performance of Technical Specification test SO-4B, "Escape Airlock Penetration Leak Test", the inner door viewing port gasket exhibited air leakage greater than the maximum acceptable value. Maintenance personnel found dirt on the sealing surface of the viewing port and a number of loose bolts. The gasket was replaced, sealing surfaces cleaned and all bolts tightened. SO-4B was performed satisfactorily.

f. Modifications of Clark Relay for the Containment Isolation System (WO 24100711, 24100456, 24004652).

During post maintenance testing of Clark Relay 5R-5, the licensee discovered that some contact spring relays were installed upside down, which could affect operability of the relay. It appears that the manufacturer's instructions lacked sufficient information to convert individual contacts from normally open to normally closed, resulting in improper installation of the contact springs. The licensee's internal corrective action document (D-PAL-91-029) implied that the problem was isolated to this outage, which eliminated the question of operability because the associated components were not yet required to be operable. The licensee inspected a sample of the Clark Relays which were modified during this outage. Based on the results of the inspection, the licensee determined that the relays were properly assembled and will operate correctly. Additionally, surveillance testing confirmed proper operation of the relays.

During a previous outage, the closing logic for the feedwater regulating valves, which uses Clark Relays, was modified. The inspector asked if a similar problem exists with these relays. The licensee determined that the design change package had sufficient information to convert the Clark Relays. In addition, the system engineer confirmed that the contact springs were correctly installed. The inspector had no additional questions.

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

4. Surveillance (61726, 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. T-213 Component Cooling Water Flow Test of the Component Cooling Water, Low Pressure Safety Injection, High Pressure Safety Injection and Containment Spray Pumps, and the Component Cooling Water Heat Exchanger.

b. T-261 Low Pressure Safety Injection Pump, P-67A and P-67B, Performance Test.

c. QO-02 Recirculation Actuation System and Containment Sump Check Valve (Operability Verification).

d. SO-4A Personnel Air Lock Penetration Leak Test.

e. RO-65 High Pressure Safety Injection Train 1 and 2 and Hot Leg Injection Check Valve Test.

f. T-226 Component Cooling Water (CCW) Accumulator Test for Containment Isolation Valves CV-0911 and CV-0940. During the performance of T-226, CCW containment isolation valve CV-0911 failed to remain shut for the required time interval due to a leak in the air accumulator system. The accumulator (a backup system) was designed to maintain CV-0911 shut if the normal instrument air supply was interrupted. (CV-0911 and CV-0940 are "fail open" valves.) The leak was repaired under Work Order 24005748 and applicable portions of T-226 were completed satisfactorily. CV-0940 successfully completed T-226 without any problems.

g. FWS-I-18 Auxiliary Feedwater (AFW) Pump, P-8C, Trip on Low Suction Water Pressure (Logic Test).

While performing FWS-I-18, an alarm circuit card would not reset. The card was repaired under Work Order 24100242. The test was completed satisfactorily.

h. RE-83A and B Service Test - Battery ED-01 and ED-02.

Surveillances RE-83A and B were performed to verify that the capacity of station batteries ED-01 and ED-02 were adequate to supply and maintain actual emergency loads for two hours. RE-83A was completed on ED-01 satisfactorily. However, one minute into RE-83B, an equipment malfunction interrupted the test. Trouble-shooting allowed ED-02 to "rest" for approximately ninety minutes. The test was re-initiated from the point it was interrupted and no additional concerns were identified by the licensee.

The licensee performed an engineering analysis to determine the overall acceptability of RE-83B with the ninety minute "rest". The licensee determined that based on the results of the last test (1986), ED-02 would have responded satisfactorily without the ninety minute interruption. Additionally, since the lead-calcium C and D Model LC-25 batteries were designed for infrequent discharges, performing a second test discharge in a short time frame would unnecessarily accelerate battery aging. The inspector reviewed the licensee's engineering analysis, with the assistance of region based specialists, and determined that RE-83B was acceptable.

i. T-SC-90-022 Hot Leg Injection/Cold Leg Injection Flow Balance.

On January 18, the inspector observed the pre-test briefing and observed that an extra licensed control operator (CO) was assigned to perform the test, a test engineer was assigned to coordinate the test, and the system engineer and a Quality Assurance Inspector were present to observe the test. The test was completed satisfactorily; however, some deficiencies were observed.

(1) The procedure did not specify either the wide or narrow range on reactor vessel level instrument L1A-0105. The test engineer stated that wide range (which was selected) was correct.

(2) The method of communication between the field operators and control room was poor. The field operators had to relay test data to a telephone communicator to contact the control room. High noise levels at the telephone stations required control room personnel to shout their instructions. This gave the control room a chaotic atmosphere and hindered other control room activities but apparently did not affect the outcome of the test. The licensee stated that poor reception at various plant locations prevented the use of radios. The licensee has been evaluating the need for additional radio "repeaters".

