U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 86-21/86-56

Docket No. 50-220/50-410

License No. DPR-63/NPF-54 Category B

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard
Syracuse, New York 12302

Facility: Nine Mile Point, Units 1 and 2

Location: Scriba, New York

Dates: October 1, 1986 to November 16, 1986

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Approved by: J. C. Linville Jr. 12/8/86
J. C. Linville, Chief, Reactor Projects Section 2C, DRP — Date

Inspection Summary:
Inspection on October 1, 1986 to November 16, 1986
(Report No. 50-220/86-21 and 50/410/86-56

Areas Inspected: Routine inspection by resident inspectors of station activities (including Unit 2 fuel load and MSIV progress), review of open items, plant tours, surveillance testing, maintenance, safety system walkdowns, Licensee Event Reports (LERs), allegation followup, TMI Action Plan Item Review, Physical Security review, Core Alteration definition, Emergency Exercise review, and Recirc Pump Trip Logic review. This inspection involved 424 hours by the inspectors. Four violations were identified.

Results: During Unit 2 fuel load, three Technical Specification violations were identified by the licensee and a violation involving a missed 10 CFR 50.72 reportable event was identified (see section 2). Unit 2 MSIV progress is discussed in section 2.b. Unit 2 control room activities are discussed in section 4. Detector venting methods are discussed in section 5. An allegation concerning MSIV leak testing is discussed in section 9. Two Physical Security items are discussed in section 11. CORE ALTERATION definition is reviewed in section 12.

DETAILS

1. Persons Contacted

   The inspectors interviewed and discussed station activities with various licensee representatives and contractor personnel.

2. Summary of Plant Events

   UNIT 1

   The plant operated at full power throughout the report period with power reductions for weekly control rod exercising and control rod pattern adjustments.

   UNIT 2

   a. Fuel Load

      The Unit 2 low power operating license was issued on October 31, 1986. Upon receipt of the license, the licensee conducted neutron source installation. Problems were encountered with the neutron source installation tool which eventually led to the use of divers to complete the final placement of the source pins in the upper core plate. A final Technical Specification verification was performed and on November 1, the Site Operations Review Committee (SORC) approved the start of fuel load. The resident inspectors independently reviewed the final fuel load prerequisites and attended the November 1 SORC meeting. No discrepancies were noted in the SORC's final assessment of plant readiness.

      The Cold Functional Test program was completed and signed off on the evening of November 1 and the first new fuel bundle was loaded the morning of November 2. The local media was allowed access to the refuel floor to witness the first bundle loading.

      During the first three days of fuel loading, the resident inspectors and one region based inspector provided 24-hour coverage of the fuel load activities.

      The inspectors observed that during the first several days of fuel loading there was some confusion among the station operators in determining what surveillances had to be satisfied prior to resuming fuel load after a temporary suspension. The Station Shift Supervisors (SSS) proceeded slowly and cautiously to ensure themselves that all Technical Specification requirements were met prior to resuming fuel load. A test procedure change was eventually issued which clarified the surveillance requirements and loading progressed more smoothly. Fuel loading was completed the morning of November 15.

During fuel load, the following events occurred:

(1) In preparation for resuming fuel load on November 3, the reactor mode switch interlock surveillance test was performed. This test requires that no rod blocks be in effect. At the time the surveillance was being performed, three SRM channels (A, C, and D) were reading downscale, and their associated rod blocks were in effect. The fourth SRM, Channel B, was reading approximately 3 CPS with its associated downscale rod block clear. To clear the downscale rod blocks, all four SRM rod block functions were bypassed by installing jumpers. All SRM downscale rod block functions were bypassed for a period of approximately 2.5 hours between 1:10 PM and 3:35 PM.

Technical Specification 3.3.6 requires that a minimum of two SRM downscale rod block channels be functional while in Mode 5 (Refuel). With one less than the minimum number of channels operable, an inoperable channel must be restored in 7 days or placed in the tripped condition within one hour. With all channels inoperable, at least one inoperable channel must be placed in the tripped condition within one hour.

