

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 87-10/87-20
Docket No. 50-220/50-410
License No. DPR-63/NPF-54 (NPF-69; as of 7/2/87) Category B
Licensee: Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212
Facility: Nine Mile Point, Units 1 and 2
Location: Scriba, New York
Dates: June 8, 1987 to July 19, 1987
Inspectors: W.A. Cook, Senior Resident Inspector
C.S. Marschall, Resident Inspector
W.L. Schmidt, Resident Inspector
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Approved by:

Jon E. Johnson
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Projects Section 2C, DRP

9/16/87
Date

Inspection Summary

Areas Inspected: Routine inspection by resident and region based inspectors of station activities (including Unit 1 power operations and Unit 2 power ascension testing), licensee action on previously identified items, plant tours, surveillance testing, safety system walkdowns, physical security review, radiological protection review, LER review, IE Bulletin review, and Part 21 review. This inspection involved 470 hours by the inspectors which included 90 hours of backshift and 31 hours of weekend inspection coverage. Backshift inspections were conducted on 6/21-27, 6/29-7/3, 7/5-10, and 7/12-19. Weekend inspections were conducted on 6/21, 6/27, 6/28, 7/5, 7/12, and 7/19.

Results: A Notice of Violation is issued concerning a Technical Specification violation of the fire protection program at Unit 2 (see section 1.2.f.). An UNRESOLVED item concerning Unit 2 licensee corrective actions for foreign material exclusion controls is discussed in section 1.2.h. Another Unit 2 UNRESOLVED item is discussed in section 1.2.k concerning inspector review of corrective actions following the licensee's discovery of a lifted lead during a HPCS surveillance test. An UNRESOLVED ITEM concerning Unit 1 breaker troubleshooting is discussed in section 10.

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DETAILS

1. Review of Plant Events

1.1 UNIT 1

- a. The plant operated at or near full power throughout the period. On June 18, 1987, an auto-initiation of Control Room Emergency Ventilation (CREV) occurred due to a spike on one channel of the control room radiation monitors. Although the licensee reported the initiation under 10 CFR 50.72, the Emergency Notification System (ENS) call was considered voluntary and the event was not considered reportable under 10 CFR 50.73. Section VII of the FSAR, Engineered Safeguards, refers to question 16, page III-34 of the First Supplement to the Preliminary Hazards Summary Report for a complete listing of systems which might be considered an Engineered Safeguard. Control room ventilation is included in the answer to question 16, as a system which functions throughout the course of the maximum credible accident, loss-of-coolant accident, and the refueling accident. The CREV system is not explicitly stated to be an Engineered Safeguard. Based on this section of the FSAR, the licensee committed to review the reportability of CREV auto-initiations.

On July 9, 1987, the licensee issued a memorandum stating the policy on reportability of Control Room Emergency Ventilation actuations. The licensee found that without the operation of CREV the control room meets the requirements 10 CFR 50 Appendix A, General Design Criterion 19. That is, the plant can be safely operated from the control room under normal conditions and can be maintained in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection is provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident. Therefore, the licensee does not consider auto-initiations of Control Room Emergency Ventilation reportable under 10 CFR 50.72 or 10 CFR 50.73, and does not intend to make reports of initiations in the future. The inspectors had no further questions.

- b. On June 19, 1987, unit power was reduced when cooling fans on the main transformer suffered a power loss. On June 22, 1987, Unit 1 set a new world record for continuous operation of a General Electric BWR2. On June 24, 1987, the No. 14 Reactor Recirculation Pump (RRP) tripped, resulting in a Technical Specification limit of 90% thermal power for three RRP's operation. Power operations at less than 90% continued through the end of the reporting period. In addition, elevated lake water temperatures resulted in occasional power reductions in order to maintain condenser vacuum greater than 26 inches of Hg.



1.2 UNIT 2

- a. During this inspection period, Power Ascension Program, Test Condition Heatup (TC-HU) was completed on July 17, 1987. This test condition included initial criticality and low power testing below five percent rated power. The unit full power operating license was issued to the licensee on July 2, following a Commission briefing held on July 1, 1987.
- b. On June 12, while operating at approximately three percent power in Mode 2 (STARTUP), a reactor scram occurred on HIGH Intermediate Range Neutron Monitor (IRM) power. The cause of the HIGH IRM power was a cold water injection resulting from the failure of the operating feedwater control valve. The feedwater control valve failed full open when the valve position feedback linkage to the Bailey position vibrated loose. The inspector determined that all systems responded as designed, operator actions were appropriate, and corrective actions were satisfactory. This event is documented in Licensee Event Report (LER) No. 87-31.
- c. On June 12 and 14, Reactor Water Cleanup (RWCU) system flow perturbations caused automatic isolations of this system. The cause of the June 12 event is still under review; however, the cause of the June 14 event was determined to be operator error. The inspector verified that corrective actions to prevent recurrence, to date, were appropriate. These events are documented in LERs No. 87-32 and 87-42, respectively. The supplemental report to LER 87-32 will be reviewed by the inspectors in a subsequent report period.
- d. On June 15, while in Mode 2, a Division II Alternate Rod Insertion (ARI) initiation was received during the performance of a Redundant Reactivity Control System (RRCS) surveillance test. Following the ARI, a Reactor Protection System scram on HIGH discharge volume occurred, as designed. While a Channel B HIGH reactor pressure trip signal was inserted per the surveillance test, a spurious Channel A LOW LOW reactor water level signal occurred, causing the ARI. The cause of the LOW LOW water level signal could not be determined; however, the licensee continues to monitor the RRCS power supplies and output for a possible cause. The inspectors reviewed and discussed with the licensee actions taken to attempt to identify the cause of the spurious trip signal. Licensee actions appear to be adequate. This event is documented in LER No. 87-33.
- e. On June 17 and 27, several recirculation pump trips occurred as result of troubleshooting the RRCS to identify the cause of the spurious ARI on June 15. The causes of the recirculation pump trips were attributed to cycling power to the RRCS and a failed optical isolator to one of the recirc pump trip logics. The inspectors reviewed licensee response to these events and determined it to be adequate. These events are documented in voluntary LER No. 87-34.



- f. On June 18, while the reactor was in Cold Shutdown, a fire watch was inappropriately terminated while the detection systems in two fire zones were inoperable. The fire detection zones, Reactor Building Elevation 261, Zones 242NW and 243SW, were disconnected at 11:20 a.m. because a vehicle was being brought into the Track Bay. A firewatch was appropriately set at that time. At 11:35 a.m., the fireman assigned was relieved to assist in a medical emergency. At 11:50 a.m. the vehicle was parked in the Track Bay and the replacement fireman left the assigned fire watch area without restoring the fire detection zones to service. At 1:45 p.m., while investigating a trouble alarm, another fireman discovered that Fire Zones 242NW and 243SW were disconnected and took action to restore them to service.