(3) Initially two steps in the procedure were missed, which were identified by the Quality Assurance inspector. He immediately informed the CO and the test engineer. The steps were then performed satisfactorily. It appears that the steps were missed because the CO was not following the procedure in parallel with

the test engineer. The inspector discussed this apparent loss of activity control with the Operations Superintendent who stated that licensed operators, not the test engineer, were responsible for the performance of test procedures. The individuals involved, as well as the rest of the licensed operators, were briefed on their respective responsibilities during testing.

Prior to this event, the inspector had not observed similar deficiencies during the performance of other test procedures.

j. RE-39 Hydrogen Recombiner M-69 A and B (Operability Verification).

During the performance of RE-39, M-69 A and B did not achieve rated power and temperature. Trouble shooting determined that potentiometers in the power controller circuit cards were out of adjustment. The circuit cards were adjusted and RE-39 was completed satisfactorily.

A review of M-69 A and B maintenance history identified that the power controller circuit cards were sent to the manufacturer (Westinghouse) for routine refurbishment at the beginning of the current refueling outage. The manufacturer tested the circuit cards using technical data for a later model in the hydrogen recombiner series, which resulted in the misadjustment of the potentiometers. The licensee apparently did not supply sufficient information to ensure that the appropriate post refurbishment testing was performed. The licensee was evaluating the instructions provided to vendors when equipment was sent off site for refurbishment and testing. The inspector reviewed the event and determined that M-69 A and B were not required to be operable for the existing plant conditions and that RE-39 was scheduled prior to the plant achieving the applicable conditions. The inspector had no additional concerns.

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

5. Refueling 60710

On January 20, the licensee commenced fuel reload activities. The inspector reviewed procedures and checklists to verify that the refueling equipment and support systems were operable. During refueling operations, the inspectors observed fuel moves from the control room, spent fuel pool and the containment.

a. On January 20, the licensee performed a video inspection of the core support plate to verify the location of the bolts for the core support barrel. A washer, approximately 2 inches in diameter, was discovered on the core support plate. Retrieval attempts were unsuccessful and the washer fell through a core support plate flow hole. Subsequent attempts to retrieve the washer were unsuccessful.

The licensee performed an engineering evaluation to determine the potential effects the washer would have on the fuel if the washer was not retrieved. The licensee determined that although the source of the washer was unknown, it was similar to washers removed during the 1988 refueling outage and may not have been removed at that time.

The following is a summary of the licensee's engineering evaluation:

(1) Primary coolant system (PCS) flow could lift the washer through the flow holes in the core support plate.

(2) If the washer was pinned against the fuel assembly lower tie plate, it would not affect the Departure from Nucleate Boiling (DNB) condition during normal operation.

(3) The chances of the washer getting into the control rod channel are very remote.

(4) If the washer got through the fuel assembly lower tie plate openings, it would wedge itself between the fuel rods. Failure of 4 to 5 fuel rods due to fretting may occur.

The licensee concluded that additional attempts to retrieve the washer were not appropriate because of the fuel performance during the last operating cycle when the washer was probably in the reactor, and the low probability of retrieving the washer without removing the core support barrel.

The inspector reviewed the engineering evaluation and discussed the event with the system engineer and licensee management and had no additional concerns.

b. On January 21, during the reactor refueling, one fuel assembly was discovered "stuck" in its spent fuel pool (SFP) storage location. The licensee continued with the refueling and raised SFP temperature to the upper end of the normal operating band to "loosen" the assembly. A second attempt to remove the assembly was unsuccessful.

On January 24, the inspector attended a plant review committee (PRC) meeting that reviewed the procedure for removal of a stuck fuel bundle from the SFP. The inspector questioned if the safety review addressed the FSAR statement that mechanical interlocks are in place on all fuel handling equipment to assure 10 feet of water was maintained over the bundle. The procedure required use of the overhead crane and specified that a person was stationed at the circuit breaker to prevent uncontrolled vertical movement of the overhead crane. The inspector questioned if a person was adequate compensation for a mechanical interlock. Subsequent to the PRC meeting, the inspector discussed the procedure with the PRC chairman. The safety evaluation was changed to reflect the inspector's questions. In addition, the inspector noted that the procedure did not compensate for the weight of the rigging below the

load cell. This meant that the lifting force specified in the safety evaluation, was reduced by approximately 400 pounds. The licensee conservatively chose to implement the procedure with the reduced lifting force.