Contrary to Technical Specification (TS) 3.3.6, all SRM rod block functions were bypassed for more than one hour without appropriate compensatory action. This is a violation. (50-410/86-56-01) Had the SRM B downscale rod block function not been bypassed, the less restrictive seven day LCO would have been in effect. The inspectors determined that the operators performing the surveillance did not consult the Technical Specification requirements for functional rod block instrumentation. The licensee identified this TS violation during the subsequent administrative review of the jumper/bypass documentation on November 6, 1986. An ENS call was made on November 6.

The safety significance of this TS violation is minimal. The purpose of the surveillance test was, in part, to verify the rod motion interlock functions of the reactor mode selector switch. During the time the SRM rod block functions were bypassed, no rod motion was in progress, and fuel loading was suspended.

(2) On November 5, 1986, at 12:41 PM, Intermediate Range Neutron Monitor (IRM) Channel D spiked to the HI HI trip setpoint on Range 1 causing a scram. The spike was apparently due to bumping of a fuel bundle while loading fuel in close proximity to IRM D. The scram recovery procedure was not followed when resetting the scram, in that, the Scram Discharge Volume (SDV) HI level trip bypass switch was not placed in the bypass position prior to resetting the scram. When the IRM scram was reset at 12:42 AM, a second scram occurred approximately 1.5 minutes later due to SDV HI level.

During the review of this event by the resident inspectors, it was determined that only the first scram was reported via the ENS. This is contrary to the reporting requirements of 10 CFR 50.72(b) (2) (ii), and is a violation. (50-410/86-56-02)

(3) During the performance of SRM functional checks, in accordance with N2-OSP-NMS-@002, on November 7, at 7:08 PM, the SRM Channel C trip functions were bypassed (neutron level indication remained functional). At the conclusion of the surveillance test, the SRM C trip functions were not restored. Approximately five hours later, at 11:57 PM, SRM C trip functions were discovered bypassed during the routine operator control panel walkdown conducted at shift turnover. The licensee reinstated SRM C trip functions at 11:58 PM.

Technical Specification 3.10.7 requires, in part, that during initial core loading, one of the two operable SRM detectors must be located in the quadrant in which core alterations are being performed. During the five hour time period SRM C trip functions were bypassed, nineteen (19) fuel bundles were loaded into the quadrant containing SRM C. This is contrary to TS 3.10.7 and is a violation. The licensee reported this violation via the ENS on November 7. (50-410/86-56-03)

Additional procedural controls and TS requirements were in effect at the time this event took place which mitigate the consequences of having the SRM Channel C trip functions bypassed. Technical Specifications required that an SRM in the adjacent quadrant be operable, Reactor Protection System "shorting links" be removed to permit noncoincident scram signals, and the Reactor Mode Switch be locked in the REFUEL position to permit the movement of only one control rod at a time. The Startup Test Procedure, N2-SUT-3-OV, governing fuel load activities required that a licensed operator be in direct communications with the refuel floor and continuously monitoring neutron instrumentation. N2-SUT-3-OV also required an average inverse count rate plot, (1/M), to be maintained throughout fuel load and both a partial and full core shutdown margin test be performed to ensure the core remains subcritical by at least 0.38% delta K/K. In addition, the Intermediate Range Neutron Monitors (IRM) in the same quadrant as the SRM were operable and provided backup scram functions.

(4) On November 8, at 10:35 AM, low sample line flow was detected on the Reactor Building Above Refuel Floor Exhaust Radiation Monitor, 2HVR-RU14A. A Work Request was generated and troubleshooting was commenced within a few hours. At 7:40 PM, after the control room operators were made aware that the detector was removed from service during the troubleshooting, and a subsequent review of the TS operability requirements by the same operators

determined that it was required to be operable, the monitor was declared inoperable, and appropriate compensatory action was taken.