Facility Operating License No. NPF-54, Technical Specifications 3.3.7.8.b and 3.7.7.2.a require that with fire detection system 243SW and fire suppression system 242NW, respectively, inoperable, a fire watch patrol shall be established and the effected zones patrolled at least once per hour. Between the hours of 11:50 a.m. and 1:45 p.m. on June 18, 1987, the licensee failed to patrol the above stated zones while the detection and suppression systems were out of service. This is a violation. VIOLATION (50-410/87-20-01)

The inspectors discussed a particular concern with station management that this was the third related event in recent months at Unit 2, (reference LER No. 87-35, 87-15, and 86-06). The inspectors concluded that the apparent problems involve poor communications within the fire protection organization and insufficient fire protection supervision oversight. The inspectors also noted that specific equipment related Fire Protection Program Technical Specifications have been removed from the recently issued Unit 2 Full Power Operating License and Technical Specifications. The inspectors emphasized the need for close management attention to the fire protection program to ensure that the program is properly implemented.

- g. On June 24, the licensee identified a design deficiency in a portion of the instrumentation for the Steam Tunnel Leak Detection System. The design problem involved the improper installation of two steam tunnel temperature elements which feed the steam tunnel differential temperature instrumentation. The improper placement of these two sensors resulted in a non-conservative differential temperature output, (downscale vice an expected differential). The licensee determined that this configuration resulted in the inoperability of the Division II Steam Tunnel Delta Temperature Containment Isolation System and appropriately placed that portion of the system in a tripped condition, in accordance with Technical Specifications. The licensee relocated the sensors prior to the conclusion of the inspection period and returned them to service. The inspectors reviewed licensee actions and determined them to be appropriate. This event is documented in LER No. 87-37.



- h. On June 26, the licensee discovered that one of two channels of the Reactor Core Isolation Cooling (RCIC) and one of two channels of High Pressure Core Spray (HPCS) condensate storage tank (CST)-to-suppression pool suction transfer transmitters were found to have their low pressure side (atmospheric) vent line plugged. The transmitters are located on the CST suction line to the RCIC and HPCS pumps and monitor CST water level. When CST level reaches a minimum water level, the transmitters generate a signal to swap the HPCS and RCIC pump suction over to the suppression pool. The licensed operators on shift when this discovery was made immediately declared the transmitters inoperable and took action to remove the vent plugs. The RCIC system was already inoperable at the time and the operators recognized the potential for the other transmitter making the HPCS system inoperable.

After a preliminary review, the licensee made a 10 CFR 50.72 report to the NRC via the Emergency Notification System identifying that the RCIC and HPCS systems were in a degraded condition for an indeterminate period of time.

Subsequent investigation by the licensee, and at the prompting of the resident inspectors, the licensee conducted laboratory testing of the same type Rosemount Model 1153 series transmitter to determine the effects of the low pressure vent plugs being installed. The licensee demonstrated that transmitter output was more conservative with the vent plugs installed than with the plugs removed. Subsequently, the licensee concluded that during the time period the transmitters had the vent plugs installed, the transmitters were fully operable and did not degrade the operability of the RCIC and HPCS systems.

The inspectors determined that licensee personnel were aware of the vent plugs being installed for cleanliness purposes during the construction phase. However, those individuals assumed that the installation of the plugs was being tracked and that the plugs would be removed prior to the transmitters being placed in service. In addition, the inspector determined that during the last calibration of the transmitters, in February 1987, the technician performing the calibration removed the vent plugs, completed the calibration procedure and then reinstalled the plugs, restoring the transmitters to the "as found" condition.

Corrective actions for this event, including appropriate licensee control of foreign material exclusion methods and technician training, were discussed with the licensee, but not finalized at the conclusion of the inspection period. A related material internal cleanliness problem, involving a Reactor Water Cleanup System transmitter sensing line plugged with tape, occurred on June 19, 1987. Pending review of the licensee's final corrective actions, this item is unresolved. UNRESOLVED (50-410/87-20-02)



- i. On July 2, 1987, the licensee determined that the Division II RWCU system suction flow transmitter had failed. The licensee declared the RWCU system containment isolation function inoperable and commenced a normal shutdown of the reactor. The licensee speculates that the high turbulence in the suction line causes transmitter overranging and eventual fatigue failure of the transmitter diaphragms. The inspectors observed the unit shutdown and noted no discrepancies. Licensee actions to correct the transmitter problems will be reviewed in a subsequent report.
- j. On July 3, the licensee determined that some of the assumptions used in the calculation of the Standby Gas Treatment (SBGT) system secondary containment drawdown time were not consistent with the current plant conditions and may result in drawdown times in excess of those reviewed and approved in the unit Safety Evaluation Report. As a result, the licensee imposed administrative limits on plant operations to ensure SBGT system operability. Subsequently, on July 13, the licensee identified a potentially more limiting accident scenario and revised the self-imposed administrative operating limits. Specifically, the licensee has limited reactor building ambient temperature to greater than or equal to 85 degrees F and the differential temperature between the reactor building and service water supply to greater than or equal to 15 degrees F. To maintain the minimum reactor building ambient temperature 85 F and the 15 degree differential temperature, the licensee has placed all of the safety-related reactor building unit cooler/heaters in operation. In addition, modifications were planned to provide continuous monitoring of differential temperature and an automatic start of all reactor building safety-related unit coolers on a Loss of Coolant Accident (LOCA) signal.

The licensee identified this problem while reviewing engineering calculation assumptions to support a Technical Specification change to increase maximum allowable service water temperature. The licensee planned to submit the change request subsequent to the end of this inspection period. The inspectors will review licensee action in this area in subsequent inspection periods.

- k. On July 2, the licensee identified, during the performance of a surveillance test of the High Pressure Core Spray (HPCS) system, that a lead to the HPCS reactor water high level seal-in reset relay (E22-K13) was lifted. The lead had apparently been lifted since the performance of the last surveillance test. The inspector determined that with this relay lead lifted the HPCS system would not have been prevented from performing its intended safety function. At the end of this inspection period, the licensee had not concluded their investigation of this event. Pending review of the licensee's investigation and corrective actions, this item is unresolved. UNRESOLVED (50-410/87-20-03)



1. On July 11, at 11:41 a.m., a reactor scram occurred as a result of the rupture of a line supplying Electro Hydraulic Control (EHC) oil to the No. 4 turbine control valve. The EHC oil pressure dropped rapidly due to the line rupture and caused the turbine bypass valve, controlling reactor pressure, to close. Reactor steam dome pressure increased and the Reactor Protection System actuated to scram the reactor.

The licensee attributes the EHC line break to vibration induced fatigue failure. The EHC line was repaired and the licensee installed additional hydraulic line supports to eliminate the vibrations. Subsequent EHC supply line vibration monitoring indicated that the additional bracing and supports were successful in eliminating the piping vibrations.