The attempt to remove the stuck fuel assembly was unsuccessful. Reactor engineering identified an acceptable alternate assembly and continued with the refueling.

c. Misplaced Fuel Assembly

On January 23, with 118 out of 204 fuel assemblies in the reactor vessel, an incorrect fuel bundle, serial number C-137, was removed from the spent fuel pool (SFP) and placed in the reactor. The error was identified after the refueling machine (RFM) operator identified extensive bowing of the assembly. The control room operator asked the RFM operator to verify the fuel assembly serial number and orientation. Neither were visible. Further investigation determined that the correct fuel assembly, serial number J-42, was still in its correct SFP location, G-5. Refueling activities were immediately suspended and reactor subcriticality was re-verified using source range neutron instrumentation. Fuel assembly C-137 was removed from the reactor vessel and placed in the SFP.

The inspector observed control room activities from the time the bundle was transferred to the reactor and recovery operations to transfer the bundle back to the spent fuel pool. At all times, communications were clear and documentation of additional fuel moves were appropriately recorded. Recovery operations were directed by the shift supervisor with input provided by the senior reactor operator stationed in the containment and the operations superintendent who was in the control room.

The licensee's immediate corrective action was to brief each of the refueling crews on the event and stress the importance of notifying the control room as soon as questions or problems were identified. Reactor engineers also explained that all of the reload fuel assemblies had a serial number and orientation mark on top of the assembly. Additionally, the Operations Superintendent made a new interpretation of Step 7.6.2.c (removing fuel from SFP locations) of System Operating Procedure (SOP) 28, "Fuel Handling Systems," as requiring the spent fuel handling machine (SFHM) operator to check the manual index position of the SFHM prior to removing the assembly. The procedure already required this check when inserting assemblies into the reactor vessel. After the on-shift refueling crew was briefed, assembly J-42 was inserted into the reactor. No other misplaced fuel bundles were identified during the remainder of the refueling process.

The inspector attended the corrective action review board at which time the SFHM operator was interviewed. The root cause of the event was the SFHM operator removing assembly C-137 from SFP location G-2 vice

assembly J-42 from location G-5. The operator used a touch sensitive computer screen to identify the assembly's coordinates and the SFHM automatically positioned itself. In this case, the operator selected G-2 vice G-5. It could not be determined whether the operator's error resulted from misreading the procedure or the touch sensitive screen. Equipment failure was ruled out, because subsequent comparison of the SFHM computer position encoder against the manual index position display and the SFHM rail scribe marks did not identify any discrepancies.

The licensee performed an engineering evaluation to determine what affect the misplaced fuel assembly had on the shutdown margin (SDM) of the core. The analysis assumed that the core was fully loaded with all control rods removed and determined that the SDM was reduced approximately 0.15 percent. This was approximately equal to reducing primary coolant system boron concentration by 13 ppm. Actual boron concentration was 1842 ppm and minimum required was 1720 ppm. The misplaced fuel bundle did not challenge reactor safety.

The licensee's immediate corrective action appeared to be adequate. However, the licensee has not documented the new interpretation of Step 7.6.2, SOP-28. The inspector discussed this observation at the exit interview and the licensee agreed to revise the procedure prior to the next usage.

d. Loose Debris on Core Support Plate

On January 25, the RFM operator identified a fuel assembly which was interfering with the insertion of a control rod into the core. Investigation determined that a piece of debris was in one of the core support plate fuel assembly alignment holes and was preventing level seating of the assembly. The object could not be identified. The object appeared to drop through the alignment hole during retrieval efforts. Video inspection of the area below the core support plate could not locate the object. The licensee concluded that it had fallen into the reactor vessel bottom.

The licensee discussed potential retrieval plans and determined that based on the configuration of the core support plate with a full fuel load, continued retrieval efforts did not have a reasonable probability of success. The inspector asked if an engineering evaluation was performed to determine the potential effect of the loose object if it came in contact with a fuel element. The licensee stated that due to the uncertain size of the object, there was not enough information to perform a reasonable evaluation.

During the January 20, core support plate video scan to verify support barrel bolt locations (see paragraph 5.a), several pieces of debris, such as a plastic tie wrap, a washer and a piece of wire, had been identified and all were removed except the washer. Other vague discontinuities were observed but could not be identified due to poor water clarity and poor video image. The exact location of the discontinuities was not known due to the "random" nature of the scan.

The licensee later determined that one of the discontinuities appeared to be in the same general area as the object seen in the alignment hole. Due to a communication breakdown no attempt had been made to remove this vague discontinuity.

The licensee was evaluating the need for core barrel vacuuming after each core off-load. The inspectors considered controls to ensure removal of foreign materials from the reactor vessel to be weak. This was discussed at the management interview.