The inspectors determined that 2HVR-RU14A was not initially declared inoperable because of an improper interpretation of the governing TS. Technical Specification 3.3.2 and Table 3.3.2-1 requires that Reactor Building Integrity be established with the Standby Gas Treatment (SBGT) System within one hour, if the minimum operable radiation monitors is not maintained. The operators misinterpreted the minimum operable channels requirement. Since Reactor Building Integrity was not established with the SBGT System within one hour, this is contrary to TS 3.3.2 and Table 3.3.2-1 and is a violation. (50-410/86-56-04) The licensee identified and reported this violation via ENS on November 9.

The safety consequences of not having Reactor Building Integrity maintained via the SBGT System within the one hour time period, for this event, is minor. The potential for any significant radiological release during the loading of new fuel is minuscule. In addition, the three operable Reactor Building Ventilation effluent radiation monitors would still provide adequate monitoring capability in the event of an accident and would still provide SBGT System actuation signals in the event of a monitored high radiation condition.

On November 11, a similar problem occurred with 2HVR-RU14A, and it was declared inoperable and removed from service. The SBGTS was started and normal reactor building ventilation was secured. The licensee made an ENS call reporting this manual actuation of the SBGTS on November 11.

(5) On November 9, two reactor scrams occurred due to high flux trips on Average Power Range Neutron Monitor (APRM) Channel C. The first scram was attributed to a spike on APRM C due to welding in close proximity to Local Power Range Neutron Monitoring (LPRM) cables. Several other upscale trips occurred on APRM C while the channel was bypassed. After the scram was reset, the second scram occurred within ten minutes from the time the channel was unbypassed. Further investigation by I&C technicians identified a faulty circuit card in LPRM 48-33. The card was replaced and no further spiking was observed. The licensee reported these scrams via the ENS on November 9.

Troubleshooting and identification of the probable cause of the initial APRM Channel C spiking appears to have been shallow and not well defined. The continued spiking of Channel C APRM after it was bypassed, with no welding in progress, apparently was not evaluated. The inspectors will continue to follow licensee efforts to improve in this area.

b. Main Steam Isolation Valve Review

The resident inspectors have closely monitored the licensee's progress in resolving the MSIV leakage and actuator problems. Inspector coverage and licensee progress are noted below:

(1) A final 50.55(e) report concerning Main Steam Isolation Valve (MSIV) leakage was submitted to the NRC on October 20, 1986. This report documented the testing conducted to support the conclusion that a redistribution of the seat ring spring forces solves the flaking problem of the tungsten carbide coating. Testing was conducted by Union Carbide and the licensee.

(2) To meet secondary containment integrity requirements for core alterations, the licensee has maintained one MSIV in each steam line in the closed position. Each valve held closed has successfully passed a Type 'C' leak rate test. During the assembly and testing of these four valves, some minor problems were encountered.

-- The first ball was returned to the site on October 15. On the open face of the ball, there was an uncoated area of approximately 0.5 square inches where the tungsten carbide had been ground out. This defect was accepted by Stone and Webster as satisfactory. An on site blue check of the ball seating surfaces indicated unsatisfactory contact. The failed blue check was attributed to temperature differences between the ball and the seats. The engineering resolution was accept-as-is because a satisfactory blue check had been performed prior to shipment from Crosby. The ball was installed in the 6C MSIV body, and leak tested satisfactory.

-- When reassembling inside containment MSIV 6D, the body to bonnet sealing surfaces were damaged. This damage required extensive weld repair to the body and bonnet. To preclude holding up fuel load, the ball was installed in outside containment 7D MSIV body.

(3) At present, the licensee has ten (10) balls in various stages of recoating. Crosby is using a contractor (Ranor) to apply the Haines 25 underlay coating to the balls. The prototype testing program and Y-pattern globe valve contingency plans continue to be pursued.