The inspector reviewed the licensee's completed Post-Trip Review package, RAP-6, for this event and discussed the data collected and the licensee's conclusions with licensee representatives. The inspector noted that there was no written explanation in the Post-Trip package for the Division 2 reactor steam dome pressure transmitter not tripping. The licensee concluded that due to the relatively slow pressure increase, the trip setpoint for the Division 2 pressure transmitter was not reached because all rods were inserted and pressure turned before getting that high. The licensee verified the pressure transmitter setpoints were within tolerance. The inspector found the licensee's conclusion acceptable.

- m. On July 11, at 8:36 p.m., with the reactor in hot shutdown, the licensee determined that they were not performing a Technical Specification requirement to monitor and record service water temperature every two hours while service water supply header discharge temperature was greater than or equal to 74 degrees F. Service Water temperatures had reached 74F at 4:00 a.m. on July 10, and operators had not increased their surveillance monitoring to two hour intervals. A four hour surveillance monitoring interval was already in effect because service water temperatures had exceeded 70F earlier. However, licensed operators failed to recognize the Technical Specification requirement to increase the monitoring frequency and the Shift Checklist, used by the operators, did not highlight increased monitoring frequency either.

The licensee determined that they were in violation of Technical Specification 4.7.1.1.1.a.(3) for a period of approximately 28 hours and had missed seven surveillances. Monitoring service water supply header discharge temperatures is one means of demonstrating service water system operability.



A Notice of Violation is not being written for this Technical Specification surveillance violation, in that: the violation was identified by the licensee and promptly reported to the NRC; the violation is of minor safety significance; licensee corrective actions including revisions to applicable surveillance procedures and training of licensed operators were appropriate; and there have been no previous Technical Specification surveillance violations for which licensee corrective actions could have reasonably been expected to have prevented recurrence. The inspector had no further questions. The event is documented in LER No. 87-41. NO VIOLATION ISSUED Item No. 50-410/87-20-05. This item has been assigned a number for tracking purposes only. No further licensee or inspector action is required.

- n. On July 17, the licensee declared Intermediate Range Neutron Monitor (IRM) Channels A, D and H inoperable after they determined that the three IRMs contained replacement parts which were not appropriately qualified. The inspectors verified that the Technical Specification action statements were followed and that the licensee notified the headquarters duty officer via the Emergency Notification System (ENS) of the event.

The inspector determined that the licensee had initially identified a potential problem with IRM Channel A on July 8. During troubleshooting of Channel A, a quality control inspector observed that an unqualified replacement circuit card was installed in the IRM. A Quality Control Inspection Report was generated by the inspector for identification and resolution of the deficiency. On July 17, the licensee concluded that the replacement card was not an appropriately qualified circuit card for use in the IRMs. The licensee also determined that two other IRM channels had circuit cards which were suspect and declared both those channels inoperable. The licensee replaced the circuit cards in IRM channels A and D with properly qualified cards and later on July 17, the licensee produced certification from the General Electric Company that the replacement cards originally installed were adequately qualified for use.

The inspectors discussed this event with site Quality Assurance personnel and a site supply/warehouse representative. The inspectors concluded that the event was adequately resolved by the licensee and that the licensee's warehouse personnel have appropriate control over IRM spare parts inventory. The inspector's determined that the apparent cause of the circuit card qualification problem was a lack of knowledge, of the persons involved, with the GE component qualification certification documents. Licensee evaluation of this event will be reviewed by the inspectors in a subsequent report.



- 1.3 The inspectors verified that the licensee made the appropriate notifications to the NRC Headquarters duty officer via the Emergency Notification System for the events discussed above.

2. Followup on Previous Identified Items

2.1 Unit 1

- a. (Closed) Followup Items (220/82-01-05, 82-10-01, 82-10-02, 82-10-04, 83-16-03, and 84-25-02). Modification control process. These Inspector Followup Items all concerned problems within the modification control process. NMPC revised the modification control process subsequent to these inspections, and the revised modification control was reviewed by a team inspection (50-220/86-07) in June 1986 covering the modifications in progress during the refueling outage. The inspection concluded that the modification control process was acceptable. Accordingly, based on the team inspection review and the extended time since identification of the Inspector Followup Items, these items are closed.
- b. (Closed) Followup Item (220/83-10-01). Sequence of Events Log. Following a reactor scram on June 2, 1983, the inspector noted that some information associated with the computer generated Sequence of Events Log appeared to be missing. Subsequently, this area received detailed review based on Generic Letter 83-28 and NRC guidance on Post-trip Reviews. Further, the inspectors have reviewed the Sequence of Events Log for the incident which occurred on June 2, 1983, and discovered that the information thought to have been missing from the Sequence of Events Log was not missing, as originally believed. Based on this review, this item is closed.
- c. (Closed) Violation (220/83-16-01). Inadequate design analysis process exhibited on Containment Spray (CS) air operators. The control of design analyses was revised by NMPC subsequent to the violation. This area was reviewed in detail by team inspection (50-220/86-07) and was found to be acceptable. Based on the team inspection findings, this item is closed.
- d. (Closed) Unresolved Item (220/83-16-02). Seismic analysis of air operators on Core Spray (CS) test valves. Air operators had been installed on CS test valves without a seismic analysis, and this item was opened to determine whether the installed design was acceptable. The inspector reviewed corrective action records, which documented that the air operators had been removed on July 12, 1983, the seismic analysis had been completed on August 15, 1983, and the operators had been reinstalled on February 8, 1984. The inspector reviewed the seismic analysis report and found it to be acceptable. Further, this problem was documented by NMPC and reviewed by NRC under LER 83-20. This item is closed.



- e. (Closed) Violation (220/83-16-04). No independent design review of Emergency Condenser vents. The inspector reviewed corrective action documentation NMP-10538, which verified the independent design review had been performed on the Emergency Condenser vents 05-05 and 05-07. The general aspects of independent design reviews were inspected by NRC team inspection (50-220/86-07) and found to be acceptable. This item is closed.
- f. (Closed) Followup Item (220/83-16-05). Procedure change to confirm proper Containment Spray System operation. An inspector noted that if a surveillance test of the Containment Spray System was in progress, the operating procedure did not specify that upon actuation of Containment Spray the test return valve should be verified to be closed. The inspector reviewed operating procedure N1-OP-14, Containment Spray System, and confirmed that the procedure had been changed to specify this action in the alarm response section for system actuation. This item is closed.
- g. (Closed) Unresolved Item (220/83-16-06). Seismic analysis of reactor recirculation loop sample line. A conservative seismic analysis of a proposed modification to a sample line had concluded that an overstressed condition existed. However, a preliminary analysis of the actual configuration had shown acceptable stresses. The inspector reviewed documentation that the final seismic analysis found the highest stress to be 28,379 psi, well within the allowable stress of 41,250 psi. This item is closed.
- h. (Open) Followup Item (220/83-18-03). Tie-in of inadequate core cooling instrumentation into the process computer. The wide range reactor vessel level indication system was inspected and was acceptable, but the tie-in to the process computer remained to be completed. In discussions with I&C personnel, the inspector confirmed that the tie-in had been completed. However, the inspector reviewed surveillance procedure N1-ISP-M-36-ICC, Inadequate Core Cooling - Reactor Core Level Indication, and found that the process computer points were not checked as part of the routine instrument calibrations. The Unit 1 I&C Supervisor agreed that this should be done. This item remains open pending a change to the above procedure to periodically check the computer points.
- i. (Closed) Violation (220/83-24-03). Loss of primary containment integrity due to flexible hose connected to torus. Following a calibration on a torus level instrument, a test connection and a flexible hose connected to it were not returned to service properly; thus, primary containment integrity was lost. The NRC resident inspector had found the problem four months after the calibration. The inspector confirmed that the calibration procedure, N1-ISP-SA-201.2-TL, Torus Water Level Instrumentation, contained proper instructions for returning the instrumentation to service and for verifying this. The inspector also reviewed procedure N1-ISP-C-21, Pre-Startup Valve Lineup Check, which had been instituted to verify