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

6. Security (71707)

Routine facility security measures - including control of access for vehicles, packages, and personnel - were observed. Performance of dedicated physical security equipment was verified during inspections in various plant areas. The activities of the professional security force in maintaining facility security protection were occasionally examined or reviewed, and interviews were occasionally conducted with security force members.

a. On January 11, the licensee reported, pursuant to 10 CFR 26.73, that a contractor supervisor tested positive during unannounced fitness-for-duty testing. The individual's site access was revoked. The licensee provided the site inspection staff with a list of work activities that the individual was performing. The inspector verified, by review of selected work activities, that operability checks (pre-planned as part of the work activities) were performed and that the components worked as intended. This information was provided to Region III fitness-for-duty specialists.

b. On January 23, the licensee informed the resident inspector that a plant employee was arrested for possession of a controlled substance. The individual subsequently tested negative during fitness-for-duty testing. This information was provided to Region III fitness-for-duty specialist. Any additional questions will be relayed by separate communications.

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

7. Design Changes (37700)

a. Testing was performed to confirm the adequacy of the system restorations performed during the changeout of the steam generators, included a hydrostatic test of the secondary system in accordance with Technical Specification 4.0.5 and ASME Section XI requirements. The inspector reviewed the licensee's procedure for the main steam and feedwater hydro, RO-701, "Main Steam and Feedwater System Hydrostatic Test," Revision 0, prior to the performance of the test. The procedure was found to be acceptable overall, with minor concerns consisting of the following:

(1) Assurance of guidance to operators in case an isolation of the Decay Heat Removal System occurs during the test.

(2) Step 5.2.15.b - the minimum flow value called for in the procedure was not measurable.

(3) Pressure fluctuations in the test pressure gauges caused by the positive displacement hydrostatic test pumps, should be dampened by use of snubbers or accumulators.

The licensee adequately addressed these concerns through procedure changes or operator briefing notes.

The test was performed on February 10, 1991, and was observed, in part, by the resident inspector staff. The test documentation was reviewed following completion of the test. Minor problems, such as lack of correspondence of readings between the two calibrated precision pressure gauges during the pressurization phase of the test; inadequate communication between hydrostatic test control operators and control room operators regarding secondary pressure effects due to primary coolant temperature changes, which led to a several hour delay in stabilizing at the required test pressure; and inadequate anchoring of the test manifold, resulting in movement of the manifold due to pulsations caused by the hydrostatic test pumps, were observed during the test. These problems were identified by and satisfactorily resolved by licensee personnel.

The four-hour hold period at the test pressure was marked by stable pressure within the allowable band and less-than-expected leakage through boundary valves and packing leaks (less than eight gpm).

The inspector reviewed Work Order 257039 for pre-test and post-test calibration records for the precision pressure gauges used in the test, and found that the gauges exhibited minor calibration deviations when post-test calibrations were performed. These variations were not at the test pressure range and the minimum test pressure was maintained during the test.

b. During an inspection of the main condenser hotwell, the inspector found several downcomer pipes which were attached to the hotwell floor and others that were not. The downcomers are intended to be free to vibrate to prevent damage to the floor. The licensee stated that several were tack welded to the floor because of a misunderstanding of the work order instruction. This problem had already been identified and would be resolved after the condensor hydrostatic test. During a subsequent inspection the inspector verified that the downcomers were free to move. The inspector had no additional questions.

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

8. Management Interview (30703)

The inspectors met with licensee representatives - denoted in Paragraph 1 - on February 22, 1991 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/processes as proprietary.

Highlights of the exit interview are discussed below:

a. Strengths noted:

(1) Involvement of the engineering department in the resolution of problems (paragraphs 3.f, "Maintenance," 4.h, "Surveillance," 5.a, "Refueling").

(2) Involvement of the Quality Assurance department in problem identification (paragraph 4.i.(3), "Surveillance")

(3) The integrity of the isolation boundary for the main steam hydrostatic test (paragraph 7.a, "Design Changes").

b. Weaknesses noted:

(1) Actual work activity exceeded the scope of the planned work activity (paragraphs 3.d, "Maintenance" and 7.b, "Design Changes").

(2) Poor communication method between the field and the control room (paragraph 4.i.(2), "Surveillance).

(3) Inadequate instructions to control testing performed at a vendor facility (paragraph 4.j, "Surveillance").

(4) Administrative controls not in effect to ensure foreign material was removed from the reactor vessel (paragraphs 5.a and d, "Refueling").

(5) Personnel error that resulted in a mispositioned fuel bundle (paragraph 5.c, "Refueling").

c. The fitness-for-duty problems were briefly discussed with the closing statement that the information was provided to Region III. Any additional questions will be handled by separate communication (paragraph 6, "Security").