3. Licensee Action on Previously Identified Items

a. (Open) FOLLOWUP ITEM (50-220/86-18-02): Review of licensee action concerning the scram isolation valve diaphragm failure. The licensee commenced a sample inspection of scram isolation valve pneumatic operator diaphragms this inspection period. The inspector examined seven scram valve diaphragms and noted the following results:

- Two diaphragms exhibited aging similar to that identified as the cause of failure leading to the single rod scram on September 8, 1986.

- Two diaphragms exhibited evidence of wear in the areas of the greatest flex.

- The remaining three diaphragms exhibited no significant aging effects.

The licensee plans to have destructive testing performed on the diaphragms to determine the effects of aging. In addition, the licensee will have an analysis performed by General Electric to determine the effects of aging on operation of the Control Rod Drives. This item remains open.

b. (Closed) CONSTRUCTION DEFICIENCY REPORT (50-410/84-00-48): This deficiency relates to improper separation of Category 1 electrical cables in free air. Certain cable installations, completed prior to August 10, 1984, did not meet the required separation criteria for cables in free air. Licensee Electrical Specification E061A, Electrical Installation, did not identify minimum separation distances for cables in free air. This deficiency was reported by the licensee to the NRC, as required by 10CFR 50.55(e), on October 31, 1984.

The inspector verified licensee corrective action as follows:

- Specification E061A, paragraph 8.2.3, was revised to clarify, in detail, the separation requirements for cables in free air.

- Stone and Webster Field Quality Control Inspection Plan N2OE061AFA025, item 23 was revised to add the above attribute for the separation requirements for cables in free air.

- A one hundred percent reinspection by Field Quality Control was performed of all Category 1 cable installed prior to August 10, 1984. This was documented by licensee internal memorandum dated August 15 and August 22, 1986.

- Random inspection of Category 1 cable in free air was conducted by NRC inspectors to confirm corrective actions provided the required separation.

No violations of the cable separation criteria were observed. This item is closed.

c. (Closed) CONSTRUCTION DEFICIENCY REPORT (50-410/86-00-14): This deficiency related to possible insufficient control voltage present at some 120 VAC and 125 VDC control device terminals such that the device may not operate when considering the minimum design voltages at the distribution system. As documented in NRC Inspection Report

50-410/86-37, the licensee committed to a complete review, prior to criticality, of all work performed under E&DCR Y07804 which relates to the Reactor Core Isolation Cooling system. All rework under E&DCR Y07804 is now complete and has been reviewed by the licensee's QA organization. This item is closed.

d. (Closed) FOLLOWUP ITEM (50-410/86-39-02): During a previous inspection period, the resident inspector observed the frequent use of uncontrolled tags and notes affixed to various control panel gages and switches. The inspector reviewed recently approved Station Superintendent's Standing Order No. 11 and its implementation. Standing Order No. 11 sets forth administrative controls for the use of Operator Aid Tags. No discrepancies were noted. This item is closed.

e. (Closed) FOLLOWUP ITEM (50-410/86-42-01): Updating of Diesel Generator surveillance procedures. The inspector verified that the licensee revised all applicable diesel generator surveillance procedures to comply with Technical Specifications. In addition, the inspector verified that the Cold Functional Test List was updated. This item is closed.

No violations were identified.

4. Plant Inspection Tours

During this reporting period, the inspectors made frequent tours of the Unit 1 and 2 control rooms and accessible plant areas to monitor station activities and to make an independent assessment of equipment status, radiological conditions, safety and adherence to regulatory requirements. The following was observed:

Unit 1

No discrepancies were noted.