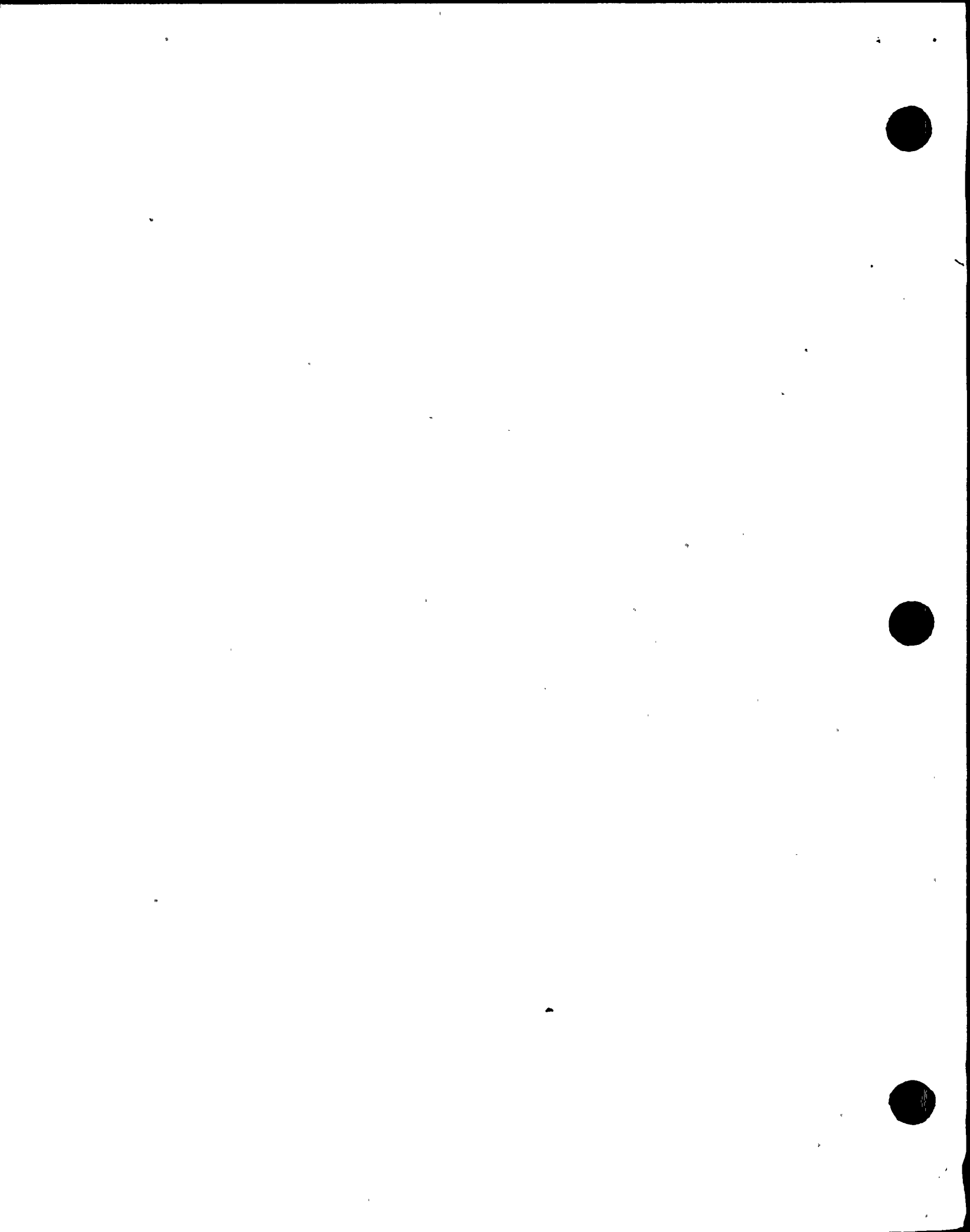
the correct position of instrument valves prior to reactor startup, and found that it covered the applicable test connections. Based on the above corrective actions and the absence of any repeat problems during the past four years, this item is closed.

- j. (Closed) Unresolved Item (220/83-28-02). Channel test of MSIVs. There was a disagreement between NRC and NMPC concerning the channel test of the scram function for MSIV position and whether the limit switches should be tested as part of the channel test. TS Amendment 61, issued May 8, 1984, resolved this issue by revising the requirements for the channel test of the MSIVs. This item is closed.
- k. (Open) Followup Item (220/83-28-03). QA verification of Technical Specification change implementation. The inspector found no evidence of QA surveillance check lists which include reviews to verify that Technical Specification changes are fully implemented, as stated in Inspection Report 50-220/83-28. This item remains open pending resolution of this issue with the licensee.
- l. (Closed) Violation (220/83-29-01). Failure to perform Technical Specification (TS) valve closure time testing. The Emergency Condenser condensate return valves (39-05 and 39-06) were not being tested for closure times. The inspector reviewed the completed procedure N1-ST-R8, Reactor Coolant and Primary Containment Isolation Valve Timing, which documented the successful closure testing of these valves on June 6, 1986. Further, to ensure no other TS surveillance requirements had been overlooked, NMPC had conducted a thorough review of all TS surveillance requirements and the corresponding surveillance procedures. The inspector reviewed the report, Technical Specification and Surveillance Procedure Review and Evaluation, dated June 15, 1984, performed by Pickard, Lowe, and Garrick, Inc.. This item is closed.
- m. (Closed) Violation (220/84-09-01). Inadequate coverage of TS required audit. The Safety Review and Audit Board (SRAB) audit to comply with TS 6.5.3.8.c, a biannual audit of "the results of actions taken to correct deficiencies", had been inadequate in that it covered only previous SRAB audits findings. The inspector reviewed two SRAB Deficiency Audits, dated June 19, 1986 and May 27, 1987, which included coverage of corrective actions associated with Quality Assurance (QA) audits, QA Corrective Action Requests (CARs), Quality First Program concerns, NRC Inspection Reports, Nonconformance Reports, LERs, Problem Reports, and Occurrence Reports. Based on the expanded audit coverage, this item is closed.
- n. (Closed) Unresolved Item (220/84-11-02). Test pressure for relief valve testing. The inspector had noted that Technical Specification (TS) 4.1.5 required relief valve testing at "low pressure", but the testing was routinely performed at 950 psig. During subsequent



discussions between Region I, NRR, and NMPC it was agreed that the 950 psig testing was acceptable, but the TS wording should be revised. TS Amendment 86 revised TS 4.1.5 to remove this inconsistency. This item is closed.

- o. (Closed) Followup Item (220/84-19-02). Corrective action to Surveillance Reports. A Surveillance Report had been identified in which no corrective action had been taken in 9 months, and NMPC had agreed to specify that findings be resolved within 15 days and described in the Surveillance Report or that a Corrective Action Request be issued. The inspector reviewed Quality Assurance Procedure (QAP) 10.03, Quality Assurance Department Surveillance Activity, which specified the above. This item is closed.
- p. (Closed) Followup Item (220/85-04-01). Precautions in surveillance test procedure. On March 4, 1985 a reactor scram occurred due to a technician's error in valving in an instrument manifold. NMPC committed to add a precaution to the surveillance test procedure to warn the technician of the potential problem and its consequences. The inspector reviewed procedure N1-ICP-C-ATWS, Anticipated Transient Without Scram, Instrument Channel Test/Calibration, and found that step 5.5 contained the proper precaution. This item is closed.
- q. (Closed) Followup Item (220/85-07-02). Oil in air start compressor for diesel generator. The inspector had identified that the air start compressor had not been changed in over ten years. NMPC changed the oil following the inspection in January 1986 and revised the preventive maintenance procedure for the diesel generator such that the compressor's oil will be changed each refueling outage as part of the diesel preventive maintenance. The inspector reviewed procedure N1-MPM-C6, Emergency Diesel Generator Engine Inspection, which specified that the air start compressor oil be changed. This item is closed.
- r. (Closed) Followup Item (220/85-09-01). Missed surveillance tests due to improper implementation of TS Amendments. LER 85-09 reported two missed surveillance tests, which had been revised or incorporated via TS Amendments, but the implementation of the Amendments had been improper. To correct this problem NMPC now reviews each TS Amendment in a SORC meeting convened following receipt of the Amendment. The inspector reviewed Office Instruction (OI)-18, Instructions for SORC Records, which specifies the above process. Based on this and the lack of any additional such missed surveillance tests, this item is closed.
- s. (Closed) Violation (220/85-09-02). Loss of primary containment integrity due to tubing connected to control rod drive (CRD) vent valves. The inspector reviewed the NMPC response in letter NMP-13445 dated August 20, 1985, which committed to revise the valve



lineup in the CRD operating procedure and to modify the administrative procedure for temporary procedures so that equipment lay up changes would be controlled via a temporary procedure. The inspector reviewed procedure N1-OP-5, Control Rod Drive System, which addressed removal of the tubing and capping of the vent valves in the valve lineup section and the recovery from venting section. Also, the inspector verified that Administrative Procedure (AP) 2.0, Production and Control of Procedures required that long term lay up of equipment be accomplished via a temporary procedure for control of the lay up removal. This item is closed.

- t. (Closed) Followup Item (220/85-13-09). Oil spilled under RBCLC pumps. An inspector had noted spilled lubrication oil under the three Reactor Building Closed Loop Cooling (RBCLC) System pumps. The inspector observed the cleanliness condition of the three RBCLC pumps and found it to be acceptable. This item is closed.
- u. (Closed) Inspector Followup Item (50-220/86-17-06): Review of Final Report of Investigation of I&C Technician Allegations. Inspection Report 50-220/86-17 documented a team inspection which followed up on numerous allegations by an I&C technician at Unit 1. The Inspection Report included a review of the summary report of the investigation of the allegations by the NMPC Security Department. Inspector Followup Item 50-220/86-17-06 was opened for NRC review of the final report upon its completion.

The final report is entitled Supplemental Report to "Confidential Investigation (technician's name) Nine Mile Point Unit #1". The final report and the supporting information were brought to Region I by Fred McCarthy, NMPC Security Investigator on June 11, 1987 for review by Glenn Meyer, Project Engineer, Region I and Richard Matakas, Senior Investigator, Office of Investigations, Philadelphia Field Office. The final report, complete with all names, was reviewed. On June 17, 1987, two copies of the final report were submitted to Region I with all names deleted. Based on the June 11 review and subsequent review of the copies with names deleted, the inspector found no additional information which raised new concerns or altered the issues or safety perspectives of the information documented at the time of the team inspection. The inspector concluded that the findings and conclusions of the team inspection remained correct. Based on this review, this item is closed.

3. Plant Inspection Tours

During this reporting period, the inspectors made 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 were observed:



3.1 Unit 1

The Unit 1 control room continues to be a quiet, controlled, business-like environment. On one occasion, an operator was noted wearing attire inappropriate to his activities for personnel safety reasons. Although noticed by Unit 1 management, no action was taken until addressed with management by the inspectors.

The paint-out of the floors in the Reactor Building continued during this reporting period. The freshly painted floors contribute to a neat, well-kept appearance in the Reactor Building.

3.2 Unit 2

The inspectors continue to closely monitor conduct of operations in the control room. The inspector observed that there has been some improvement in the control of access to and traffic through the control room. The licensee has moved the tagout desk and operator in charge of tagouts to a location just inside the control room south access door. This arrangement minimizes the number of station personnel transiting through the control room and provides more direct access control. The inspectors also observed during this inspection period a rather casual response by operators to control room annunciators. On several occasions, control room operators were observed to have taken up to 30 seconds to acknowledge and respond to alarms. This observation was discussed with station management. A memorandum pertaining to operator responsibilities and alarm acknowledgement was subsequently placed in the Superintendent of Operation's Night Notes and operator acknowledgement of alarms has since been observed to be more timely.

No violations were observed.

4. Surveillance 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 operations were met, and the system was correctly restored following the testing.

4.1 Unit 2

- a. On July 14, the inspector observed the performance of the Division II Diesel Generator Monthly Surveillance, N2-OPS-EGS-M001. All operators involved had a good understanding of the test to be performed. The inspector verified that all sections of the normal operating procedure, required to be performed, were properly completed. When the diesel generator was running and synchronized to the grid, the operator at the local panel was observed to monitor



all important parameters, but was not observed taking any logs. The inspector determined that the licensee is currently finalizing the new logs to be used when diesel generators are in operation.