Unit 2

During this inspection period, the inspectors observed excessive noise and personnel traffic in the control room. It was not apparent to the inspectors that the licensed operators on shift were taking any action to correct this problem. These observations were also made by Chairman Zech and his staff during their visit on October 29. With the issuance of the operating license and the beginning fuel load, no significant improvement was noted. Subsequently, steps have been taken by the licensee to reduce the noise level and congestion in the Control Room. The Shift Work Coordinator has been moved to a desk outside the Control Room. All construction and start-up related Work Requests and the associated equipment tagouts are processed through this individual. This action reduced much of the unnecessary traffic in the Control Room. In addition, the resident inspectors have observed that the SSS and CSO have exercised their

authority to remove unnecessary personnel from the Control Room or to ask them to move away from the control panels. The inspectors will continue to monitor licensee efforts to improve the control room work atmosphere. Inspector Followup Item (50-410/86-56-05).

No violations were noted.

5. Surveillance Testing Review

The inspectors observed portions of the surveillance test procedures listed below to verify that the test instrumentation was properly calibrated, approved procedures were used, the work was performed by qualified personnel, limiting conditions for operation were met, and the system was correctly restored following the testing.

a. UNIT 1

(1) N1-IMP-44.2, CRD Scram Time Testing, Revision 0, dated January 14, 1986, observed on November 10 ,1986.

(2) N1-RPSP-7, LPRM Calibration, Revision 4, dated April 16, 1985, observed on October 22, 1986.

b. UNIT 2

(1) N2-OSP-CSH-Q002, HPCS Pump and Valve Operability Test and System Integrity Test, revision 0, dated 8/22/86, observed on October 8, 1986.

(2) N2-OSP-RHS-Q006, RHR System Loop C Pump and Valve Operability Test and System Integrity Test, revision 0, dated 8/22/86, observed on October 8, 1986.

(3) On October 27, the inspector observed the performance of N2-OSP-RHS-Q004 on the Residual Heat Removal (RHS) System. The test was conducted to obtain IST baseline data. The operators performing the test observed that the flow meter in the control room was exhibiting some erratic movement. They requested that the operator at the pump have the detector vented to remove any possible air trapped in the sensing lines. The meter was observed to peg high in the Control Room during the venting. The inspector determined that the detector was not equalized prior to being vented and that this was the typical method of venting such detectors. The inspector questioned the operators involved and later the station Instrumentation and Control Supervision to determine if a detector could be damaged when vented in this manner. The licensee is evaluating this venting method and any potential damage done to the detector. INSPECTOR FOLLOWUP ITEM (50-410/86-56-06).

No violations were noted.

6. Maintenance Review

The inspectors observed portions of various safety-related maintenance activities to determine that: limiting conditions for operation were observed; required administrative approvals and tagouts were obtained prior to the start of work; approved procedures were used; appropriate radiological controls were implemented; and that the equipment was properly tested prior to its return to service.

During this inspection period, the following activities were observed:

Unit 1

-- WR 105104, 02-35 CRD Diaphragm replacement.

No violations were noted.

7. Safety System Operability Verification

On a sampling basis, the inspectors directly examined selected safety system trains to verify that the systems were properly aligned in the standby mode. The following systems were examined:

Unit 1

- Emergency Condenser System
- Standby liquid Control System

Unit 2

- Automatic Depressurization System, Nitrogen Supply
- High Pressure Core Spray

No violations were noted.

8. Review of Licensee Event Reports (LERs)

The LERs submitted to NRC, Region I were reviewed to determine whether the details were clearly reported, including accuracy of the description of the cause and adequacy of the corrective action. The inspectors also determined whether the assessment of potential safety consequences had been properly evaluated, whether generic implications were indicated, whether the event warranted on site follow-up and whether the reporting requirements of 10 CFR 50.72, where applicable, and 10 CFR 50.73 had been met.