- b. During a review of completed surveillance procedures, the inspector noted a discrepancy in N2-OPS-CSH-Q001, High Pressure Core Spray Valve Operability Test. The inspector identified that the acceptance criteria steps used to evaluate the test did not refer to the proper procedural steps where data was taken. This surveillance was performed on April 28, 1987, and had been reviewed and approved by the Operations management. The inspector reviewed the test results and verified that the results met the acceptance criteria given. The inadequate procedural review was discussed with Operations management. The inspector was assured that a procedural revision would be made.
- c. On June 24, the inspector observed the performance of N2-ISP-NMS-W@007, APRM/LPRM Channel Functional test. No discrepancies were noted.
- d. On June 27, the inspector witnessed the performance of a manual reactor scram as required per Power Ascension Test Program, Startup Test No. 5. Operators were well briefed and cognizant of their responsibilities and actions. Conduct of the operators on shift and control of the evolutions were very good.

No violations were observed.

5. Safety System Operability Verification

On a sample 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:

5.1 Unit 1

- a. On July 13, the inspector walked down the Liquid Poison system, the Emergency Condenser systems, and portions of the Containment Spray system. No unacceptable conditions were noted.

5.2 Unit 2

- a. During the inspection period, the inspectors conducted walkdowns of portions of the Residual Heat Removal, Reactor Core Isolation Cooling and Automatic Depressurization systems. No unacceptable conditions were noted.



- b. On July 7, the inspector walked down the High Pressure Core Spray System (HPCS). The following was noted by the inspector:
- The Reactor Vessel injection valve, MOV 107, exhibited packing leakage. This normally closed reactor coolant and primary containment isolation valve was observed, with the plant at normal operating pressure, to have water and wisps of steam leaking past the packing. The packing gland was also observed to be cocked. The leakage had filled the valve yoke area, overflowed onto the floor and was running to a floor drain.
 - One of the two test return valves to the Condensate Storage Tank (CST), MOV 112, was observed to have a packing leak at only the CST head pressure. This leakage was identified to be falling from the valve onto steel grating and supports, then dripping to the lower elevation floor and running into a floor drain.
 - The test return valve to the suppression pool, MOV 111, was observed to have packing leakage.
 - Several HPCS valves did not have permanently installed plastic coated name tags.

These discrepancies were brought to the attention of the Assistant Station Shift Superintendent on the day they were found, and subsequently, brought to the attention of station management. At the close of the reporting period, these discrepancies had not yet been corrected, however, the inspector verified that the licensee had generated Work Requests to address the problems. Licensee representatives stated that the Work Requests had not been assigned a high work priority, but that the work items were being tracked and would be accomplished when plant conditions and manpower permitted. The inspector found this to be acceptable.

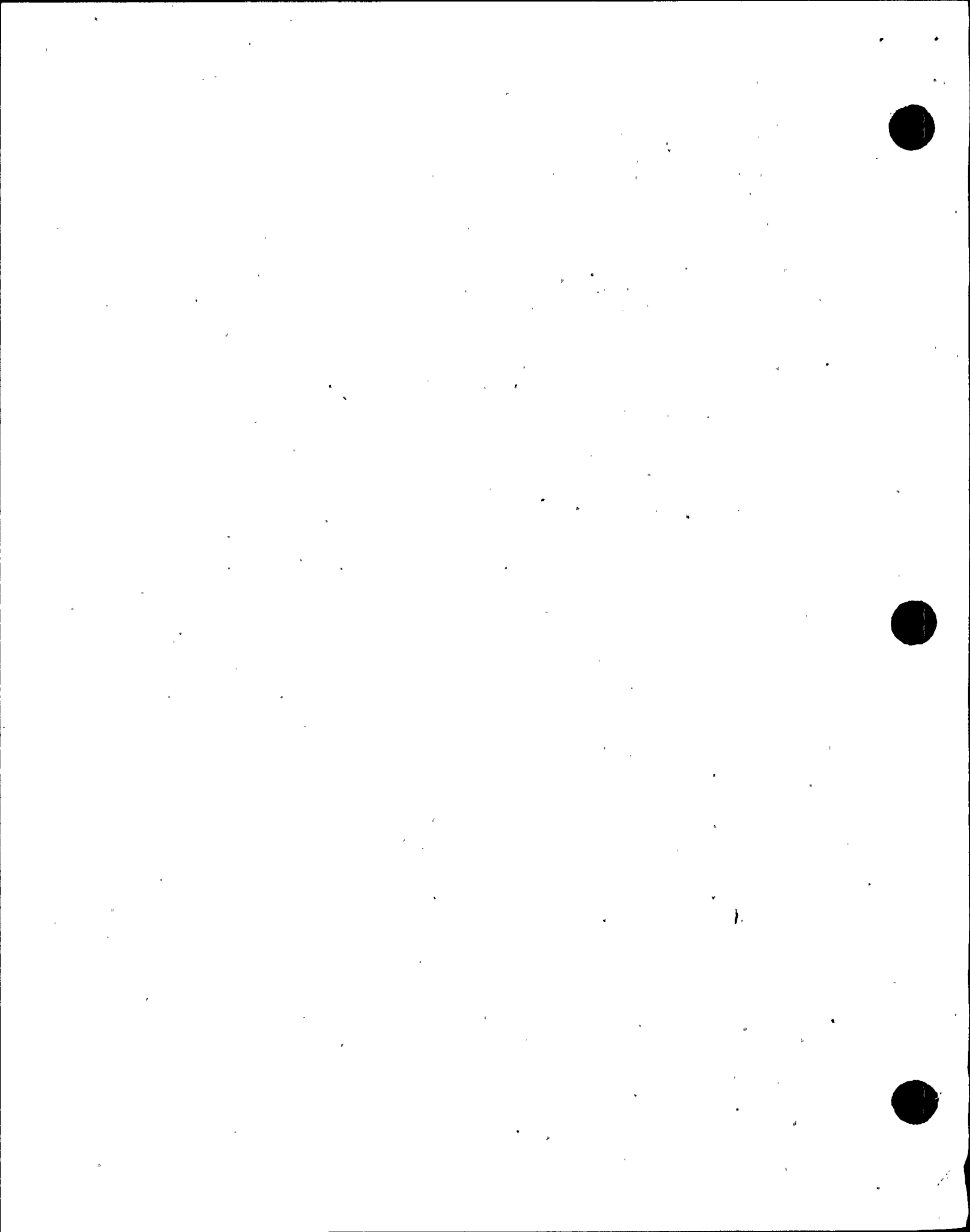
No violations were observed.

6. 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.

The inspectors observed normal security patrols of protected and vital areas, and verified that appropriate compensatory measures were taken when these area boundaries were temporarily degraded. The inspectors also reviewed licensee access control at the station entries.

No discrepancies were noted.



7. Radiological Protection Review

The inspector reviewed selected aspects of the licensee's radiological protection program to verify that the stations policies and procedures were in compliance with regulatory requirements.

During this inspection period, compliance with radiation protection procedures was observed to be generally acceptable. The inspectors made their observations during the conduct of routine plant tours and safety system walkdowns.

The inspectors identified no unsatisfactory conditions or practices.

8. Review of Licensee Event Reports (LERs)

The LERs submitted to the NRC were reviewed to determine whether the details were clearly reported, the cause(s) properly identified and the corrective actions appropriate. 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, whether the reporting requirements of 10CFR50.72 were applicable, and whether the requirements of 10CFR50.73 had been properly met. (Note: the dates indicated are the event dates)

8.1 Unit 1

a. The following LERs were reviewed and found to be satisfactory:

- 87-06, 03/24/87, Failure to perform daily starting air tank pressure readings for the diesel fire pump.
- 87-07, 03/27/87, Failure to meet Technical Specifications requirements for fire rated penetrations. NO VIOLATION ISSUED, Item No. 50-220/87-10-03.
- 87-08, 05/12/87, Fire rated barrier containing nonqualified piping. NO VIOLATION ISSUED, Item No. 50-220/87-10-04.
- 87-09, 07/02/87, Vibration Instrumentation not in compliance with ASME Section XI and Technical Specifications.

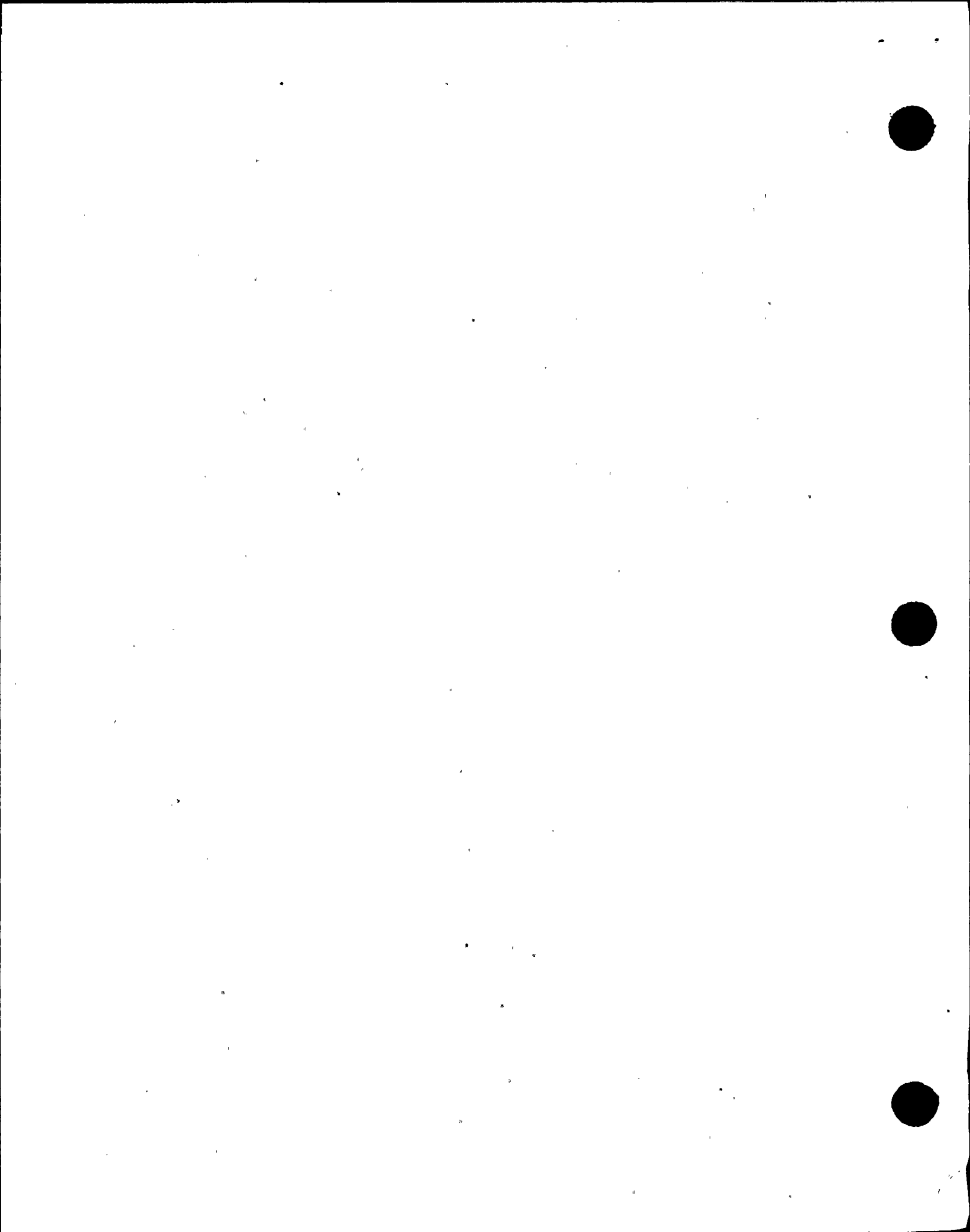
Although LERs 87-07 and 87-08 report instances of violations of Technical Specifications, the criteria of 10 CFR 2, Appendix C were met for each of the events reported. Therefore, no Notice of Violation will be issued. These items have been assigned a number for tracking purposes only. No further licensee or inspector action is required.



- b. For the following LERs, the licensee has committed to issue a supplemental report, which will be reviewed in a subsequent inspection period:
- 87-10, 06/12/87, Stack Gas sample pump failure due to deteriorated components. Corrective actions were not given for all identified root causes.
 - 87-04, 02/10/87, Failure to perform surveillance testing within required interval. A detailed review of the process for scheduling surveillances was conducted. The inspector found that corrective actions to prevent exceeding 3.25 times the required interval for three successive Technical Specification related surveillances, may not be effective for all cases. The corrective actions include an unwritten policy not to schedule surveillances early, and a procedural revision to prevent a "sliding schedule" in most cases. Compliance with the unwritten policy varied from one department to another, and a procedural provision for changes to the database exists and has been used by some departments. The inspectors will review the surveillance scheduling process in a future inspection to insure that effective corrective actions are implemented to prevent recurrence.

8.2 Unit 2

- a. The following LERs were reviewed and found to be satisfactory:
- 87-31, 6/12/87, Scram due to cold water excursion when the feedwater level control valve failed open.
 - 87-33, 6/15/87, Spurious Level 2 signal during surveillance test initiates ARI and reactor scram.
 - 87-34, 6/17/87, (VOLUNTARY LER), Reactor recirculation pump trips due to troubleshooting on RRCS circuitry.
 - 87-37, 6/22/87, Main Steam Tunnel differential temperature instrumentation inoperable due to a design deficiency.
 - 87-41, 7/10/87, Technical Specification violation results from failure to increase surveillance monitoring of service water temperature.
 - 87-42, 6/14/87, Reactor Water Cleanup system isolation due to procedural deficiency.
- b. For the following LER, the licensee has committed to issue a supplemental report, which will be reviewed in a subsequent inspection period:



-- 87-32, 6/12/87, Reactor Water Cleanup system isolation on high differential flow oscillations.

c. The following LER was reviewed and found to be satisfactory, however, the identified corrective actions will be monitored and reviewed in a subsequent report:

-- 87-35, 6/18/87, Fire watch inappropriately suspended which results in a Technical Specification violation - personnel error.