UNIT 1

During this inspection, the following LERs were reviewed:

LER #	Event Date	Subject
86-25	August 6, 1986	Continuous fire watch not established within 1 hour while fire door D-52 was inoperable
86-28	September 10, 1986	Nonrepresentative Service Water Sample

Each of the LERs listed above state that a Technical Specification was violated. In both cases, the violation was identified and reported by the licensee. Each of the violations of Technical Specifications has minor safety or environmental significance. In the case of service water radiological monitoring, other systems exist which would have detected any radioactivity released to the environment. The inoperable fire door is one of two rated fire doors in an airlock. The other fire door was not affected during the period when door 52 was non-functional. Neither violation could reasonably be expected to have been prevented by previous corrective action since this is a first instance for each of the occurrences.

In the case of the service water sample line, corrective action identified in the LER is adequate.

Corrective action addressed in LER 86-25 does not address measures to prevent recurrence. However, investigation revealed that the licensee plans to incorporate changes to the procedure for breach permits. These changes will insure that when maintenance is performed on any door in the plant, adequate action will be taken to determine whether the door is a fire door and, if so, that compensatory measures will be taken as appropriate.

Although a violation of a Technical Specification was identified in each of the LERs, the criteria set forth in 10CFR Part 2, Appendix C, section V.a. have been met and Notices of Violation are not issued.

9. Allegation Followup

During the inspection period, the inspectors conducted interviews and inspections in response to allegations presented to the NRC. The inspector and licensee actions resulting from these allegations are noted below:

UNIT 2

Allegation RI-86-A-125:

On October 24, 1986, the NRC was contacted by a local television reporter who had received an allegation concerning the Main Steam Isolation Valve leak rate testing. The allegation was presented to the reporter by a NMPC employee. Allegedly, the Type C leak rate tests performed on the two recently installed MSIVs (valves 6C and 6B) had failed, but the test results were changed to reflect that they had passed.

The resident inspectors witnessed the leak rate testing of MSIV 6A and 7D, performed on October 24 and October 28, respectively. The inspectors reviewed the test procedure and equipment setup, verified the test prerequisites, discussed the procedure with various test engineers, technicians, and quality assurance inspectors involved in the test, and verified that the test results were within the acceptance criteria. No deficiencies were observed.

The inspector subsequently reviewed, with the licensee, the completed test packages for all the MSIVs leak tested. The licensee was unable to locate the official data table used for recording the values for the 6A MSIV leak rate test. Unofficial data and QA surveillance reports were available and supported an acceptable completion of the test. The licensee reperformed the leak test on valve 6A on October 30 to ensure that the test package would be complete. The resident inspectors observed the retest of the 6A valve and observed no discrepancies. This allegation was unsubstantiated.

Allegation RI-86-A-129:

During the week of October 6, 1986, the NRC Region V office was notified that an individual taken into custody by the FBI, in Idaho, allegedly worked under an alias at the Unit 2 construction site as a Quality Control Inspector.

The licensee's security organization became aware of this allegation the week of October 20, 1986 and launched a comprehensive investigation of this individual's work activities while at Unit 2. The inspector determined from the licensee's security and Quality Assurance staffs, that the individual worked under an alias while at Unit 2, between February 13, 1984 and April 11, 1985. He was a contractor employee with Butler Services, Inc., working as a quality control inspector of small bore piping welds and pipe supports. The licensee also determined that this individual left the site without a Quality First Program (Q1P) exit interview. The licensee suspects that his departure from the construction site on April 11, 1985, coincided with the implementation of their employee background investigation verification program.

Licensee security representatives conducted an interview with the individual in Idaho and determined that there were no significant concerns the individual had with the construction of Unit 2. The licensee also interviewed this individual's supervisors and peers at Unit 2 and determined that he was considered knowledgeable in his discipline and an adequate quality control inspector. With reason to suspect his credentials as a QC inspector, the licensee took a representative sample of the surveillance reports he generated and reverified his work, by field inspection (where practicable). The licensee noted no discrepancies.

In conjunction with Allegation RI-86-A-101, this allegation remains open pending review of the licensee's employee background investigation verification program.

10. Three Mile Island Action Plan Items

As a result of the Three Mile Island (TMI) plant accident, generic reactor enhancements were developed by the NRC. NUREG-0737 documents the specific action requirements. The following TMI Action Plan Item was reviewed during this inspection period:

UNIT 2

(Closed) TMI ITEM II.E.4.2, CONTAINMENT ISOLATION DEPENDABILITY (50-410/86-29-03): Surveillance procedure, N2-RSP-RMS-R103, which operationally checks the isolation function of the containment purge system on a high radiation effluent from the Standby Gas Treatment System, was completed on October 15. This procedure was reviewed by the resident inspector and the results of the test were found to be acceptable. The satisfactory completion of the above test, in conjunction with the previous review of procedures documented in NRC Inspection Report 50-410/86-42, verifies licensee compliance with the FSAR requirements. This TMI ITEM is closed.

11. Physical Security Review

The inspector made observations to verify that selected aspects of the station physical security program were in accordance with regulatory requirements, physical security plan and approved procedures.

a. Unit 1

On November 2, 1986, the inspector identified a potential for hand-carried items to be brought into the protected area without either being subjected to search or passed through search equipment.

The inspector brought this situation to the attention of the security personnel on duty and interim corrective action was promptly initiated. However, this condition was identified in two previous reporting periods (reference NRC Inspection Reports 50-220/85-15 and 50-220/86-42). The inspector discussed with the licensee the failure

of previous corrective actions to prevent recurrence. The inspector determined that the corrective action, in this instance, was considered short-term by the licensee. A long term solution is pending. The inspector will review the licensee's long-term corrective action in a subsequent report. INSPECTOR FOLLOWUP ITEM (50-220/86-21-01).

b. Unit 2

Breach of Vital Area Barrier

On November 3, 1986, at 8:10 p.m., an access plug was removed from the ceiling of a vital area. The access plug was removed, in accordance with the existing Breach Permit procedures, to facilitate equipment maintenance. At the time this vital area breach occurred, security was not informed. Although periodic security patrols were conducted through this area, the breach was not recognized until November 5 by security force personnel. Even then, the security guards who identified the breach did not immediately notify their supervision. Security supervision was made aware of the vital area breach on November 6, 1986 and immediately posted a security guard at the breach until the plug was replaced. The licensee promptly notified the resident inspectors of this event and notified the NRC Headquarters duty officer via the ENS at 7:00 PM, November 6, 1986.

The inspectors determined that the licensee has taken prompt and thorough corrective action to prevent recurrence. A Breach Permit change request has been expedited, which will include routine security notification and evaluation of all future Breach Permits. In the interim, verbal notification of security of all pending Breach Permits will be made at the Plan-of-the-Day meetings. All security personnel were retrained and increased awareness of vital area integrity verifications was stressed. Also, increased involvement and communications between guard force and security supervision, including formal training to improve supervisory skills, communication and security philosophy, will be implemented.

In that, this security plan violation was of minor safety significance, was identified by the licensee and promptly reported, was not indicative of a negative trend and was swiftly addressed by appropriate corrective action to prevent recurrence, a Notice of Violation is not issued.

12. Core Alteration

On November 13, 1986, the resident inspectors met with licensee representatives to discuss the definition of CORE ALTERATION, as stated in Unit 2 Technical Specifications (TS). It was the licensee's position, although not specifically stated in the written definition, that normal movement of control rod drives (CRD) by their respective hydraulic control units was not considered a CORE ALTERATION. The licensee's position was based on a

Unit 1 Technical Specification CORE ALTERATION definition and the Unit 2 core load Safety Analysis which ensures that the core will remain subcritical even with the highest worth rod fully withdrawn. Further, with the reactor mode switch in the refuel position, the one rod out interlock would be imposed and ensure that only one rod is withdrawn at a time.