9. Licensee Action on IE Bulletins

The inspector reviewed licensee records relating to the IE Bulletin identified below to verify that: the IE Bulletin was received and reviewed for applicability; a written response was provided, if required; and the corrective action taken was adequate.

Unit 2

IE Bulletin No. 84-03: Refueling Cavity Water Seals. This bulletin notified licensees of an incident in which the refueling cavity water seal failed and rapidly drained the refueling cavity. The bulletin also requested certain actions be taken by the licensee to assure that fuel uncover during refueling operations remains an unlikely event.

The inspector reviewed the following documents:

- NMP letter NMP2L-0258, dated November 26, 1984
- Nonconformance and Disposition Report No. 11,891
- Deficiency Report No. 14652
- Engineering and Design Coordination Report No. F12617
- Test Procedure MP.0038.008, Static Head Pressure Test of the Reactor Head Cavity, Spent Fuel and Reactor Internal Storage Pools.
- N2-OP-39, Fuel Handling

The refueling cavity water seal is designed with chamfered support plates which match the seating surfaces of the pneumatic seal chamfer. This configuration provides for a tighter seal under the application of hydrostatic pressure. Near the end of the plant construction phase, a new water seal was procured based on the as-built dimensions of the annular seal supports. The new cavity seal was tested to ensure that it properly seals and the test results were reviewed by the inspector. No discrepancies were noted.

In addition, the inspector reviewed the licensed operator requalification program and verified that operators were given training on the lessons learned from the event discussed in IE Bulletin 84-03. The inspector also verified that the current refueling procedure has precautions concerning potential seal failures and operator actions to be taken in the event of a rapidly lowering cavity water level.



This bulletin is closed.

10. Part 21 Report Review

During this inspection period, the following 10CFR21 report was submitted by the licensee:

Unit 1

Report No. F87-02, dated June 22, 1987, Breaker Interlock Defect. The report documents a misalignment of the mechanical interlock for a 600V AC breaker (General Electric AK-2A-25). The misalignment resulted in the breaker being partially closed causing a significant voltage drop across the breaker and was the probable cause of the failure of a liquid poison pump motor. Further investigation revealed the defective condition in three AK-2A-25 Class 1E breakers. The report concluded that a significant safety hazard could have existed due to the breaker defect, if the liquid poison system had been called on to perform, and the redundant system failed to perform or was out of service.

The inspector determined that problems with the liquid poison pump breaker were encountered during hydrostatic testing at the end of the 1986 refueling outage. It is possible that the problems experienced at that time were caused by the defect discussed in the above Part 21 report. The inspector will review, in a subsequent inspection period, licensee actions in determining whether adequate troubleshooting and a proper root cause determination was done following the 1986 breaker failure. UNRESOLVED ITEM (50-220/87-10-02)

11. Inadvertent TIP Withdrawal - Unit 2

Unit 2 has five Transverse Incore Probes (TIP) drive mechanisms. The TIP drives are used to insert a neutron detector (probe) into the core for purposes of determining local core power levels. The probes, drive cables and cable lubricant can become neutron activated and may result in radiological controls concerns if the cables and probes are withdrawn into an occupied area.

On June 25, the licensee was conducting initial (TIP) drive settings, in accordance with a Startup Test Program procedure, when the C probe was accidentally retracted beyond the lead shielded storage cell and into the outer TIP room. The probe was being manually inserted and then withdrawn when the manual handcrank came off the drive gear. Due to internal spring tension, the cable continued to retract by itself and the probe was drawn back into the outer TIP room. A worker attempted to stop the TIP drive cable by hand, but was unsuccessful.

The outer TIP room was evacuated and the licensee allowed the short-lived activation products of the cable and probe to decay off prior to attempting to reconnect the drive and reinsert the probe. The TIP was reinserted a couple days later.



The licensee initiated a dose evaluation of the workers who were in close proximity to the TIP. The licensee's evaluation concluded that the extremities, skin and whole body exposures sustained were low. The licensee held a post-incident critique and a list of potential corrective actions was generated.

Within the scope of this review, no apparent violations were identified. The inspector plans to review the adequacy of the licensee's final corrective actions in a subsequent routine inspection.

12. Local Resident Inquiry Into Potentially Radioactive Material Offsite

On July 17, 1987, the inspector received a telephone call from an Oswego resident inquiring about how radioactive waste is typically packaged and labeled. When questioned by the inspector, the individual stated that she was specifically concerned that a business establishment in her area was in possession of a small, reddish-orange rectangular box which was supposedly labeled "Nuclear Waste Only" in large black print. The individual stated that she was concerned that her children may be unnecessarily exposed to radiation while playing near the business premises and that the proprietors may be wrongfully in possession of radioactive waste materials.

The inspectors determined, via the licensee, that this business establishment did perform contract work at the site, but did not, to their knowledge, have a license to possess or transport radioactive waste materials. The licensee contacted the business and determined that the box described was a weld rod oven labeled "Nuclear Materials Only". Based on this information, the licensee concluded their review of the Oswego resident's inquiry and contacted her to discuss the information they had obtained. The NRC inspector visited the business and received permission to inspect and survey the weld rod oven. The inspector found no evidence of radiation above background in or around the weld rod oven. The inspector discussed use of the weld rod oven with one of the proprietors and determined that this particular weld rod oven was used to store weld rod for contract work at Nine Mile Point. The weld rod oven was not used to store scrap or radioactive waste materials. On July 23, the inspector contacted the Oswego resident to inform her of the results of their review and to determine if she had any further questions or concerns. She had none.

The inspectors had no further questions.

13. Non-Class 1E Component Isolation Verification - Unit 2

By letter dated June 23, 1987, the licensee revised their June 16, 1987 commitment to upgrade certain Non-class 1E components to Class 1E components and to make certain other design and hardware changes prior to the completion of the first refueling outage. The June 23, 1987 letter stated that the June 16, 1987, letter commitments are no longer required



and that the previously identified components are now considered Class 1E components, with one exception. The one exception is a Non-Class 1E Reactor Water Clean Up (RWCU) System temperature controller and associated temperature probe which receives electrical power from a Class 1E power supply.

The licensee committed to isolate the temperature controller and probe from the Class 1E power supply utilizing two Class 1E qualified fuses prior to exceeding five percent reactor power. The inspector discussed the temperature controller power supply modification with licensee representatives and verified that the Class 1E qualified fuses were installed, prior to the licensee increasing reactor power above five percent. Within the scope of this review, the inspector identified no deficiencies.

14. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, or violations. Unresolved items identified during this inspection are discussed in sections 1.2.h., 1.2.k., and 10.

15. 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.