The licensee's position is not considered conservative. Although the Unit 1 TS definition for CORE ALTERATION does specifically exclude normal control rod drive motion, Reactor Building Integrity (secondary containment) requirements ensure that building integrity is maintained during the REFUELING condition. REFUELING is defined by the position of the Reactor Mode Switch (REFUEL) and reactor water temperature (§212F).

The Unit 2 CORE ALTERATION definition applies to the movement of fuel and/or any changes to reactivity while the reactor vessel head is removed, including normal control rod drive movement. Unit 2 TS also state that Secondary Containment Integrity is required any time CORE ALTERATIONS are in progress.

This position is consistent for both Unit's Technical Specification Secondary Containment Integrity requirements. The CORE ALTERATION definition and Secondary Containment Integrity TS, taken collectively, provide the same level of safety.

13. Site Visits

On October 23, Commissioner James Asselstine, and on October 28, Chairman Lando Zech and members of his staff, toured the Unit 1 and Unit 2 facilities. Both the Commissioner and the Chairman, were briefed by licensee management on the readiness of Unit 2 for fuel load. Short news conferences were held with the local press at the conclusion of each visit.

14. Annual Emergency Preparedness Exercises

On October 29, 1986, the licensee conducted their Annual Emergency Exercise to demonstrate the adequacy of their Emergency Preparedness Plan and their ability to properly implement it. This was the first evaluated exercise from the Unit 2 facility and involved local, county and state participation, as well as, observation by a Region I inspection team. The inspection team observations and findings are documented in combined NRC Inspection Report 50-220/86-22 and 50-410/86-58.

15. Recirculation Pump Trip (RPT) to Mitigate the Consequence of an Anticipated Transient Without Scram (ATWS) - UNIT 2

a. Design

The RPT function during an ATWS is accomplished by a special design feature. Upon receipt of a high reactor pressure signal, the power

to the recirculation pump motor transfers from a 60 hertz 13.8 KV source to a 15 hertz (motor generator) 4160V source. A confirmed low-low water level signal trips the 4160V MG set drive motor. The licensee uses a non-safety grade 4160V General Electric Company Magne-Blast breaker for the RPT function. The facility uses a two-out-of-two logic for both the transfer function and trip function actuation. The setpoints for these trips are specified in the facility Technical Specifications (TS). The requirements for channel checks, functional tests and calibrations are also specified in TS. Except for the trip breaker, the RPT system is designed to safety grade standards. Uninterruptable power is provided to the instruments, logic and trip units. Safety portions of the systems are separated from non- safety portions using fuses. Redundant electrical and mechanical systems and components are physically separated.

Inadvertent actuation of the RPT is minimized using two-out-of-two logic requirements. Set points for actuations will normally be reached only after reaching the scram setpoints. The instrumentation and logic for RPT may be tested at power. The breaker testing is only allowed during a shutdown.

b. Preventive Maintenance and Surveillance Testing

The licensee has established formal procedures to meet the TS requirements for channel checks, functional test and calibration. The licensee has also developed a formal preventive maintenance (PM) program for the 4160V RPT breakers. These breakers will undergo PM once every cycle. Corrective maintenance will be implemented through the use of work requests.

c. RPT Reliability

The non-safety grade breakers used for RPT functions (4160V and 13.8 KV breakers) have reliable low failure rates. The licensee's preventive maintenance program, when implemented properly, would enable the licensee to minimize failures. The instruments that provide actuation signals also receive surveillance under an established program. The licensee believes that these measures would provide a reasonably reliable RPT function.

d. Use of General Electric Company AKF-2-25 Breakers

The licensee uses AKF-2-25 breakers for the main generator and main generator field applications, only.

No violations were noted.

16. Exit Meetings

At periodic intervals and at the conclusion of the inspection, meetings were held with senior station management to discuss the scope and findings of this inspection. Based on the NRC Region I review of this report and discussions held with licensee representatives, it was determined that this report does not contain Safeguards or 10 CFR 2.790 information.